

**AVENUE 416 KINGS RIVER BRIDGE PROJECT**  
**AGREEMENT FOR**  
**FINAL ENGINEERING FOR PLANS, SPECIFICATIONS AND ESTIMATE**

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**AVENUE 416 KINGS RIVER BRIDGE PROJECT**  
**AGREEMENT FOR**  
**FINAL ENGINEERING FOR PLANS, SPECIFICATIONS AND ESTIMATE**

THIS AGREEMENT is entered into as of \_\_\_\_\_, 2010, between the COUNTY OF TULARE, referred to as "County", and CORNERSTONE STRUCTURAL ENGINEERING GROUP, referred to as "Consultant", incorporated within the State of California in March, 2004, with reference to the following:

A. County has requested proposals for consulting services for a bridge replacement project on Avenue 416 over the Kings River, approximately 5.5 miles east of State Route 99. These consulting services are to include final engineering for plans, specifications and estimates performed to the satisfaction of the County, State and Federal Highway Administration (FHWA)

B. Consultant's response indicates that it possesses the professional qualifications, relevant experience and demonstrated competence to provide final engineering for plans, specifications and estimates services.

ACCORDINGLY, IT IS AGREED:

1. SERVICES. Consultant will provide final engineering for plans, specifications and estimates services, more particularly described in Exhibit A ("Scope of Work"). All work performed and billed to the County by the Consultant shall be grant eligible in accordance with the Caltrans Local Assistance Procedures Manual (LAPM), unless otherwise directed by the County, in writing. The County will issue a Notice to Proceed for each task order mentioned in Exhibit A. The Consultant is not to proceed on any tasks without a written Notice to Proceed from the County.

2. TIME FOR PERFORMANCE/TERM. Time is of the essence in this Agreement. The final engineering for plans, specifications and estimates services as described in Exhibit A will commence within five days of receipt of a written Notice to Proceed issued following acceptance of this Agreement by the County. The Consultant shall complete the work described in Exhibit A within eighteen (18) months from the date first written above. The schedule is detailed in Exhibit C. Mutually acceptable changes in the scope, character, or complexity of the work if such changes become desirable or necessary as the work progresses will be accommodated by a supplemental agreement.

An appropriate extension of time may be made in the form of a supplemental agreement in case of unavoidable delays. Corresponding warranted adjustments in payment will be made based upon the incorporated rate schedule.

3. COMPENSATION.

- a. The method of payment for this contract will be based on lump sum. The total lump sum fee paid to the Consultant will include compensation for all work and deliverables, including but not limited to salary, overhead, profit, travel and equipment described in Exhibit A Scope of Work of this contract. No additional compensation will be paid to the Consultant, unless there is a change in the scope of the work or the scope of the project. In the instance of a change in the scope of work or scope of the project, adjustment to the total lump sum fee will be negotiated between the Consultant and the County. Adjustment in the total lump sum fee will not be effective until authorized by contract amendment and approved by the County.
- b. The County shall pay the Consultant as provided in Article 4 a lump sum fee amount of \$1,247,771 (one million two hundred forty seven thousand seven hundred seventy one dollars) for Basic Services (Task 1 through 10) as described in Exhibit B.
- c. The County shall pay the Consultant a lump sum fee amount for each of the Optional Services (Task 11 through 15) as described in Exhibit B. The total amount for the Optional Services shall not exceed the amount of \$316,666 (Three hundred sixteen thousand six hundred sixty six dollars). The County has the sole authority to issue a Notice to Proceed for each task in the Optional Services. Optional Services may or may not be utilized as part of this agreement. The total compensation for services will include the lump sum fee for Basic Services amount and the lump sum fee amount for each of the utilized individual Optional Services.
- d. The lump sum fee for Basic Services and Optional Services shall not exceed the amount of \$1,564,437 (one million five hundred sixty four thousand four hundred thirty seven dollars).

- e. The Consultant shall identify which job classifications in Exhibit B are subject to prevailing wage rates per Article 5 of this Agreement.
- f. It is agreed that Federal Acquisition Regulations in 48 CFR 31 are the governing factors regarding allowable elements of cost.
- g. 49 CFR, Part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local governments shall be complied with.
- h. Any cost for which payment has been made to Consultant that are determined by subsequent audit to be unallowable under 48 CFR, Federal Acquisition Regulations System, Chapter 1, Part 31 et seq., or 49 CFR, Part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments, are subject to repayment by the Consultant to the County.
- i. Any subcontract in excess of \$25,000, entered into as a result of this contract, shall contain all the provisions of this article.

4. PAYMENT. No sooner than the 10<sup>th</sup> day of each calendar month, Consultant will submit to the Resource Management Agency, Attn: Contract Administrator, an invoice for services rendered under this Agreement during the previous calendar month. Progress payments may be made monthly in arrears based on the percentage of work completed by the Consultant. If Consultant fails to submit the required deliverable items according to the schedule set forth in the Statement of Work, the County shall have the right to delay payment and/or terminate this Agreement in accordance with the provisions of Article 11 Termination. Consultant will be deemed to have waived all rights to compensation for any services not billed within 90 days after the month in which the services were provided. All Data as described in Article 28 of this agreement shall be provided to the County prior to the release of final payment.

5. COMPLIANCE WITH LAW. Consultant will provide the services called for under this Agreement in accordance with applicable Federal, State, and local laws, regulations and directives. With respect to Consultant's employees, Consultant will comply with all laws and regulations pertaining to wages and hours (including prevailing wage rates where applicable), state and federal income tax, unemployment insurance,

Social Security, disability insurance, workers' compensation insurance, and discrimination in employment.

6. RECORDS. Consultant will maintain complete and accurate records with respect to the services rendered and the costs incurred under this Agreement, including records with respect to any payments to employees or subcontractors. These records shall be retained by the Consultant for inspection by the County, State, FHWA, or duly authorized representatives. All such records will be prepared in accordance with generally accepted accounting principles, will be clearly identified, and will be kept readily accessible. Upon request, Consultant will make such records available for inspection by the County, State, FHWA, or duly authorized representative for the purpose of auditing and/or copying such records during the agreement period and continuing for a period of five (5) years from the date of final payment under this Agreement. Any subcontract in excess of \$25,000, entered into as a result of this contract, shall contain all the provisions of this article

7. INDEPENDENT CONTRACTOR STATUS. Consultant will perform all services required under this Agreement as an independent contractor. Nothing in this Agreement may be construed to constitute Consultant or any of its agents, employees or officers as employees or officers of County. Consultant agrees to advise everyone it assigns or hires to perform any duty under this agreement that they are not employees of County. Consultant will be solely responsible for determining the means and methods of performing the specified services, and County will have no right to control or exercise any supervision over Consultant as to how the services will be performed. County will not:

- a. Withhold FICA (Social Security) from Consultant's payments.
- b. Make state or federal unemployment insurance contributions on Consultant's behalf.
- c. Withhold state or federal income tax from payments to Consultant.
- d. Make disability insurance contributions on behalf of Consultant.
- e. Obtain unemployment compensation insurance on behalf of Consultant.

Notwithstanding this independent contractor relationship, County reserves the right to monitor and evaluate the performance of Consultant for the purpose of assuring compliance with this Agreement.

8. NON-ASSIGNABILITY. Unless otherwise provided in this Agreement, County is relying on the personal skill and expertise of Consultant and no part of this Agreement may be assigned by Consultant, except that services may be subcontracted to reputable and qualified subcontractors as otherwise provided for in this agreement. Subcontracts exceeding \$25,000 in cost shall contain all provisions in Article 2 of this agreement.

9. INSURANCE. Prior to approval of this Agreement by the County, Consultant shall file with the Clerk of the Board of Supervisors evidence of the required insurance set forth in Exhibit D attached.

10. INDEMNIFICATION: Consultant shall hold harmless, defend and indemnify County, its agents, officers and employees from and against any liability, claims, actions, costs, damages or losses of any kind, including death or injury to any person and/or damage to property arising out of the willful misconduct, or the negligent acts or omissions, of Consultant or its agents, officers and employees under this agreement. This indemnification specifically includes any claims that may be made against County by any taxing authority asserting that an employer-employee relationship exists by reason of this Agreement, any claims made against County alleging civil rights violations by Consultant under Government Code sections 12920 et seq. (California Fair Employment and Housing Act). The indemnification obligation shall continue beyond the term of this Agreement as to any willful misconduct, errors, omissions, or negligent acts occurring under this Agreement or any extension of this Agreement.

11. TERMINATION. The right to terminate this Agreement under this provision may be exercised without prejudice to any other right or remedy to which the terminating party may be entitled at law or under this Agreement.

- (a) Without Cause: County will have the right to terminate this Agreement without cause by giving ten (10) days prior written notice of intention to terminate pursuant to this provision, specifying the date of termination. County will pay to the Consultant the compensation earned to the date of

termination. The payment of such compensation is subject to the restrictions on payment of compensation otherwise provided in this Agreement, and is conditioned upon receipt from Consultant of any and all preliminary engineering, environmental documents and final engineering for plans, specifications and estimates services, and other documents prepared by Consultant in accordance with this Agreement. No sanctions will be imposed.

(b) With Cause: This Agreement may be terminated by either party should the other party:

- (1) be adjudged a bankrupt, or
- (2) become insolvent or have a receiver appointed, or
- (3) make a general assignment for the benefit of creditors, or
- (4) suffer any judgment which remains unsatisfied for 30 days, and which would substantively impair the ability of the judgment debtor to perform under this Agreement, or
- (5) materially breach this Agreement.

In addition, County may terminate this Agreement based on:

- (6) material misrepresentation, either by Consultant or anyone acting on Consultant's behalf, as to any matter related in any way to County's retention of Consultant, or
- (7) other misconduct or circumstances which, in the sole discretion of the County, either impair the ability of Consultant to competently provide the services under this Agreement, or expose the County to an unreasonable risk of liability.

For any of the occurrences except item (5), termination may be effected upon written notice by the terminating party specifying the date of the termination. Upon a material breach, the Agreement may be terminated following the failure of the defaulting party to remedy the breach to the satisfaction of the non-defaulting party within FIVE (5) days of written notice specifying the breach. If the breach is not remedied within that FIVE (5) day period, the non-defaulting party may terminate the agreement on further written notice

specifying the date of termination. County will pay to the Consultant the compensation earned to the date of termination. The payment of such compensation is subject to the restrictions on payment of compensation otherwise provided in this Agreement, and is conditioned upon receipt from Consultant of any and all preliminary engineering, environmental documents and final engineering for plans, specifications and estimates services, and other documents prepared by Consultant by the date of termination in accordance with this Agreement. If the cost of completion to the County exceeds the funds remaining in the contract, the overage shall be deducted from any sum due the Consultant under this agreement and the balance, if any, shall be paid the Consultant upon demand. Sanctions taken will be possible rejection of future proposals based on specific causes of non performance.

(c) Effects of Termination: Expiration or termination of the Agreement shall not terminate any obligations to indemnify, to maintain and make available any records pertaining to the Agreement, to cooperate with any audit, to be subject to offset, or to make any reports of pre-termination contract activities. Where Consultant's services have been terminated by the County, said termination will not affect any rights of the County to recover damages against the Consultant.

(d) Suspension of Performance: Independent of any right to terminate this Agreement, the authorized representative of County for which Consultant's services are to be performed, may immediately suspend performance by Consultant, in whole or in part, in response to health, safety or financial emergency, or a failure or refusal by Consultant to comply with the provisions of the Agreement, until such time as the cause for suspension is resolved, or a notice of termination becomes effective.

12. ENTIRE AGREEMENT REPRESENTED. This Agreement represents the entire agreement between Consultant and County as to its subject matter and no prior oral or written understanding shall be of any force or effect. No part of this Agreement may be modified without the written consent of both parties.

13. HEADINGS. Section headings are provided for organizational purposes only and do not in any manner affect the scope, meaning or intent of the provisions under the headings.

14. NOTICE. Except as may be otherwise required by law, any notice to be given must be written and must be either personally delivered, sent by facsimile transmission or sent by first class mail, postage prepaid and addressed as follows:

County:

Tulare County Resource Management Agency

Attention: Kuna Muthusamy, Contract Administrator

5961 South Mooney Boulevard

Visalia, CA 93277

Fax No.: (559) 730-2653      Confirming No.: (559) 624-7000,

Email : [kmuthusamy@co.tulare.ca.us](mailto:kmuthusamy@co.tulare.ca.us)

Consultant:

Cornerstone Structural Engineering Group

Attention: Todd Goolkasian, Project Manager

986 West Alluvial Avenue, Suite 201

Fresno, CA 93711

Fax No.: (559) 320-3201      Confirming No.: (559) 320-3200

Email: [tgoolkasian@cseg.com](mailto:tgoolkasian@cseg.com)

Notice delivered personally or sent by facsimile transmission is deemed to be received upon receipt. Notice sent by first class mail will be deemed received on the fourth day after the date of mailing. Either party may change the above address by giving written notice pursuant to this paragraph. The above stated Consultant address is to be the main working office location for the duration of this agreement.

15. CONSTRUCTION. This Agreement reflects the contributions of both parties and accordingly the provisions of Civil Code section 1654 will not apply to address and interpret any uncertainty.

16. NO THIRD PARTY BENEFICIARIES INTENDED. Unless specifically set forth, the parties to this Agreement do not intend to provide any other party with any benefit or enforceable legal or equitable right or remedy. The Consultant warrants that he/she has not employed or retained any company or person, other than a bona fide employee working for the consultant, to solicit or secure this agreement, and that he/she has not paid or agreed to pay any company or person, other than a bona fide employee, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award or formation of this agreement. For breach or violation of this warranty, the County shall have the right to annul this agreement without liability, or at its discretion to deduct from the agreement price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee (See Exhibit E). The County warrants that they have not required the Consultant to employ or retain any company or person, or to pay or agree to pay any firm, person or organization, any fee, contribution donation or consideration of any kind, contingent upon or resulting from the award or formation of this agreement (See Exhibit F).

17. JURISDICTION/VENUE. This Agreement will be interpreted and governed under the laws of the State of California without reference to California conflicts of law principles. Any litigation arising out of this Agreement must be brought in Tulare County California.

18. WAIVERS. The failure of either party to insist on strict compliance with any provision of this Agreement will not be considered a waiver of any right to do so, whether for that breach or any subsequent breach. The acceptance by either party of either performance or payment will not be considered to be a waiver of any preceding breach of the Agreement by the other party.

19. EXHIBITS AND RECITALS. The Recitals and the Exhibits to this Agreement are fully incorporated into and are integral parts of this Agreement.

20. CONFLICT WITH LAWS OR REGULATIONS/SEVERABILITY. This Agreement is subject to all applicable laws and regulations. If any provisions of this Agreement are found by any court or other legal authority, or are agreed by the parties, to be in conflict with any code or regulation governing its subject, the conflicting provision

will be considered null and void. If the effect of nullifying any conflicting provision is such that a material benefit of the Agreement to either party is lost, the Agreement may be terminated at the option of the affected party. In all other cases, the remainder of the Agreement will continue in full force and effect.

21. FURTHER ASSURANCES. Each party agrees to execute any additional documents and to perform any further acts which may be reasonably required to affect the purposes of this Agreement.

22. ASSURANCES OF NON-DISCRIMINATION. Consultant will not discriminate in employment or in the provision of services on the basis of any characteristic or condition upon which discrimination is prohibited by state or federal law or regulation.

23. PROFESSIONAL STANDARDS. By submitting final documents for approval by County, Consultant represents that said documents are accurate. Consultant will be responsible to County for the professional quality, adequacy, and completeness of the services, studies, and reports provided, and represents that such services, studies and reports will be suitable for the intended purposes.

Consultant will perform the services provided in this Agreement in a manner consistent with the professional skill and care ordinarily exercised by expert members of the planning, engineering, right of way and environmental profession practicing in the State of California under similar conditions.

Where applicable and in accordance with California law, the responsible consultant/engineer shall sign and seal reports, plans, specifications, estimates and engineering data furnished by him/her.

24. VITAL PERSONNEL. Personnel listed in Exhibit G are considered the vital personnel on the Consultant's project team. There shall be no change in the Consultant's Project Manager or members of the project team, as listed in the approved Cost Proposal, which is a part of this contract without prior written approval by the County's Contract Administrator. Vital personnel are defined as any Consultant employee or Sub-Consultant that are authorized by Consultant to represent Consultant in dealings with the County.

25. COMPUTER SERVICES. The Consultant shall provide computer services as shown in Exhibit H.

26. PATENT RIGHTS AND COPY RIGHTS. Applicable patent rights provisions described in 41 CFR 1-9.1 regarding rights to inventions shall apply to this agreement. The County may permit copyrighting reports or other agreement products. If copyrights are permitted, the agreement shall provide that the FHWA shall have the royalty-free non-exclusive and irrevocable right to reproduce, publish, or otherwise use, and to authorize others to use, the work for government purposes.

27. DBE PARTICIPATION REQUIREMENTS

A. Disadvantaged Business Enterprise (DBE) Participation

1. The County has established an 18.6% participation goal for the participation of DBE's and a 13.27% goal for the participation of UDBE's for this Agreement. The Consultant shall comply and be fully informed respecting Part 26, Title 49, Code of Federal Regulations, which is incorporated by reference, and is urged to obtain DBE participation.
2. It is the policy of the County that certified DBE firms shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with federal funds. The Consultant shall ensure that certified DBE firms, as defined in said Code of Federal Regulations, have the maximum opportunity to participate in the performance of this Agreement and shall take all necessary and reasonable steps, as set forth in said Part 26, for such assurance. The Consultant shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of subconsultant. Failure to carry out the requirements of this paragraph shall constitute a breach of the Agreement and may result in termination of this Agreement or such other remedy the County may deem appropriate.
3. If DBE participation is obtained, the Consultant shall maintain records of all subconsultant agreements entered into with DBE subconsultants and records of materials purchased from DBE suppliers. Such records

shall show each subconsultant's and vendor's name and address and the actual dollars paid to each. Upon completion of the Agreement, a summary of these records shall be prepared, certified correct and submitted on the form "FINAL REPORT – UTILIZATION OF DISADVANTAGED BUSINESS ENTERPRISES (DBE), FIRST – TIER SUBCONTRACTORS" Form 17-F of the LAPM, (See Exhibit-I), or equivalent, by the Consultant to the County's Contract Administrator showing total dollars paid to each DBE subconsultant and supplier. Failure to provide the summary of DBE payments with the final invoice will result in 25% of the dollar value of the invoice being withheld from payment until the form is submitted. The amount will be returned to the Consultant when a satisfactory "Final Report-Utilization of Disadvantaged Business Enterprises (DBE), First-Tier Subcontractors" is submitted to the Contract Administrator.

- 4 Any DBE firm working as a subconsultant under this Agreement must be responsible for the execution of a distinct element of the work and must carry out its responsibility by actually performing, managing, and supervising the work.
5. The Consultant shall make every reasonable effort to replace a certified DBE firm that is unable to perform the provisions of this contract with another certified DBE firm.
6. The "Notice To Proposers Disadvantaged Business Enterprise Information" (Exhibit 10-I of the LAPM) is included in this consultant contract (see Exhibit J)

28. OWNERSHIP OF DATA.

- a. Upon completion of all work under this contract, ownership and title to all reports, documents, plans, specifications, and estimates produced as part of this contract will automatically be vested in the County; and no further agreement will be necessary to transfer ownership to the County. The Consultant shall furnish the County all necessary copies

of data needed to complete the review and approval process continuously throughout this contract.

- b. Plans shall be provided to the County in hardcopy and in electronic format using AutoCAD Version 2007 or a mutually agreed upon format. Specifications shall be provided in hardcopy and in electronic format using Microsoft Word. Other data shall be provided in hard copy and electronic format using a mutually agreed upon format.
- c. It is understood and agreed that all calculations, drawings and specifications, whether in hard copy or machine-readable form, are intended for one-time use in the construction of the project for which this contract has been entered into.
- d. The Consultant is not liable for claims, liabilities, or losses arising out of, or connected with the modification, or misuse by the County of the machine-readable information and data provided by the Consultant under this agreement; further, the Consultant is not liable for claims, liabilities, or losses arising out of, or connected with any use by the County of the project documentation on other projects for additions to this project, or for the completion of this project by others, except only such use as may be authorized in writing by the Consultant.

29. POST-AWARD AUDIT. The Cost Proposal in Exhibit B, is subject to a post award audit. After any post award audit recommendations are received, Exhibit B will be adjusted by Consultant and approved by County's Project Contract Administrator to conform to the audit recommendations. Consultant agrees that individual items of cost identified in the audit report may be incorporated into the Agreement at County's Project Contract Administrator's sole discretion. Refusal by Consultant to incorporate the interim audit or post award recommendations will be considered a breach of the Agreement terms and cause for termination of the Agreement.

The post-award audit will be conducted in accordance with generally accepted government auditing standards as promulgated by the United States General Accounting Office.

The Consultant agrees that all invoices after the post award audit will be based on the adjusted Exhibit B. Any invoices paid prior to the post award audit will be recalculated by the County in accordance with the recommendations of the post award audit. Any difference in moneys due the Consultant as a result of these recommendations as applied to those paid invoices will be added to, or deducted from, moneys due the Consultant on the subsequent invoice. In no event shall the total compensation to be paid to the Consultant exceed the sum in Article 3d. "COMPENSATION" of this Agreement.

The rates included in the consultant's cost proposal, after the post-award audit recommendations are incorporated, shall remain in effect for the duration of the Agreement.

The scope of the audit will consist of such tests as the auditors consider necessary to assure that Consultant satisfactorily meets the requirements in this Agreement.

At the time of the post-award audit, the prospective consultant must demonstrate through actual historical data that its accounting system is capable of accumulating and segregating reasonable, allowable and allocable costs. For new businesses, if actual historical data is unavailable or the accounting system is newly implemented, the system will be tested to determine whether the accounting system is adequate and, if necessary, recommend that an interim audit be performed. At a minimum, Consultant must have an accounting system that meets the following objectives:

- a. The ability to record and report financial data in accordance with generally accepted accounting principles and the Code of Federal Regulations 48, Chapter 1, Part 31 Federal Acquisition Regulations System (FAR) at 48 FAR 31.201-6.
- b. The ability to accumulate and segregate reasonable, allowable and allocable costs through the use of a cost accounting system.
- c. A system of record keeping to ensure the costs billed to the County will be supported by adequate documentation and will be in compliance with the terms of the contract and applicable Federal and State regulations.
- d. Procedures to retain accounting records and source documentation as required by the terms of the Agreement.

- e. A system of internal control that provides reasonable assurance that assets are protected; financial data, records and statements are reliable, and errors and irregularities are promptly discovered, reported and corrected.

The prospective consultant must be financially capable of performing the work.

The costs proposed must be reasonable.

Additional information regarding the Accounting and Audit guidelines for contracts using State and/or Federal funds is available on the Internet at: <http://caltrans-opac.ca.gov/aeinfo.htm>.

THE PARTIES, having read and considered the above provisions, indicate their agreement by their authorized signatures below.

COUNTY OF TULARE

By: \_\_\_\_\_

Chairman, Board of Supervisors

ATTEST: \_\_\_\_\_,

County Administrative Officer/

Clerk of the Board of Supervisors

By: \_\_\_\_\_

Deputy Clerk

CONSULTANT

By: \_\_\_\_\_

Title: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Approved as to Form

County Counsel

By: \_\_\_\_\_

Deputy

## EXHIBIT A

### TULARE COUNTY RESOURCE MANAGEMENT AGENCY

Avenue 416 Kings River Bridge  
Br. No. 46C-0027  
HBP Bridge Replacement

### SCOPE OF WORK

#### TASK 1 – PROJECT MANAGEMENT

The CONSULTANT will manage project tasks including work needed to:

- Lead, direct and monitor the project team
- Prepare and monitor a Work Plan & QA/QC Plan
- Prepare for, attend, and document Team Meetings and Action Items (10 Meetings at the County and 10 conference calls)
- Prepare, coordinate, and maintain a critical path method schedule
- Prepare monthly progress reports
- Prepare Caltrans Programming Paperwork & Local Assistance Manual Forms
- Miscellaneous coordination and support
  - Assist the County with meetings and coordination efforts with property owners
  - Assist the County with preparation of Board of Supervisors' memoranda/correspondence
- Prepare monthly invoices and specific work completed

**1.1 Monitor Work Plans:** The CONSULTANT will monitor the workplan which includes the scope of work, fee, the terms of the professional services agreement and other contractual requirements over the course of the project.

**1.2 Caltrans Programming and Local Assistance Paperwork:** The CONSULTANT will prepare the paperwork necessary to comply with the requirements of the HBP program and Local Assistance Procedures Manual (LAPM) for the proposed project for the County to submit to Caltrans District 6 Local Assistance. The documents will include (but not be limited to):

- HBP Scope/Cost/Schedule Change Request (Exhibit 6D) required to transfer project from Seismic account to Replacement
- Life Cycle Cost justification of complete bridge replacement
- Design Exception Requests
- Request for Authorization to Proceed with Construction Certification
- Finance Letters
- Cooperate with Caltrans or County pre- or post award audit

- 1.3 Monthly Progress Reports:** As part of the general project management responsibilities, the CONSULTANT will prepare status reports addressing the progress of the project, project design schedule, decisions that must be made to keep the project on schedule, and a list of work that has been accomplished in the previous month and forecasted for the upcoming month.
- 1.4 Quality Control/Quality Assurance:** The CONSULTANT will utilize a quality control plan/process for this project whereby deliverables are reviewed for uniformity, compatibility and constructability as well as general conformance with the federal HBP program requirements. Senior level roadway and bridge PS &E review will be incorporated with Task 9, "Final Design".
- 1.5 Public Outreach Meetings:** An organized, inclusive public relations program has been developed and will be implemented by CONSULTANT. The program recognizes the interests and sensitivities of nearby citizens, businesses, property owners, schools and other interested parties and will ensure public involvement in the project development process. The **public workshop** will be held in a nearby facility. The meeting will provide information on the project background, purpose, and tasks and will solicit information from citizens. COUNTY will prepare meeting notices, and prepare agendas, sign-in sheets, and comment cards. CONSULTANT will record public comments and help to facilitate appropriate responses. It is envisioned that COUNTY will develop and maintaining an "interested persons" mailing list. The two meetings will be held shortly after the 35% design submittal.

**Deliverables:**

- Project work plan & QA/QC plan
- Project CPM schedule (Task 9 in County RFP)
- Quarterly progress reports and schedules
- Exhibits for public workshop
- Meeting notes prepared by Consultant and distribution to all attendees
- LAPM/HBP documents required
- Assistance with applying for the E-76 for Construction

**TASK 2 – UPDATE SURVEYS/MAPPING**

CONSULTANT shall prepare the base mapping for the project sufficient to cover the project limits for both a single stage and a two-stage bridge construction alternative. Aerial photogrammetry will be used to prepare the overall project area base mapping and will be augmented with ground surveys and hydrographic survey as further described below. Ground surveys will be used to determine pavement elevations at edge of travel ways, edge of shoulders, and conform locations. Ground surveys are also required for utilities, trees, drainage flow lines, and inverts. Photogrammetric surveys are adequate for off-pavement areas. Under this task, sufficient ties to right of way monuments and property corners and resolution of property and right of way lines will also be developed.

- 2.1 Project Survey Control:** Perform control surveys and set control points. Set and survey aerial control targets. Resolve property boundary and right-of-way locations.
- 2.2 Obtain County Encroachment Permit and Permission to Enter From Adjoining Property Owners:** Under this task, CONSULTANT shall obtain an encroachment

permit to perform surveying within the roadway right-of-way. It is assumed that this permit will be provided at no cost to the CONSULTANT. Additionally, under this task, CONSULTANT shall identify those properties where access is required in order to complete the project base mapping (e.g. setting of flight crosses, topographic mapping, property line resolution, etc.). A mailing list and pre-addressed letter(s) shall be provided to the County for printing on County letterhead and mailing to addressees.

**2.3 Aerial Mapping:** After the control has been set, the site will be photographed with a negative scale of 1:2400 or 1:3000 for mapping at a scale of 1"=40' with a 1-foot contour interval, planimetry, spot elevations, and breaklines in the latest Caltrans format.

**2.4 Topographic Surveys:** Perform supplemental topographic surveys including; necessary utility potholes, existing bridge features, existing utility locations (inverts), sign location and nomenclature, and other detailed topography not shown by aerial photography. Supplemental surveys include Avenue 416 between Roads 38 and 40 and beyond if necessary to cover the intersections and cross-sections at locations where new improvements join existing improvements. This task also includes the following:

- **Hydrographic Survey:** Perform a hydrographic survey using conventional survey techniques. Channel bottom points not visible in the aerial photography will be surveyed by cross section method 500 feet upstream to 500 feet downstream from the existing bridge structure. Ten (10) cross sections will be taken at 100 foot intervals including a cross section on both side of the existing bridge. All observable scours, holes, and minor channels will be included. Client provided data indicates water depths of 1 to 3 feet, prohibiting the use of boat mounted sounders. Water depths greater than 3 feet may not be safe for conventional survey techniques and will require additional equipment and services to complete field surveys and are included in this scope.
- **Traffic Control:** Set-up and maintain approved traffic safety devices during the field survey.
- **Utility Mapping:** Contact utility companies, provide base map for review and comment, and obtain written confirmation from utility companies of location of existing facilities.
- **High Risk Utilities and Pot-holing:** For budget purposes a total of 10 utility potholes have been included to address the potential need for locating high pressure gas mains and fiber optic facilities within the project area. Surveys will be performed, including obtaining County encroachment permits, traffic control, USA clearance, etc. to locate both horizontal and vertical position of the utilities once uncovered by the utility potholing subconsultant. Should additional pot holes be deemed necessary, additional budget may be required.
- **Additional Design Surveys:** Provide additional topographic surveys that may be required during design. This task may include wetland locations, boring locations, additional tree information, soundings, or other requested data.
- **Tree Survey:** Survey all existing trees 6" or greater in diameter at breast height and prepare a separate tree survey document. The limits of the

tree survey will extend 200 feet upstream and 100 feet downstream from the existing bridge structure and will include any areas potentially affected by construction.

- 2.5 Property Surveys and Resolution:** Perform property boundary and right-of-way surveys of all affected parcels (estimate 6 parcels). Set and stake necessary monuments to indicate boundary locations and acquisition corners.
- 2.6 Base Map Preparation:** Prepare a base map, in imperial units, showing property boundaries, easements, rights-of-way, existing utilities and topographic information. CONSULTANT will set-up of the project computer files and prepare the Triangular Irregular Network (TIN) used for three-dimensional calculations, i.e. earthwork, cross-sections, and profiles.
- 2.7 Right-of-Way Acquisition Support:** This task shall include assisting the COUNTY with the preparation of R/W Appraisal Maps; R/W descriptions and exhibits, descriptions and exhibits for utilities, drainage, slope, and construction easements to be prepared by the COUNTY. A CAD base file will be prepared for the COUNTY's use to generate the legal descriptions as described in Task 2.6.

**Deliverables:**

- 10 paper and electronic copies of Base Map as necessary.
- Record of Survey
- Set Monuments
- Aerial Check plots (ink on paper) and disks in ACAD
- 1 copy Aerotriangulation report
- Aerial image of project limits with 0.5- pixels (tiff or MrSid format)
- Digital Mapping Files in Caltrans Check plot format
- One photo index negative
- Two copies of negatives on resin coated paper

**TASK 3 – FIELD INVESTIGATIONS/GEOTECHNICAL/RESEARCH**

The proposed foundation investigation will include review of readily available data including the Log of Test Borings (2001 exploration) and foundation data, supplemented by limited number of borings to confirm and evaluate the subsurface soil conditions. Based on the site conditions, four additional borings, one at each abutment and pier location, will be performed for the replacement project. Two borings (to 70 ft) are planned at the abutments, and two borings (to 150 ft below mudline) are planned to drill through bridge deck. A general discussion of the scope and budget is provided for these elements.

As discussed above, the proposed bridge replacement project will require subsurface information at four additional borings. Following is a task breakdown for the proposed work.

- 3.1 Research and Data Collection:** Review of readily available geologic and soil literature in the vicinity of the site including review of any as-built drawings and existing LOTB (2001 exploration).

Permits/USA Clearances: We will comply with local permit requirements. There is no permit fee anticipated at this time unless a boring is to be drilled in the water. We will field locate the boring and call for USA clearance. Any permit fees required are assumed to be paid directly by the County.

- 3.2 Field Exploration:** For the proposed bridge replacement, geotechnical subconsultant Parikh Consultants will drill four borings. Two borings up to 70 ft deep are planned at the two abutment areas. Two borings, to 150 ft deep below mudline, are planned from the existing bridge deck to supplement the existing two borings drilled through the bridge deck in 2001. The exploration will provide an evaluation of subsurface conditions for the proposed foundations of the structure. The boring locations will depend upon the available access and any boring data from previous studies. We anticipate using a truck mounted drill rig for our work. Traffic control is required since the bridge has one lane in each direction and will be provided by the COUNTY or alternatively by the CONSULTANT as an optional service. No lane closures will be performed after dark if possible. Coring through the deck is also required to facilitate drilling set up. The "abutment" borings will take one day per hole, and the "deck" borings will take minimum of two days per hole. The two bridge deck borings will be drilled using two separate drill rigs (and required casing tools etc) that operate simultaneously to reduce traffic impacts and closures. Optional borings can be drilled as required after the design is formalized.

Classify and continuously log subsurface soil conditions encountered in the test boring at the time of drilling. Obtain "relatively undisturbed" and bulk samples of substrata from test boring. The borings will be drilled and capped in accordance with the permit requirements.

- 3.3 Laboratory Testing:** Perform laboratory tests on representative soil samples such as moisture density, unconfined compression, gradation analyses, corrosion tests and Plasticity Index test, as necessary.
- 3.4 Soils Analysis/Evaluation:** Perform engineering analyses and develop design recommendations for the proposed foundations.
- 3.5 Prepare Draft Foundation Memo (Type Selection Report/Letter):** Prepare preliminary recommendations for foundations and provide a Type Selection Report (Geotechnical) with the Log of Test Borings.
- 3.6 Prepare Final Foundation Report:** Prepare detail report including design recommendations for foundation types and footing elevations lateral design capacities, pile foundation recommendations or spread footings.
- Discuss seismic considerations, evaluate the liquefaction potential and comment on the site soil conditions from this standpoint. The seismic design criteria will be based on Caltrans 2009 Seismic Design Criteria considering both deterministic and probabilistic approaches.
  - Prepare final Foundation Report for the bridge structure. The existing LOTB from the preliminary phase will be included as an as-built sheet.
  - Using the general plan as a base map, we will provide boring logs.
- 3.7 Design Review Consultation through final design.** Geotechnical subconsultant will coordinate with bridge designers through the design process to provide all necessary soils design values, LPILE computer software input, etc. needed for bridge design. Includes coordination of all geotechnical design parameters through the Independent Check phase of the project.

**Deliverables:**

- Draft Foundation Report

- Final Foundation Report
- Log of Test Borings (LOTB)

#### **TASK 4 – RIVER HYDROLOGICS/HYDRAULICS AND ROADWAY DRAINAGE**

Prepared in accordance with Tulare County Standards the drainage design will include the calculation of runoff quantities; hydraulic grade lines in cross culverts and pipes, ditch and gutter capacity calculations within the project limits. CONSULTANT shall coordinate water quality issues related to runoff from the structure with the relevant agencies and document on the plan .

**4.1 Meetings:** CONSULTANT will attend conference call and in-person meetings as necessary to complete the project. For budgetary purposes, a total of two (2) meetings are assumed.

**4.2 Data Review:** CONSULTANT will review available data provided by the County, including but not limited to the following:

- Caltrans Bridge Maintenance Reports for adjacent bridges crossing the Kings River (such as Olson Avenue upstream and Route 99 downstream). From this information, one can determine if any maintenance issues of concern have occurred. This helps to determine the necessary freeboard, span lengths and the type of bridge pier that will minimize debris capture.
- County of Tulare information on the existing bridge. There is some indication of scour at the existing bridge. The cause of this scour will be investigated with the County of Tulare and the Caltrans Maintenance Reports and the potential to adversely affect the proposed bridge.
- Historic hydraulic reports for the bridge analysis from Caltrans Structure Hydraulics (if available).
- Historic creek discharges from the United States Geologic Survey (if available).
- FEMA floodplain mapping from FEMA.

**4.2.1 Field Reconnaissance:** CONSULTANT will conduct a field reconnaissance to assess existing conditions in vicinity of the project site. CONSULTANT will identify potential hydraulic-related design problems to the Project Team.

**4.3 Review Hydrology Estimates:** FEMA and Pacific Hydrologies Inc. (PHI) have estimated discharges at the bridge site. Discharge will be evaluated by CONSULTANT to determine if they are reasonable. The Watermaster of the Kings River Water Association will also be contacted to determine if information on discharges near the bridge site is reasonable. If information is available, it will be reviewed to determine if the discharge estimates are reasonable. Peak discharges for the 50 and 100-year flood event discharges will be estimated.

CONSULTANT will update available gage records for the Kings River and plot time periods where flow has been historically high and historically lower for inclusion in any permit applications to the Central Valley Flood Protection Board (CVFPB).

**4.4 Obtain and Review HEC-RAS Model:** CONSULTANT will complete a request letter for Tulare County to send to Quincy Engineers, Inc. to request an electronic copy of the HEC-RAS models from Pacific Hydrologics Inc.

- 4.5 Hydraulic Analysis:** CONSULTANT will perform the hydraulic analysis to determine the 100-and 50-year flow characteristics, including water surface elevations (depths) and velocities. CONSULTANT will analyze the hydraulics for both existing and proposed conditions, including temporary falsework conditions. CONSULTANT will coordinate with the Project Team surveyors regarding the surveyed cross-sections.

Hydraulic parameters (water surface elevations and velocity) will be obtained from the Army Corps of Engineers HEC-RAS (Hydraulic Engineering Center River Analysis System) version 3.1.3 model based on: 1) The HEC model from Task 4.4, 2) channel cross-sections to supplement the topography in the model, 3) as-built data provided by Tulare County and Caltrans 4) and a reconnaissance level field investigation.

Variable starting water surface elevation and conditions will be utilized to insure that there is a reliable water surface elevation approximately 1 bridge length downstream of the bridge.

Calibration data will be researched to determine if any highwater elevations were recorded for the flood of record. If calibration data can be found, it will be used to calibrate the HEC-RAS model by running the HEC-RAS model and adjusting the model parameters until the discharge associated with the highwater marks can be replicated with the model.

The river reach will be described. Manning's "n" values for the channel and overbank will be estimated from field investigation and engineering judgment. CONSULTANT shall obtain the existing model from Tulare County as outlined in Task 4.4. The model topography will be checked using information obtained from surveyed river cross sections. This model will be the existing conditions model.

The HEC-RAS model will be re-run for three alternative proposed bridges and corresponding creek bank grading plans and river cross-sections. We will examine alternative bridges which are shorter than the existing bridge. If a shorter bridge which does not adversely impact the water surface elevation in this FEMA designated floodplain can be found, it will be considered.

Revise the channel geometry and re-run the HEC-RAS model for up to three falsework scenarios. Estimate the impact to the hydraulic variables including water surface elevation and velocity.

The hydraulic variables (water surface elevation, velocity etc.) will be determined for the 50- and 100-year discharges estimated under Task 4.3 above. Results from the Hydraulic analysis will be provided in both tabular as well as graphical output formats.

CONSULTANT will research bridge maintenance records for existing bridges upstream and downstream of the proposed bridge to determine if any maintenance challenges have occurred such as debris getting caught on the piers. This helps to determine the necessary freeboard, span lengths and the type of bridge pier that will minimize debris capture and, therefore, future maintenance.

**4.6 Estimate Local Scour and Channel Bed Degradation:** CONSULTANT will perform a bridge scour analysis to determine the scour potential per the methodology specified in the FHWA's HEC-18, *Evaluating Scour at Bridges*.

CONSULTANT will review maintenance records for the existing and adjacent bridges over the Kings River to determine if the river has degraded over time. CONSULTANT will contact the Tulare County Planning Department to determine if there is any past, existing or potential future gravel mining in or near the river.

Bridge maintenance records indicate that the piles under 10 of the piers are exposed up to 3.3-feet. The Structure Hydraulics Branch, however, rated the bridge a "5" for scour which means the bridge is not scour critical.

Contraction and abutment scour will be estimated using the methods described in the Federal Highway Administration (FHWA) Publication HEC-18, *Evaluating Scour at Bridges*

Up to three alternative pier configurations will be examined. The Colorado State University Equation (CSU) will be used for estimating local pier scour as recommended in the Federal Highway Administration (FHWA) Publication HEC-18, *Evaluating Scour at Bridges*

Bank Protection Parameters: CONSULTANT will perform calculations to determine the need for bank protection. If bank protection is required, parameters will be provided according to the Bank and Shore Protection Manual using a layered Caltrans Design. Bank protection extents will be dependent on the extents of creek bank grading required to conform the new bridge abutments into the existing topography.

**4.7 CVFPB Coordination:** CONSULTANT will coordinate, prepare for, and attend meetings with the Central Valley Flood Protection Board Floodway Protection Section. Bridge alternatives and hydraulic analysis results of those alternatives will be discussed to ascertain the potential for obtaining CVFPB permits for each proposed alternatives including freeboard requirements, need for floodway boundary change and/or variance for non-permissible work periods.

**4.8 Draft Bridge Hydraulic Study Report:** CONSULTANT will prepare a Draft Bridge Hydraulic Study Report for the project to summarize the recommendations and results from the hydraulic and scour analyses based on the bridge design data provided by the team. A draft outline of the report includes:

- Table of Contents, List of Tables, List of Figures
- Executive Summary
- Bridge History
- Basin and Drainage
- HEC-RAS Hydraulic Analysis
- Scour Analysis
- Bank Protection Design Parameters
- References
- Appendices

**4.9 Final Bridge Hydraulic Study Report:** \_CONSULTANT will prepare a Final Bridge Design Hydraulic Study Report for the project incorporating the comments from the Draft Report.

**4.10 Roadway Drainage Design:** CONSULTANT will prepare draft and final roadway drainage design including the calculation of runoff quantities; hydraulic grade lines in cross culverts and pipes, ditch and gutter capacity calculations within the project limits. Drainage runoff from the bridge will be collected in a drainage system within the structure and captured by storm drain systems in the approach roadways. Structure drainage will be conveyed to water quality treatment structure and then discharged to the river. CONSULTANT shall coordinate storm drainage and water quality issues related to runoff from the structure and document on the plans and in the report.

**Deliverables:**

- Draft Design Hydraulic Study Report
- Final Design Hydraulic Study Report
- Draft Roadway Drainage Design
- Final Roadway Drainage Design

## **TASK 5 – UTILITY COORDINATIONS**

Several major utility facilities are located within the project limits. Electrical service poles and vaults located outside of the existing right-of-way are in place under easement rights granted to Pacific Gas and Electric (PG&E). Aerial cable television lines are in place under license agreement with the pole owner. Medium and high pressure gas lines and fiber optic lines are adjacent to the existing right-of-way. Electrical service is provided by Pacific Gas and Electric, AT&T provides telephone communications and Southern California Gas Company provides gas services. The following tasks address coordination required per the Caltrans Right-of-Way Manual, Chapter 13 for utility relocations and protections:

**5.1 Preparation of Utility Conflict Maps and Relocation Letters:** Under this task CONSULTANT shall determine ownership/easement rights and shall prepare utility conflict maps for use by COUNTY and the utility companies in determining liability (cost share) of the utility relocations. Separate individual maps will be prepared for each utility involvement. The maps will be sent to each utility along with the required Relocation Letter. The Relocation letter will follow Caltrans format, but will be modified to request different times for the draft relocation plan, costs and liability claims to allow the right-of-way acquisitions to proceed concurrently with the utility relocation liability determination.

**5.2 Resolution and Coordination of Utility Easements:** Under this task, the CONSULTANT shall document the issues associated with the relocation of utilities and the various utility easements, both existing and proposed, in special memorandums and color exhibits for review by the COUNTY and the utility purveyors. Included in this task are meetings and coordination with COUNTY and the utility purveyors to determine the appropriate course of action for each issue.

**5.3 Preliminary Utility Relocation Plan Coordination:** This task addresses coordination of the preliminary utility relocation plans with the plans for the project. The affected utility company will complete their relocation plans with input from

CONSULTANT. For instance, utility sleeves, pole locations, clearances, and cost and schedules to relocate are typical items addressed under this task. Utility relocations are assumed to be completed during Stage 1 construction, and by the utility purveyors' own forces. As such, relocation plans for electrical, gas and communication facilities will not be included as work items in the project contract documents; instead, the relocated utilities will be shown as by others on the project plans. It will be necessary that the coordination of the phasing of utility relocations be addressed in the Special Provisions and on the Stage Construction Plans. Not included in this task is the extension of new utility services which do not currently exist through the project area.

- 5.4 Coordination of Utilities on Structures:** CONSULTANT shall coordinate with the existing utility purveyors in the project area to determine if any existing utilities or future utility extensions will be required through the structure(s). Requests for conduits in the structure(s) will be documented on Caltrans standard forms and transmitted to the COUNTY for review and approval.
- 5.5 Preparation of Report of Investigation Forms:** The utility relocations on the project may involve both franchise and non-franchise relocations. The Report of Investigation forms will be a critical part in finalizing the liability determination (actual cost charged to the project) and are a requirement of the typical Caltrans utility relocation process. Under this task, CONSULTANT will prepare the Report of Investigation forms for review and use of the COUNTY during the liability determination phase of the utility relocations.
- 5.6 Utility Agreement Support and Preparation of Notice to Owner letters:** CONSULTANT shall be available to support the COUNTY in the drafting of utility agreements for the relocation of utilities. It is assumed that the COUNTY will prepare and execute the Utility Agreements. The CONSULTANT shall prepare the Notice to Owner letters and provide them to the COUNTY for signature and subsequent delivery to the utility companies.
- 5.7 Utility Certification:** CONSULTANT shall prepare and sign the Utility Certification form (13-EX-26) and the Project Engineer's Certification of Utility Facilities form.

#### **TASK 6 – RIGHT OF WAY ACQUISITION SERVICES**

Right of Way Engineering, Appraisal, and Acquisition services will be in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 USC 4601 *et seq.*) and implementing regulation, 49 CFR Part 24; California Government Code Section 7267 *et seq.*; California Code of Civil Procedure Sections 1263.010 to 1263.620 and 1255.010 to 1255.060; Housing and Community Development Title 25; State of California, Department of Transportation, Right of Way Manual, as applicable

All right-of-way engineering appraisal and acquisition services for this project will be provided by the COUNTY with assistance by CONSULTANT.

#### **TASK 7 - TRAFFIC**

Under this task, the preliminary roadway and bridge alignment will be determined (final traffic control plans are included in Task 9 – Final Design). Preliminary striping plans and typical sections will be developed to confirm the location of the new bridge, coordination with the ultimate roadway alignment, roadway tapers during stage

construction and the final configuration of the roadway after completion of the project (interim two-lane roadway). Median openings for private driveways and turn pockets for public roadways will be located as necessary. Pedestrian, ADA, and bicycle facilities will be identified. The following tasks will be completed:

- 7.1 Roadway Alignment:** COSULTANT shall prepare exhibits for the single stage and two stage bridge options showing the relationship of the existing roadway, interim 2-lane roadway and ultimate 4-lane roadway for review by the project team and COUNTY. It is anticipated that the transitions from the existing 2-lane roadway to the single stage and two stage bridge will exceed the 200 foot federal funding limit. An exception for approach roadway funding will be required. Preliminary construction cost estimates for the interim approach roadways for both the single stage and two stage bridge options will be prepared. The CONSULTANT shall prepare this exception document.
- 7.2 Preliminary Pavement Delineation and Signing:** Utilizing the design centerline alignment determined above, CONSULTANT shall prepare preliminary pavement delineation and signing plans for County review. The intent of this plan is to determine the proposed roadway tapers, confirm locations and areas of roadway widening prior to the 35% plan submittal.
- 7.3 Stage Construction and Traffic Handling:** Under this task, CONSULTANT shall prepare preliminary stage construction and traffic handling plans for the construction of conforms from the interim 2-lane roadway to the existing roadway.

**Deliverables:**

- Alternative roadway alignment layouts
- Preliminary striping and signing plans
- Preliminary stage construction plans

## **TASK 8 – ENVIRONMENTAL PERMITTING**

Removal and replacement of the Avenue 416 Bridge over the Kings River in Tulare COUNTY will require environmental permits from the U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service, California Department of Fish and Game (DFG), Central Valley Regional Water Quality Control Board (RWQCB), Central Valley Flood Protection Board (CVFPB), and California State Lands Commission (SLC). Endorsements from the Kings River Conservation District and Alta Irrigation District may also be required.

- 8.1 Permit Strategy, Coordination, Management, and Meetings:** This task includes support for the COUNTY over the permitting process to adapt and modify the permit strategy, to coordinate with the COUNTY, County departments, regulatory agencies, and to attend permitting meetings. This task also includes management of the project as it relates to permitting. In addition to agency meetings, the project manager will also attend a project kick-off meeting and the project manager will attend up to four other meetings with the COUNTY, as needed.

**Deliverables:**

- Periodic updates of permit strategy
- Maintenance and update of permit schedule
- Conference calls, email coordination, etc.

The following agency meetings are included in the separate tasks noted below:

- Public Outreach meetings (2 meetings)
- CDFG meetings (2 meetings)
- CVFPB meetings (1 meeting)

**8.2.0 Army Corps of Engineers, Section 404 Permitting Support:** To facilitate Army Corps approval of the project, CONSULTANT will work with the design team to suggest ways that the project might be permitted under a Nationwide 404 Permit. However, should it be decided that an Individual Permit is necessary this is also included in CONSULTANT'S scope.

The general steps in the Nationwide Permit process are:

- Attendance at pre-application meeting;
- Preparation of an information package for each of the attending agencies including a draft impact map and a preliminary project description;
- Submission of a complete preconstruction notification (PCN);
- Compliance with related laws including Section 401 of the Clean Water Act (CWA Section 401), Section 7 of the federal Endangered Species Act (ESA Section 7) and Section 106 of the National Historic Preservation Act (NHPA Section 106);
- Verification letter from USACE and issuance of a permit

For projects that do not fall under a Nationwide Permit (NWP), USACE issues individual permits. The general steps in the individual permit process are:

- Attendance at a pre-application meeting;
- Preparation of an information package for each of the attending agencies including a draft impact map and a preliminary project description;
- Submission of a complete permit application;
- Issuance of a public notice describing the project and its potential effects;
- Review of and response to public notice comments;
- Compliance with related laws including Section 401 of the Clean Water Act (CWA Section 401), Section 7 of the federal Endangered Species Act (ESA Section 7) and Section 106 of the National Historic Preservation Act (NHPA Section 106);
- Compliance with the National Environmental Policy Act (NEPA) including the preparation of an environmental assessment and finding of no significant impact;
- Compliance with the U.S. Environmental Protection Agency's (USEPA) Section 404(b)(1) guidelines and a finding the proposed project is the least environmentally damaging practicable alternative (LEPDA).
- Completion of a public interest determination, and

- Issuance or denial of a permit.

USACE can only issue a permit if it determines the project complies with NEPA and other required laws, is the LEDPA, and is not contrary to the public interest.

**8.2.1 Attend a Pre-Application Meeting** Prior to submitting the permit application or preconstruction notification, CONSULTANT will attend a pre-application meeting with the USACE and other agencies, including USEPA, U.S. Fish and Wildlife Service (USFWS), CA Department of Fish and Game (CDFG), and the Central Valley Regional Water Quality Control Board (RWQCB) to discuss the proposed project and Kings River permitting issues. The meeting provides an important opportunity to review the project alternatives that have been considered to date, and ascertain whether there are other alternatives or project modifications to be addressed in the permit application. USACE pre-application meetings are held once a month in Sacramento and can be important in identifying hot button concerns and agency personnel that will be involved during the permit process. CONSULTANT will prepare a memorandum detailing the pre-application meeting.

**Deliverables:**

- Pre-application meeting agenda and information package to be sent to meeting attendees prior to meeting.

**8.2.2 Determine Extent of Impacts to Waters of the United States:** An accurate assessment of the amount of waters of the United States, including wetlands, to be affected by an activity is key to determining the type of permit that will be required by USACE. A Wetland Delineation Report for the proposed project was prepared in June 2007 and submitted to USACE for verification. Verification is still pending. CONSULTANT will work closely with COUNTY and project engineers on a final project design that minimizes impacts to wetlands to the extent practical, while achieving the purpose and needs of the project. Based on at least a 35% design set and the June 2007 wetland delineation report prepared for the project, CONSULTANT will determine the approximate extent of waters of the United States to be affected by the project both permanently and temporarily. CONSULTANT will provide to the COUNTY a memorandum explaining the results, along with maps indicating the impact areas.

If necessary, CONSULTANT will accompany USACE on a site visit to verify the existing wetland delineation map showing the extent of waters of the U.S. within the project area. Specifically, a wetland biologist will be present onsite with USACE and note any changes USACE will require before verifying the map. Following the field visit, the CONSULTANT will prepare an addendum to the existing wetland delineation report if impacts have changed from those indicated in the June 2007 Wetland Delineation Report, including a revised map showing the extent of waters of the U.S. within the project area and submit it to USACE for verification.

If the results indicate the project will not exceed the 0.5-acre threshold (or other term or condition of the NWP), the project may be authorized under a nationwide permit. Should this occur, Tasks 8.2.3 and 8.2.6 described below would not be necessary.

**Deliverables:**

- Project plan showing impacts to waters of the U.S., including wetlands.

**8.2.3 Prepare the Section 404(b)(1) Alternatives Analysis:** CONSULTANT will prepare an analysis of alternatives that meets the Section 404(b)(1) guidelines, taking into consideration costs, available technology and logistics, and will be used by USACE to make a permit decision. In developing the analysis, CONSULTANT will maximize use of previously prepared materials concerning alternatives, including the EIR/EA, and any additional information provided by the COUNTY to create a tiered review and make a demonstration of "mitigation sequencing" (avoidance, minimization, compensation). As such, the analysis will contain an evaluation of bridge alternatives and identification of the project LEDPA. A draft of the analysis will be furnished to the COUNTY for review before submission to USACE.

**Deliverables:**

- Draft and Final Alternatives Analysis

**8.2.4 Prepare a Habitat Restoration and Compensatory Mitigation Plan:** A Mitigation and Monitoring Plan has been prepared as part of the Environmental Documents. Separate from the Mitigation and Monitoring Plan prepared for the EIR and based on the project's anticipated impacts to riparian habitat, waters of the U.S., including wetlands, and mitigation needed for aquatic species, ICF Jones & Stokes will research and identify appropriate and acceptable compensatory wetland and riparian mitigation options, including reviewing the feasibility, costs, and timing of each that will satisfy the existing Mitigation and Monitoring Plan and the regulatory agencies. Following discussions with the COUNTY, CONSULTANT will prepare a draft habitat restoration and compensatory mitigation plan. The plan will satisfy mitigation measures BR-1, BR-2, and BR-3 in the EIR. If appropriate, the plan will include compensation for impacts to the SJ Kit fox and/or VELB. A draft of the plan will be furnished to the COUNTY for review before submission to USACE, CDFG or other agencies requiring approval. Once the draft plan is approved, a final habitat restoration and compensatory mitigation plan will be developed that includes the information for implementing and monitoring the onsite restoration.

**Deliverables:**

- Draft and Final Habitat Restoration and Compensatory Mitigation Plan, including chapters and detailed figures addressing the following:
  - Project Description, Impacts, and Proposed Mitigation (responsible parties, basis of design, site conditions, long-term goals)
  - Compensatory Mitigation Success Criteria and Monitoring (monitoring methods, photo-documentation, as-built drawings)
  - Implementation Plan (site preparation, planting and seeding plans and methods, irrigation, as-built drawings)
  - Maintenance During the Monitoring Period (irrigation, weed management, inspections, monitoring reports, contingency measures)
  - Completion of Mitigation (notification instructions)
  - Contingency Measures (initiating procedures, alternative locations, funding mechanism)

- o Long-term Management (property ownership, management plan)  
The final Plan will follow the USACE standard template for mitigation sites and include all necessary figures, details, and specifications, for implementation and approval.

**8.2.5 Submit the Individual Permit Application (or Pre-Construction Notification for NWP):** Submission of a "complete" individual permit application is an important step and the start of the formal review process by USACE. The application package will include a completed application form (ENG 4345), project purpose and need, project description, project impacts, addresses of adjoining property owners (to be provided by the COUNTY), and other information required in regulations to make the application complete. To advance the permit process, CONSULTANT will prepare and submit with the application a draft public notice that can be used by USACE. In addition, CONSULTANT will submit copies of the Biological Opinion, SHPO letter, 404(b)(1) alternatives analysis, and conceptual mitigation plan. Although these documents are not required for a complete permit application, they will be needed by USACE to make a permit decision. Preparing draft documents for USACE and early submission of required materials encourages issue resolution and promotes a shorter review timeframe. A draft of the permit application will be furnished to the COUNTY for review before submission to USACE.

**Deliverables:**

- Draft permit application or PCN for COUNTY review
- Final permit application

**8.2.6 Respond to Public Notice Comments:** Once it has received a complete application for the individual permit, USACE will publish a public notice. The public notice is sent to interested parties, including adjoining property owners (based on address information provided by the COUNTY), individuals, agencies, and organizations. Comments received on the public notice are sent to the applicant for response. CONSULTANT, coordinating with the project engineers and the COUNTY, will prepare and submit to the USACE a response to all public notice comments. CONSULTANT will consult with organizations or individuals as necessary when responding to comments. A draft of the response to public notice comments will be furnished to the COUNTY for review before submission to USACE.

**Deliverables:**

- Draft comment responses
- Final comment responses

**8.2.7 Manage the USACE Permit Review Process:** Representing the COUNTY, CONSULTANT expects regular coordination with USACE to answer questions, address concerns and otherwise keep review process on track. CONSULTANT will seek opportunities to facilitate and expedite USACE's review, including drafting the USACE permit decision document and special conditions for USACE permit. This task assumes up to two meetings with USACE.

**Deliverables:**

- Communication memoranda
- USACE meetings (2 meetings including pre-application meeting)

- Obtain USACE Final Permit Approval

### **8.3 Clean Water Act, Section 401 Water Quality Certification Support**

#### **8.3.1 Prepare the CWA Section 401 Water Quality Certification Application:**

CONSULTANT will compile the necessary information and submit a complete application package to RWQCB. The application must include a copy of the 404 permit application, a Streambed Alteration Agreement with DFG, or copy of the 1602 notification package; and evidence of CEQA compliance. A fee based on the acreage of fill also will be required at the time of application filing and will need to be provided by the COUNTY. The base fee for the application is \$640 and is all that is needed to file the application. An additional fee of \$6.40 per linear feet of stream affected or \$2752 per acre of waters filled, whichever is greater, will be required before certification can be given.

#### **8.3.2 Manage the RWCQB Certification Process:** On behalf of the COUNTY, CONSULTANT will coordinate regularly with RWQCB to answer questions, address concerns and otherwise keep the review processes on track. CONSULTANT will work with the RWQCB to finalize the CWA Section 401 water quality certification, including conditions.

##### **Deliverables:**

- Draft 401/WQC Application
- Revised Draft 401/WQC Application
- Obtain 401 Permit

### **8.4 Assist with Fish and Game Code Section 1602 Compliance**

#### **8.4.1 Prepare the DFG 1602 Streambed Alteration Agreement Notification:**

CONSULTANT will prepare the required SAA notification package to be filed with DFG. The application package will describe the project features; construction period; construction methods; impacts on vegetation, fish, and wildlife; and the proposed mitigation and/or restoration plan prepared in connection with USACE permitting. This plan may be enhanced to include other species and resources of particular interest to the DFG such as nesting raptors and bats. As with the RWQCB and a Section 401 water quality certification, DFG will require evidence of CEQA compliance prior to issuing a SAA for the project.

#### **8.4.2 Manage the DFG Approval Process:** On behalf of the COUNTY, CONSULTANT will coordinate regularly with DFG to answer questions, address concerns and otherwise keep the review processes on track, including up to four meetings with the DFG representatives. CONSULTANT will work with the DFG to finalize the 1602 streambed alteration agreement, including conditions.

##### **Deliverables:**

- Draft SAA Applications
- Revised SAA Applications
- Responses to Information Queries from DFG
- Responses to Proposed Terms and Conditions in draft SAA
- Obtain SAA

- 8.5 Assist with Central Valley Flood Protection Board Encroachment Permit:** CONSULTANT will submit the necessary notifications and prepare the necessary application forms to allow work within the Kings River floodway. Prior to submitting the application, it will need to be endorsed by the local maintaining agency, if any. The application materials will include the project description, photographs of the floodway, construction drawings, and technical studies including hydraulic and scour analysis, and geotechnical reports if available. If the project does not land on the Boards consent calendar, the project manager will attend the Board meeting.

**Deliverables:**

- Draft CVFPB Applications
- Revised CVFPB Application
- Responses to Information Queries from CVFPB
- Attendance at the Board meeting
- Obtain approved CVFPB permit

- 8.6 Assist with State Lands Commission Use Lease:** A new Land Use Lease may be required from the SLC for the Project or the existing lease may need to be amended. Under this task, CONSULTANT will prepare a formal request to be sent to the SLC and determine if a new land use lease is necessary. A response from SLC typically takes 4 to 6 weeks. If a new Land Use Lease is necessary, CONSULTANT will prepare the necessary application for a Land Use Lease. A \$25 application fee and \$1,500 expense deposit for the processing fee will be required at the time of submittal. If an amendment is necessary, CONSULTANT will prepare the necessary materials requesting an amendment to the existing lease.

**Deliverables:**

- Draft SLC Use Lease Application
- Revised SLC Use Lease Applications, and amendment if necessary
- Responses to Information Queries from the SLC

**8.7 Mitigation Strategy, Coordination, and Purchase**

- 8.7.1 Compensatory Mitigation Strategy:** The EIR/EA identified the need for compensatory mitigation for project effects on valley elderberry longhorn beetle, wetlands, and riparian habitat. Assuming there are no on site creation opportunities and based on the ratios negotiated with agencies during Section 7 consultation and the permitting process described above, CONSULTANT specialists will arrange for the COUNTY to purchase mitigation credits at appropriate and approved mitigation banks. This coordination effort will include contacting banks and making arrangements for the COUNTY to set up agreements and make payment to secure the credits. As the effort needed to make these arrangements can affect the project schedule, we have assumed that appropriate, approved banks are available in the area and have the necessary number of credits available for purchase.

**Deliverables:**

- A memorandum and matrix summarizing the results of the off-site mitigation investigations including a list of mitigation banks in the area, credits available, cost estimates per acre, and location. The

memorandum and matrix will provide the COUNTY important information they will need to decide where to purchase mitigation bank credits, in lieu fee credits, or create habitats offsite.

- 8.7.2 Non-Compensatory Mitigation Strategy:** To ensure that the bridge design and construction specifications fully comply with environmental regulatory agency requirements and the mitigation measures specified in the EIR/EA, the EIR/EA mitigation and any additional requirements identified during the permitting coordination above will be reviewed together and a compliance strategy will be developed. This strategy is separate from mitigation plans developed for regulatory agency approval as it would include mitigation measures outside of their purview. The strategy will assist the COUNTY by identifying all measures that must be implemented prior to and throughout project construction, and will identify unique or special services that may be needed. For example, the strategy would include bridge design accommodations for bats, preconstruction surveys and on-site monitors and periodic reporting requirements. This scope of work includes, as an optional task, conducting the surveys, or monitoring. The surveys are described under the optional Task 13, below.

## **TASK 9 – FINAL DESIGN (PLANS, SPECIFICATIONS, ESTIMATE)**

- 9.1 Preliminary Engineering (35% PS&E):** This task includes work required to develop and study roadway and bridge alternatives and develop a preferred project design concept for environmental approval, permitting and final design. This work includes the following:

**9.1.1 Preliminary Roadway Design:** The 35% roadway design submittal will conform with the 35% bridge design and is intended to show the initial design concept and how major components of the project will be addressed to facilitate COUNTY approval of the roadway geometries. Identification of project impacts, (i.e. right-of-way requirements including temporary easements for construction and utility relocations) are key objectives of the 35% PS&E. Plans will be prepared in conformance with County standards and the May 2006 Caltrans Standard Specifications in U.S. (imperial) units. The proposed structural sections will be developed based on pavement design methods from Caltrans Highway Design Manual and input from the project Geotechnical Engineer. The proposed sections will be based on year 2030 ADT (20 year); a truck percentage within the ADT agreed to by the Project Team, and native material R-values based on the soils survey. Draft outline project Special Provisions are included in this submittal.

The preliminary roadway design will include the following

- Typical Sections (1 sheet)
- Plan and Profile (20 Scale) (2 sheets)
- Drainage Layout (1 sheet)
- Pavement Delineation Plans (1 Sheet)
- Sign Plans (1 Sheet)
- Traffic Control Plans (1 Sheet)
- Cross Sections for all roadways (3 Sheets)

- 9.1.2 Prepare Preliminary Bridge Design:** This task includes work required to develop three bridge replacement concepts. CONSULTANT will involve Caltrans and the

Department of Fish and Game and other agencies as necessary in the development of these alternatives, including the following:

- Prepare Bridge Planning Study Drawings: Prepare drawings that include preliminary plan, elevation, and typical section for three bridge alternatives on the preferred roadway alignment (3 – 11 x 17 sheets).
- Prepare conceptual bridge aesthetics exhibits for the pedestrian barriers, vehicular barriers, and monuments at the end of the bridge wingwalls. Three concepts will be prepared for review and approval by the COUNTY.
- Prepare Bridge Planning Estimates: Prepare engineer's estimate of probable cost on a cost per square foot basis for each bridge option. Costs will be based on preliminary quantities developed in general conformance with Caltrans Bridge Design Aids and will include approximately 25% contingency.

**9.1.3 Prepare Draft and Final Project Memorandum:** Prepare a short technical memorandum that includes:

- Summary of the components of each alternative including preliminary plans, right-of-way (temporary easements), construction staging and access, utility relocation and accommodation, and anticipated design exceptions
- Discussion of the pros & cons of each alternative
- Preliminary Quantities and Estimated Construction Cost for each alternative, including environmental mitigation costs
- Recommended Alternative for Final Design
- List of design decisions needed by the COUNTY
- List of issues that will be resolved during final design

**Deliverables:**

- Draft Drainage Report
- Project Concept Exhibit
- Preliminary Roadway Plans
- Preliminary Bridge Plans & Estimates
- Draft & Final Project Memorandum

**9.2 Final Design (65% PS&E):** Upon approval of the design memorandum, the CONSULTANT will prepare and submit the draft plans, specifications, and estimate to the COUNTY. This scope of work is based on the approximate sheet count listed below. Sheets will include necessary details to address comments from COUNTY, regulatory agencies, Caltrans, etc.

Title Sheet

Road Plans

Plan and Profile (2 Sheets)

Contour Grading and Drainage Sheets including detailed slope grading, and areas of rock slope protection (3 Sheets)

Drainage Profiles, Details and Quantity Sheets (2 Sheets)

Construction Details for detailed grading, approach guardrails and crash cushions, and pedestrian access (3 Sheets)

Utility Relocation Plans (Gas, Elec., Tel. Fiber Optic) (1 Sheet)

Construction Area Signs (1 Sheet)

Erosion Control Plans (1 Sheet)  
Pavement Delineation (1 Sheet)  
Sign Plans (1 Sheet)  
Traffic Handling Plans/Construction Phasing (1 Sheet)  
Bridge Aesthetics Plans (4 Sheets)  
Roadway Cross Sections for all roadways (minimum 50 foot interval) (3 Sheets)

Bridge Plans

(Cast-In-Place Post-Tensioned Box Girder Bridge shown, Precast similar)

General Plan  
Deck Contours  
Foundation Plan  
Abutment Layout  
Abutment Details No. 1  
Abutment Details No. 2  
Pier Layout  
Pier Details No. 1  
Pier Details No. 2  
Typical Section  
Girder Layout No. 1  
Girder Layout No. 2  
Girder Layout No. 3  
Additional Deck & Soffit Reinforcing No. 1  
Additional Deck & Soffit Reinforcing No. 2  
Additional Deck & Soffit Reinforcing No. 3  
Hinge Details  
Architectural Details  
Joint Seal Assembly Details  
Structure Approach Slab Details  
Utility Details  
Log of Test Borings No. 1  
Log of Test Borings No. 2

**9.2.1 Bridge Design:** CONSULTANT will prepare structural calculations and bridge plans for the bridge type and configuration agreed upon during the Preliminary Engineering task. This submittal will represent complete, unchecked set of bridge construction documents to be submitted to the COUNTY. The bridge design will be performed in general accordance with the following:

- California Department of Transportation (Caltrans) Standard Plans & Specifications
- Caltrans Bridge Design & Detailing Manuals
- AASHTO LRFD Bridge Design Specifications with 2006 Interims and Caltrans Addenda (Blue Sheets)
- Caltrans Seismic Design Criteria, Version 1.4

**9.2.2 Approach Roadway Design:** CONSULTANT will prepare the approach roadway design in general conformance with COUNTY Standard, AASHTO "A Policy on Geometric Design of Highways and Streets" and the Caltrans Highway Design Manual, Caltrans Standard Specifications and Standard Plans. Final grading and drainage details will be developed as well as new/existing roadway conformance details, as required. A key element of this plan submittal is

completion of the utility relocation plans which will be prepared by Utility companies, but included in the plan set for information only.

**9.2.3 Engineer's Estimate of Probable Construction Cost:** CONSULTANT will provide cost estimates at the 65% PS&E design submittal. CONSULTANT will prepare detailed quantities in accordance with Caltrans standard specifications and payment items. The engineer's estimate of probable construction cost ("Marginal Estimate") for the project will be prepared using the most recent and relevant Caltrans Cost Data, CONSULTANTS cost data, as well as the COUNTY's cost data.

**9.2.4 Contract Specifications/Special Provisions:** CONSULTANT will prepare the contract Special Provisions for the project based in General on Caltrans' Standard Special Provisions, Caltrans Standard Specifications, and COUNTY construction contract standards.

**Deliverables:**

- Final Drainage Report
- Three full-size sets of 65 percent plans(22X34)
- One half-size set of 65 percent plans (11X17)
- Three sets of annotated Special Provisions
- Three copies of Cost Estimate
- One set of all draft (unchecked) Design Calculations

**9.3 90% PS&E**

**9.3.1 Bridge Independent Check:** The 65% PS&E will be sufficiently completed by CONSULTANT so that an independent bridge design check can be completed. An independent engineer, who was not involved in the design will re-analyze the bridge, verify member capacities and review the special provisions for the bridge. The checker will provide a list of comments and a set of "red-marked" plans that communicate issues uncovered during the preparation of the independent check. Issues raised by the checker will be discussed with and resolved by the designer and checker. The final design will reflect agreement between the two engineers.

**9.3.2 Response to Comments:** CONSULTANT will provide written responses to Independent Check comments and COUNTY comments to 65% PS&E.

**9.3.3 Update Bridge and Roadway PS&E:** CONSULTANT will update the PS&E based on the agreement and resolution of comments for final submittal to the COUNTY. This submittal will represent the final contract documents that will be issued for bid and construction.

**Deliverables:**

- Three full-size sets of Plans (22 x 34)
- Two half-size set of Plans (11 x 17)
- Three sets of annotated Special Provisions
- Three copies of Cost Estimate
- Three sets of checked Bridge Design Calculations
- Three sets of Foundation Report with Log of Test Borings
- Three sets of Hydraulic Design Report

- 9.4 100% Design:** Following the reviews by the COUNTY, agreed-upon revisions shall be made to the 90% PS&E. The specifications, plans, and other bid documents will be submitted to the COUNTY for final approval.

**Deliverables:**

- Three full-size sets of Plans (22 x 34)
- Three sets of 100 Percent Bidding Documents
- Three copies of Cost Estimate
- Copies of all updated Design Calculations

- 9.5 Deliver Final PS&E:** After receipt of final approval, an original set of stamped and signed plans, two camera ready copies of the bidding documents and an engineer's estimate will be submitted to the COUNTY for its use in soliciting construction bids. The CONSULTANT shall provide the quantity calculations to the COUNTY for use in administering the contract.

**Deliverables:**

- One set of vellum Final plans
- Two camera-ready sets of Bidding Documents
- Final Plans on compact disk in AutoCAD 2007 format
- Bidding Documents on compact disk in MS Word format
- Engineers Estimate on compact disk in MS Excel format
- Three full-size sets of Plans (22 x 34)
- Two sets of independently checked Bridge Design Calculations
- Two sets of independently checked Quantity Calculations
- Copies of all permit documents

**TASK 10 - SCHEDULE**

CONSULTANT shall prepare and maintain a project schedule, as identified in the tasks above for right-of-way, PS&E preparation, environmental permitting and utility relocations. Schedule will be prepared in Microsoft Project format and will be updated monthly throughout the course of the project. Please refer to attached project schedule.

**TASK 11 – VALUE ENGINEERING ANALYSIS (OPTIONAL)**

The CONSULTANT shall assist with preparing and distributing a Value Analysis (VA) study of the project described below:

VA Study to comply with NHS VE mandate and follow the Caltrans VA methodology as outlined in the Chapter 19, "Value Analysis" of the Project Development Procedures Manual (PDPM) and detailed in the Caltrans VA Team Guide and Report Guide – Third Editions, April 2003. VA studies identify and evaluate alternative project solutions and provide recommendations to decision-makers.

The VA Study is to follow the activities as defined in the Caltrans VA Activity Chart. The list of VA Study participants will be developed by the CONSULTANT, the COUNTY, and Caltrans and will include key subconsultant representatives. The study will be five or six days. A pre-study meeting will be scheduled no later than the week prior to the start of the study. Once the Draft report has been reviewed the project stakeholders, and

implementation meeting will be conducted to resolve the disposition of the VA Alternatives presented in the report.

The scope of the work shall include but is not limited to the following:

- Provide a qualified, independent Certified Value Specialist (CVS) team leader to lead a VA study in accordance with Caltrans value methodology.
- Provide VA study documentation in accordance with the Caltrans VA Report Guide.
- Conference rooms will be provided by the COUNTY.
- Ensure that applicable data and correspondence, any other relevant information necessary for the VA study is collected, developed and distributed.
- Facilitate VA Team Meetings.

**Deliverables:**

- Develop the draft VA study charter (Attachments A, B and C per the Caltrans Team Guide).
- Complete the Preliminary VA Report with input/review of VA Team and technical reviewers in accordance with the VA Report Guide – Third Edition and with the following items:
  - A distribution list for the VA reports will be developed with the Project Manager.
  - Submit Preliminary VA Report; no more than 2-weeks following Initial VA Presentation, as specified in the report distribution list.
  - The preliminary report shall be in electronic format and distributed to the VA team, key technical reviewers and the project stakeholders.
- Coordinate with COUNTY and Caltrans on the project stakeholders' responses to the preliminary VA report and prepare for an implementation meeting to resolve the disposition of the VA alternatives, finalize the VA study reportables (costs, performance and value indices).
- Submit Final VA Report as specified in Caltrans VA Report Guide – Third Edition. Report should be submitted no more than 3 weeks following VA Final Presentation. Final VA report shall be in an electronic format.
- Submit electronic copies of the updated VA study summary reports and updated Executive Summary as needed to document the resolution of conditionally approved alternatives as specified.

**TASK 12 – ASSISTANCE DURING BIDDING**

The COUNTY will advertise the project for bidding and distribute the plans to prospective bidders. The COUNTY's project coordinator will be the designated person to receive contractor inquiries. The CONSULTANT's project manager and project staff will assist the COUNTY as requested during bidding. The work may include answering questions, providing consultation and interpretation of the construction documents, and assisting the COUNTY in preparation of addenda to the PS&E during the advertisement period. Attending preconstruction meetings or bid opening and analysis of bids will also be provided if requested.

**TASK 13 – DESIGN SUPPORT DURING CONSTRUCTION (NOT INCLUDED)**

The CONSULTANT's project manager and project staff will be available to assist the COUNTY during construction and provide construction support services. The scope of work for construction support services will be determined at a later date and will be under separate contract.

#### **TASK 14 – TWO STAGE BRIDGE CONSTRUCTION (OPTIONAL)**

Should a two stage bridge construction alternative be chosen at the 35% submittal phase due to schedule, right-of-way, or environmental challenges, additional work items will be required to augment the single stage bridge scope of work described in Task 1 through Task 10. The two stage bridge construction alternative will require a portion of the bridge, Stage 1, be constructed to the north of the existing bridge, allowing traffic to remain on the existing bridge during construction of Stage 1. Once Stage 1 construction is complete, temporary approach roadways will be constructed at each end of the bridge and traffic will be shifted from the existing bridge to the new Stage 1 portion of the bridge. Once traffic is shifted, the existing bridge will be removed and the remainder of the new bridge, Stage 2, will be constructed on the existing alignment. Upon completion of Stage 2 construction, traffic will be shifted to the interim alignment along the south portion of the new bridge.

The following tasks will be completed:

- 14.1 Final Design (65% PS&E):** The draft plans, specifications, and estimate will include the two stage bridge construction alternative, requiring additional sheets from those listed in Task 9.2. The additional sheets are listed below:

Road Plans

Stage Construction and Traffic Handling Plans for two stages (4 additional sheets)

Bridge Plans (Assuming Cast-In-Place Post-Tensioned Box Girder Bridge)  
Typical Section No. 2

- 14.1.1 Bridge Design:** CONSULTANT will prepare additional structural calculations and bridge plans for the two stage bridge construction alternative including; calculations and bridge plans for the stand-alone Stage 1 portion, calculations and bridge plans for Stage 2, calculations and bridge plans for the combined bridge structure (Stage 1 and Stage 2), and closure pour calculations and details.
- 14.1.2 Approach Roadway Design:** CONSULTANT will prepare the additional approach roadway design required for the two stage construction alternative including the additional staging and traffic handling plans.
- 14.1.3 Engineer's Estimate of Probable Construction Cost:** CONSULTANT will prepare detailed quantities and engineer's estimate of probable construction cost for the two stage construction alternative.
- 14.1.4 Contract Specifications/Special Provisions:** CONSULTANT will prepare the additional contract Special Provisions required for the two stage construction alternative.

- 14.2 90% PS&E Bridge Independent Check:** The independent bridge design will be completed as discussed in Task 9.3.1. The independent bridge design will include the additional structural calculations required for the two stage bridge construction and review of the 65% design plans.
- 14.3 Utility Coordination and Relocation Plans:** The two stage bridge construction will require additional utility coordination with the utility companies. Utility relocations will occur between stages, prior to the removal of the existing bridge. Utility relocation staging plans will be required to encourage utility relocations with minimal impacts to the traveling public, the project schedule, and the project budget. This task will include the preparation of Utility Relocation Plans to be included in the 65% PS&E.

#### **TASK 15 – ADDITIONAL GEOTECHNICAL FIELD EXPLORATION**

The field exploration program in the base project assumes that a cast-in-place post-tensioned box girder bridge with 4 piers in-stream will be designed. To avoid potential construction claims it is recommended that each pier be represented by a soil boring. Since the bridge design is not finalized and a precast superstructure would require shorter spans and additional piers in the river, it is prudent to assume that additional borings may be required in the river from the bridge deck. The two abutment borings and two river borings will remain as in the base scope. A separate budget has been provided per additional soils boring. Traffic Control will be provided by the COUNTY or alternatively by the CONSULTANT as an optional service. No lane closures will be performed after dark if possible.

#### **TASK 16 –GEOTECHNICAL FIELD EXPLORATION TRAFFIC CONTROL**

Traffic Control will be provided by the COUNTY or alternatively by the CONSULTANT as an optional service. Traffic control will involve the closing of one lane of traffic over the bridge during boring operations and will include the necessary flaggers and cones. No lane closures will be performed after dark if possible. It is assumed that 3 days will be required for each soil boring.

#### **WORK PERFORMED BY THE COUNTY**

The COUNTY will perform tasks as identified above and the following:

- Review and Comment
- Project Approval
- Environmental Documentation
- Right of way engineering, appraisal, negotiation, acquisition, and certification
- Provide Traffic Data (TI) for Pavement Design
- Coordination with Caltrans
- Coordination of Public Meetings
- Payment of all permitting fees
- Traffic Control for Geotechnical Borings
- PS&E Approval
- Advertise for Bids
- Award of Construction Contract
- Construction Management

## **ASSUMPTIONS**

The following assumptions were made in generating this proposal.

1. Street lighting will not be provided due to the rural location of the bridge.
2. Tulare County encroachment permit will be provided at no cost.
3. One lane on the bridge will be closed during the borings from the deck. Traffic control will be provided by CONSULTANT.
  - The two bridge deck borings will be drilled using two separate drill rigs (and required casing tools etc) operating simultaneously to reduce traffic impacts and closures.
4. The HEC-RAS model of the river is available from Tulare County in electronic format. If the models supplied by Tulare County include outdated, invalid, or insufficient topography, as determined from surveyed river cross sections, or if CHECK-2 or CHECK-RAS programs show significant errors in the model, additional scope and budget will be required to create a new HEC-RAS model.
5. No Conditional Letter of Map Revision (CLOMR) will be required; if a CLOMR is required, a separate task order will be necessary.

## **Permit Application Assumptions**

1. It is assumed that the King River Bridge was not identified in the cultural resources reports prepared for the project as being eligible for listing in the NRHP.
2. USACE will not require additional cultural resources surveys or documentation than what has already been prepared for the project.
3. The County will provide copies of all environmental documents including the Biological Assessment, Biological Opinion, Wetland Delineation, Cultural Resources Reports and Hydraulic/Scour Study.
4. No additional field surveys will be required for fish, wildlife, cultural, or botanical resources in order to submit complete application packages.
5. A new ESA Section 7 consultation will not be required.
6. USACE will accept the Biological Opinion for the project.
7. USACE will not have comments on the SHPO letter.
8. All required fees for the filing of the 401 water quality certification application, 1602 SAA notification package, SLC Land Use Lease application, the cost of any on-site restoration or relocation of biological resources, and the purchase of mitigation credits will be paid by the COUNTY.
9. A mitigation bank approved by USACE has acceptable compensatory mitigation credits for waters of the U.S. including wetlands.
10. A mitigation bank approved by the USFWS has acceptable compensatory mitigation credits for valley elderberry longhorn beetle.
11. Mitigation credits for riparian habitat can be purchased at one of the banks used for other necessary compensatory mitigation.



TOTAL FEE BASIC SERVICES \$ 1,247,771	
BRIDGE COST = \$2008 FT. x 61" WIDE x 180' LONG =	\$12,860,000
CONCRETE CURB AND GUTTER, 12" x 48" WIDE x 180' LONG ± =	\$460,000
BRIDGE REMOVAL, 180' x 61" WIDE x 180' LONG ± =	\$293,500
CONFINEMENT (SEE MAT 259) =	\$17,298,375
TOTAL ESTIMATED CONSTRUCTION COST	\$17,298,375
CIBQ FEE AS A % OF CONSTRUCTION =	3.87%
TOTAL DESIGN FEE AS A % OF CONSTRUCTION =	7.84%
PERCENTAGE OF CONSTRUCTION COST =	18.97%
PERCENTAGE OF TOTAL PROJECT COST =	18.97%

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
*NOT TO BE USED ON OVERHEAD MULTIPLIER OF .84% AND 10% FEE				
*SEE BOOKS OF WORK FOR ASSUMPTIONS				
BRIDGE COST = \$20000 FT. x 61' WIDE x 100' LONG =				\$12,600,000
CONCRETE COST = 100' LONG x 10' WIDE x 4' DEEP = 4000 YD <sup>3</sup> =				\$400,000
BRIDGE REMOVAL, 1 BRIDGE = 100' LONG x 10' WIDE x 4' DEEP =				\$200,000
CONCRETE (SEE ITEM 259) =				\$17,200,000
TOTAL ESTIMATED CONSTRUCTION COST				\$17,200,000
TOTAL FEE BASIC SERVICES \$				1,247,771
CIRGO FEE AS A % OF CONSTRUCTION =				3.87%
TOTAL DESIGN FEE AS A % OF CONSTRUCTION =				7.84%
TOTAL FEE BASIC SERVICES AS A % OF CONSTRUCTION =				14.81%
TOTAL FEE AS A % OF CONSTRUCTION =				18.57%



TOTAL FEE OPTIONAL SERVICES \$	316,666
TOTAL FEE BASIC SERVICES + OPTIONAL SERVICES \$	1,564,437

LUMP SUM COST SUMMARY	
<b>Basic Services</b>	
<b>Optional Services</b>	
Value Engineering Analysis	\$ 80,350
Assistance During Bidding	\$ 21,400
Design Support During Construction (Not Included)	\$ -
Two Stage Construction	\$ 179,916
Additional Geotechnical Field Exploration (Per Soil Boring)	\$ 29,000
Additional Geotechnical Field Exploration Traffic Control (Per 3 Days)	\$ 6,000
<b>Maximum Lump Sum Fee</b>	<b>\$1,564,437</b>

\$12,900,000	
BRIDGE COSTS = \$200/90 FT. 48" WIDE x 800' LONG =	
\$3,240,000	
STAGED CONSTRUCTION + 25% OF BRIDGE COST =	
\$810,000	
ROAD COSTS = \$250/52 FT. x 40' WIDE x 300' LONG 1/2 =	
\$960,000	
BRIDGE REMOVAL = \$100/52 FT. 48" WIDE x 800' LONG =	
\$265,500	
CONTINGENCIES (AT 25%)	
\$4,365,075	
TOTAL ESTIMATED CONSTRUCTION COST	\$21,776,575

NORMAL  
 OVERTIME

Combined  
 Multiplier %  
 173.84%  
 173.84%

Fee %  
 10.00%  
 10.00%

BILLING INFORMATION

CALCULATION INFORMATION

Name/Classification <sup>1</sup>	Loaded Hourly Billing Rates		Effective Date of Hourly Rate From To	% Escalation Increase	Actual Hourly Rate and/or Average Hourly Rate <sup>2</sup>	Hourly Range for Class
	Straight	Overtime				
Todd M. Goolkasian, Project Manager	\$200.58	N/A	1/1/2010 12/31/2010	0.00%	\$66.55	
Todd M. Goolkasian, Project Manager	\$210.61	N/A	1/1/2011 12/31/2011	5.00%	\$69.88	
Todd M. Goolkasian, Project Manager	\$221.14	N/A	1/1/2012 12/31/2012	5.00%	\$73.37	
Todd M. Goolkasian, Project Manager	\$232.20	N/A	1/1/2013 12/31/2013	5.00%	\$77.04	
Thomas L. Swayze, QA/QC Manager	\$197.03	N/A	1/1/2010 12/31/2010	0.00%	\$65.37	
Thomas L. Swayze, QA/QC Manager	\$206.88	N/A	1/1/2011 12/31/2011	5.00%	\$68.64	
Thomas L. Swayze, QA/QC Manager	\$217.22	N/A	1/1/2012 12/31/2012	5.00%	\$72.07	
Thomas L. Swayze, QA/QC Manager	\$228.08	N/A	1/1/2013 12/31/2013	5.00%	\$75.67	
Maureen C. Goolkasian, Project Administrator	\$182.71	N/A	1/1/2010 12/31/2010	0.00%	\$60.62	
Maureen C. Goolkasian, Project Administrator	\$191.84	N/A	1/1/2011 12/31/2011	5.00%	\$63.65	
Maureen C. Goolkasian, Project Administrator	\$201.44	N/A	1/1/2012 12/31/2012	5.00%	\$66.83	
Maureen C. Goolkasian, Project Administrator	\$211.51	N/A	1/1/2013 12/31/2013	5.00%	\$70.18	
Benjamin Ruiz, QA/QC Coordinator	\$123.45	N/A	1/1/2010 12/31/2010	0.00%	\$40.96	
Benjamin Ruiz, QA/QC Coordinator	\$129.63	N/A	1/1/2011 12/31/2011	5.00%	\$43.01	
Benjamin Ruiz, QA/QC Coordinator	\$136.11	N/A	1/1/2012 12/31/2012	5.00%	\$45.16	
Benjamin Ruiz, QA/QC Coordinator	\$142.91	N/A	1/1/2013 12/31/2013	5.00%	\$47.42	
Shawn M. Cullers, Project Engineer	\$100.85	N/A	1/1/2010 12/31/2010	0.00%	\$33.46	
Shawn M. Cullers, Project Engineer	\$105.89	N/A	1/1/2011 12/31/2011	5.00%	\$35.13	
Shawn M. Cullers, Project Engineer	\$111.19	N/A	1/1/2012 12/31/2012	5.00%	\$36.89	
Shawn M. Cullers, Project Engineer	\$116.74	N/A	1/1/2013 12/31/2013	5.00%	\$38.73	

**BILLING INFORMATION**

NORMAL  
 OVERTIME

Combined  
 Multiplier %  
 173.84%  
 173.84%

Fee %  
 10.00%  
 10.00%

BILLING INFORMATION			CALCULATION INFORMATION				
Name/Classification <sup>1</sup>	Loaded Hourly Billing Rates		Effective Date of Hourly Rate From To	% Escalation Increase	Actual Hourly Rate and/or Average Hourly Rate <sup>2</sup>	Hourly Range for Class	
	Straight	Overtime					
Andrew Borrelli, Struct Designer II	\$91.29	N/A	1/1/2010 12/31/2010	0.00%	\$30.29		
Andrew Borrelli, Struct Designer II	\$95.86	N/A	1/1/2011 12/31/2011	5.00%	\$31.80		
Andrew Borrelli, Struct Designer II	\$100.65	N/A	1/1/2012 12/31/2012	5.00%	\$33.39		
Andrew Borrelli, Struct Designer II	\$105.68	N/A	1/1/2013 12/31/2013	5.00%	\$35.08		
Benjamin A. Holton, Struct Designer II	\$81.74	N/A	1/1/2010 12/31/2010	0.00%	\$27.12		
Benjamin A. Holton, Struct Designer II	\$85.83	N/A	1/1/2011 12/31/2011	5.00%	\$28.48		
Benjamin A. Holton, Struct Designer II	\$90.12	N/A	1/1/2012 12/31/2012	5.00%	\$29.90		
Benjamin A. Holton, Struct Designer II	\$94.62	N/A	1/1/2013 12/31/2013	5.00%	\$31.39		
Chris Meade, Struct Designer II	\$83.46	N/A	1/1/2010 12/31/2010	0.00%	\$27.69		
Chris Meade, Struct Designer II	\$87.63	N/A	1/1/2011 12/31/2011	5.00%	\$29.07		
Chris Meade, Struct Designer II	\$92.01	N/A	1/1/2012 12/31/2012	5.00%	\$30.53		
Chris Meade, Struct Designer II	\$96.61	N/A	1/1/2013 12/31/2013	5.00%	\$32.05		
Daniel D. Arredondo, CAD Drafter	\$82.89	\$124.33	1/1/2010 12/31/2010	0.00%	\$27.50		
Daniel D. Arredondo, CAD Drafter	\$87.03	\$130.54	1/1/2011 12/31/2011	5.00%	\$28.88		
Daniel D. Arredondo, CAD Drafter	\$91.38	\$137.07	1/1/2012 12/31/2012	5.00%	\$30.32		
Daniel D. Arredondo, CAD Drafter	\$95.95	\$143.92	1/1/2013 12/31/2013	5.00%	\$31.83		
Jason K. Vivian, Staff Engineer	\$95.63	N/A	1/1/2010 12/31/2010	0.00%	\$31.73		
Jason K. Vivian, Staff Engineer	\$100.42	N/A	1/1/2011 12/31/2011	5.00%	\$33.32		
Jason K. Vivian, Staff Engineer	\$105.44	N/A	1/1/2012 12/31/2012	5.00%	\$34.98		
Jason K. Vivian, Staff Engineer	\$110.71	N/A	1/1/2013 12/31/2013	5.00%	\$36.73		

**BILLING INFORMATION**

NORMAL  
 OVERTIME

Combined  
 Multiplier %  
 173.84%  
 173.84%

Fee %  
 10.00%  
 10.00%

BILLING INFORMATION			CALCULATION INFORMATION				
Name/Classification <sup>1</sup>	Loaded Hourly Billing Rates		Effective Date of Hourly Rate		% Escalation Increase	Actual Hourly Rate and/or Average Hourly Rate <sup>2</sup>	Hourly Range for Class
	Straight	Overtime	From	To			
Joel Pancoast, Staff Engineer	\$85.63	N/A	1/1/2010	12/31/2010	0.00%	\$31.73	
Joel Pancoast, Staff Engineer	\$100.42	N/A	1/1/2011	12/31/2011	5.00%	\$33.32	
Joel Pancoast, Staff Engineer	\$105.44	N/A	1/1/2012	12/31/2012	5.00%	\$34.98	
Joel Pancoast, Staff Engineer	\$110.71	N/A	1/1/2013	12/31/2013	5.00%	\$36.73	
Kym Hall, Administrative Assistant	\$57.27	\$85.90	1/1/2010	12/31/2010	0.00%	\$19.00	
Kym Hall, Administrative Assistant	\$60.13	\$90.19	1/1/2011	12/31/2011	5.00%	\$19.95	
Kym Hall, Administrative Assistant	\$63.14	\$94.70	1/1/2012	12/31/2012	5.00%	\$20.95	
Kym Hall, Administrative Assistant	\$66.29	\$99.44	1/1/2013	12/31/2013	5.00%	\$21.99	
Mark A. Weaver, Struct Designer I	\$78.24	N/A	1/1/2010	12/31/2010	0.00%	\$25.96	
Mark A. Weaver, Struct Designer I	\$82.16	N/A	1/1/2011	12/31/2011	5.00%	\$27.26	
Mark A. Weaver, Struct Designer I	\$86.26	N/A	1/1/2012	12/31/2012	5.00%	\$28.62	
Mark A. Weaver, Struct Designer I	\$90.58	N/A	1/1/2013	12/31/2013	5.00%	\$30.05	
Melanie Rubia, Struct Designer II	\$88.67	N/A	1/1/2010	12/31/2010	0.00%	\$29.42	
Melanie Rubia, Struct Designer II	\$93.11	N/A	1/1/2011	12/31/2011	5.00%	\$30.89	
Melanie Rubia, Struct Designer II	\$97.76	N/A	1/1/2012	12/31/2012	5.00%	\$32.44	
Melanie Rubia, Struct Designer II	\$102.65	N/A	1/1/2013	12/31/2013	5.00%	\$34.06	
Robin E. Dansby, Struct Designer II	\$90.42	N/A	1/1/2010	12/31/2010	0.00%	\$30.00	
Robin E. Dansby, Struct Designer II	\$94.94	N/A	1/1/2011	12/31/2011	5.00%	\$31.50	
Robin E. Dansby, Struct Designer II	\$99.69	N/A	1/1/2012	12/31/2012	5.00%	\$33.08	
Robin E. Dansby, Struct Designer II	\$104.67	N/A	1/1/2013	12/31/2013	5.00%	\$34.73	

Combined  
 Multiplier %  
 173.84%  
 173.84%

Fee %  
 10.00%  
 10.00%

**NORMAL  
 OVERTIME**

**BILLING INFORMATION**

**CALCULATION INFORMATION**

Name/Classification <sup>1</sup>	Loaded Hourly Billing Rates	Effective Date of Hourly Rate	% Escalation Increase	Actual Hourly Rate and/or Average Hourly Rate <sup>2</sup>	Hourly Range for Class
	Straight Overtime	From To			
Shawn M. Cullers, Project Engineer	\$100.85	1/1/2010 12/31/2010	0.00%	\$33.46	
Shawn M. Cullers, Project Engineer	\$105.89	1/1/2011 12/31/2011	5.00%	\$35.13	
Shawn M. Cullers, Project Engineer	\$111.19	1/1/2012 12/31/2012	5.00%	\$36.89	
Shawn M. Cullers, Project Engineer	\$116.74	1/1/2013 12/31/2013	5.00%	\$38.73	
Susie Lai, Staff Accountant	\$78.36	1/1/2010 12/31/2010	0.00%	\$26.00	
Susie Lai, Staff Accountant	\$82.28	1/1/2011 12/31/2011	5.00%	\$27.30	
Susie Lai, Staff Accountant	\$86.40	1/1/2012 12/31/2012	5.00%	\$28.67	
Susie Lai, Staff Accountant	\$90.72	1/1/2013 12/31/2013	5.00%	\$30.10	
William Dana Hooper, Senior Engineer	\$126.95	1/1/2010 12/31/2010	0.00%	\$42.12	
William Dana Hooper, Senior Engineer	\$133.30	1/1/2011 12/31/2011	5.00%	\$44.23	
William Dana Hooper, Senior Engineer	\$139.96	1/1/2012 12/31/2012	5.00%	\$46.44	
William Dana Hooper, Senior Engineer	\$146.96	1/1/2013 12/31/2013	5.00%	\$48.76	
Project Administrator	\$182.71	1/1/2010 12/31/2010	0.00%	\$60.62	
	\$191.84	1/1/2011 12/31/2011	5.00%	\$63.65	
	\$201.44	1/1/2012 12/31/2012	5.00%	\$66.83	
	\$211.51	1/1/2013 12/31/2013	5.00%	\$70.18	
Senior Engineer	\$126.95	1/1/2010 12/31/2010	0.00%	\$42.12	
	\$133.30	1/1/2011 12/31/2011	5.00%	\$44.23	
	\$139.96	1/1/2012 12/31/2012	5.00%	\$46.44	
	\$146.96	1/1/2013 12/31/2013	5.00%	\$48.76	

NORMAL  
 OVERTIME

Combined  
 Multiplier %  
 173.84%  
 173.84%

Fee %  
 10.00%  
 10.00%

BILLING INFORMATION			CALCULATION INFORMATION				
Name/Classification <sup>1</sup>	Loaded Hourly Billing Rates		Effective Date of Hourly Rate From	To	% Escalation Increase	Actual Hourly Rate and/or Average Hourly Rate <sup>2</sup>	Hourly Range for Class
	Straight	Overtime					
Project Engineer	\$100.85	N/A	1/1/2010	12/31/2010	0.00%	\$33.46	
	\$105.69	N/A	1/1/2011	12/31/2011	5.00%	\$35.13	
	\$111.19	N/A	1/1/2012	12/31/2012	5.00%	\$36.89	
	\$116.74	N/A	1/1/2013	12/31/2013	5.00%	\$38.73	
Staff Engineer	\$95.63	N/A	1/1/2010	12/31/2010	0.00%	\$31.73	
	\$100.42	N/A	1/1/2011	12/31/2011	5.00%	\$33.32	
	\$105.44	N/A	1/1/2012	12/31/2012	5.00%	\$34.98	
	\$110.71	N/A	1/1/2013	12/31/2013	5.00%	\$36.73	
Asst Structure Rep	\$125.95	\$190.42	1/1/2010	12/31/2010	0.00%	\$42.12	
	\$133.30	\$199.95	1/1/2011	12/31/2011	5.00%	\$44.23	
	\$139.96	\$209.94	1/1/2012	12/31/2012	5.00%	\$46.44	
	\$146.96	\$220.44	1/1/2013	12/31/2013	5.00%	\$48.76	
CAD Drafter	\$82.89	\$124.33	1/1/2010	12/31/2010	0.00%	\$27.50	
	\$87.03	\$130.54	1/1/2011	12/31/2011	5.00%	\$28.88	
	\$91.38	\$137.07	1/1/2012	12/31/2012	5.00%	\$30.32	
	\$95.95	\$143.92	1/1/2013	12/31/2013	5.00%	\$31.83	
Struct Designer I	\$78.24	N/A	1/1/2010	12/31/2010	0.00%	\$25.96	
	\$82.16	N/A	1/1/2011	12/31/2011	5.00%	\$27.26	
	\$86.26	N/A	1/1/2012	12/31/2012	5.00%	\$28.62	
	\$90.59	N/A	1/1/2013	12/31/2013	5.00%	\$30.05	

**NORMAL  
OVERTIME**

Combined  
Multiplier %  
173.84%  
173.84%

Fee %  
10.00%  
10.00%

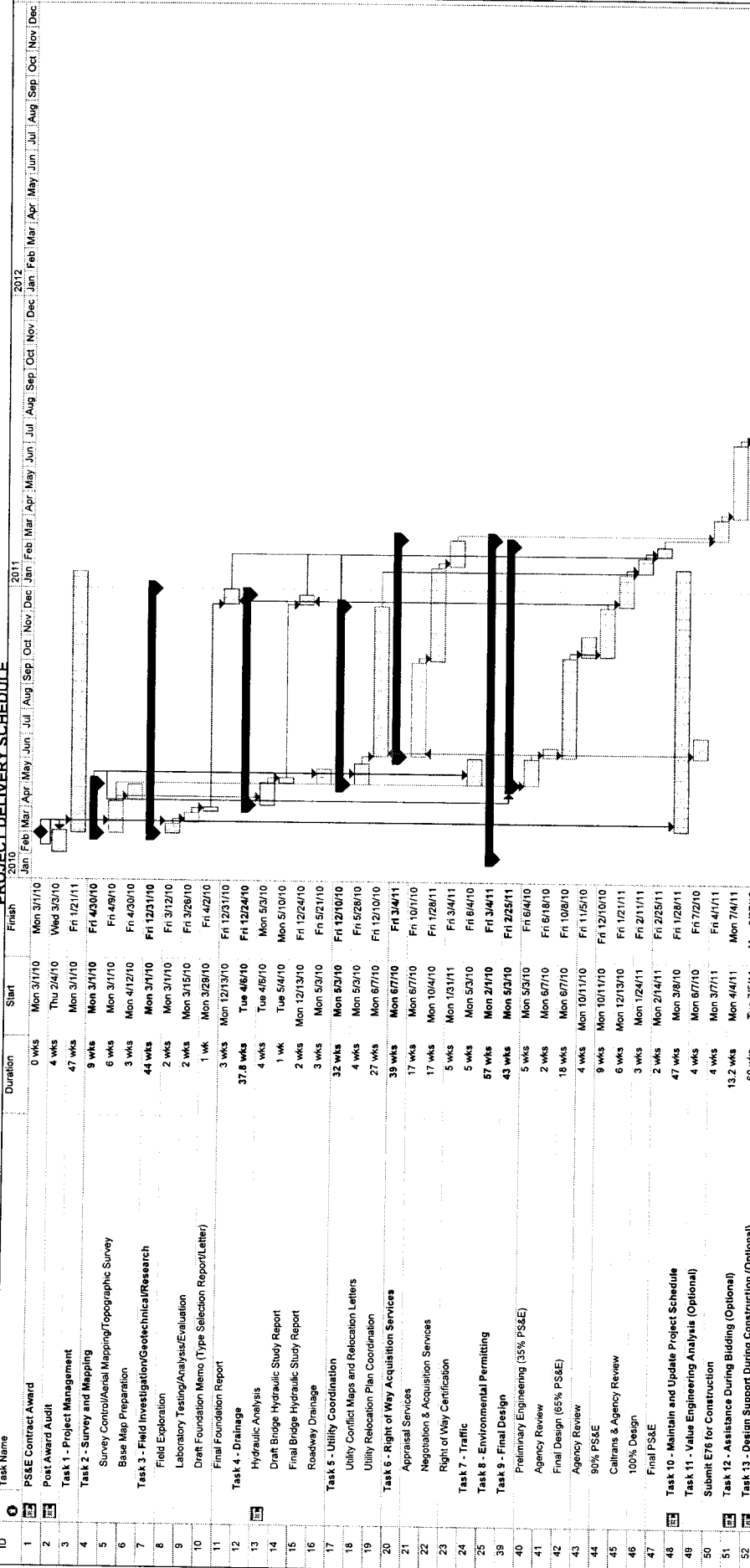
**BILLING INFORMATION**

**CALCULATION INFORMATION**

Name/Classification <sup>1</sup>	Loaded Hourly Billing Rates		Effective Date of Hourly Rate		% Escalation Increase	Actual Hourly Rate and/or Average Hourly Rate <sup>2</sup>	Hourly Range for Class
	Straight	Overtime	From	To			
Struct Designer II	\$90.42	N/A	1/1/2010	12/31/2010	0.00%	\$30.00	
	\$94.94	N/A	1/1/2011	12/31/2011	5.00%	\$31.50	
	\$99.69	N/A	1/1/2012	12/31/2012	5.00%	\$33.08	
	\$104.67	N/A	1/1/2013	12/31/2013	5.00%	\$34.73	
Administrative Assistant	\$57.27	\$85.90	1/1/2010	12/31/2010	0.00%	\$19.00	
	\$60.13	\$90.19	1/1/2011	12/31/2011	5.00%	\$19.95	
	\$63.14	\$94.70	1/1/2012	12/31/2012	5.00%	\$20.95	
	\$66.29	\$99.44	1/1/2013	12/31/2013	5.00%	\$21.99	
Secretarial Services	\$54.25	\$81.38	1/1/2010	12/31/2010	0.00%	\$18.00	
	\$56.96	\$85.45	1/1/2011	12/31/2011	5.00%	\$18.90	
	\$59.81	\$89.72	1/1/2012	12/31/2012	5.00%	\$19.85	
	\$62.80	\$94.21	1/1/2013	12/31/2013	5.00%	\$20.84	

- For all key team members that are listed on the Prime Consultant's Organization Chart, list the name and corresponding job classification. For all other employees (i.e. support staff/non-professional) list only the job classification. Teams members subject to FLSA are not eligible for overtime.
- For named employees enter the actual hourly rate. For classifications only, list the average hourly rate for that classification.
- Note employees/classifications that are subject to prevailing wage requirements with an asterisk (\*).

# EXHIBIT C AVENUE 416 KINGS RIVER BRIDGE PROJECT DELIVERY SCHEDULE



☐ Milestone  
☐ Summary  
☐ Rolled Up Task  
☐ Task  
☐ Critical Task  
☐ Progress

☐ Split  
☐ External Task  
☐ Project Summary  
☐ Group By Summary

## **EXHIBIT D**

### **PROFESSIONAL SERVICES CONTRACTS INSURANCE REQUIREMENTS**

CONTRACTOR shall provide and maintain insurance for the duration of this Agreement against claims for injuries to persons and damage to property which may arise from, or in connection with, performance under the Agreement by the CONTRACTOR, his agents, representatives, employees or subcontractors, if applicable.

#### **A. Minimum Scope & Limits of Insurance**

1. Coverage at least as broad as Commercial General Liability Insurance of \$1,000,000 combined single limit per occurrence. If the annual aggregate applies it must be no less than \$2,000,000.
2. Comprehensive Automobile Liability Insurance (if applicable) of \$1,000,000 per occurrence.
3. Workers' Compensation and Employer's Liability Insurance as required by law.
4. Professional Errors and Omissions Insurance of \$1,000,000.

#### **B. Specific Provisions of the Certificate**

The Certificate of Insurance for General Liability, Comprehensive Automobile Liability Insurance must meet the following requirements:

- a. State that such Insurance for additional insured shall apply as primary Insurance and any other insurance maintained by COUNTY shall be excess.
- b. Provide that coverage shall not be suspended, voided, canceled, reduced in coverage, or otherwise materially changed except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the County.

The Certificate of Insurance for Workers Compensation, must include the following waiver of subrogation:

- a. Waiver of Subrogation. Contractor waives all rights against the County and its agents, officers, and employees for recovery of damages to the extent these damages are covered by the workers compensation and

employer's liability.

**C. Deductibles and Self-Insured Retentions**

The COUNTY Risk Manager must approve any deductible or self-insured retention that exceeds \$100,000.

**D. Acceptability of Insurance**

Insurance must be placed with insurers authorized to do business in California and any waiver of these standards are subject to approval by the County Risk Manager or County Risk Manager's designee.

**E. Verification of Coverage**

Prior to approval of this Agreement by the COUNTY, the CONTRACTOR shall file with the submitting department, certificates of insurance with original endorsements effecting coverage in a form acceptable to the COUNTY. The COUNTY reserves the right to require certified copies of all required insurance policies at any time.

## EXHIBIT E

### CERTIFICATION OF CONSULTANT

I HEREBY CERTIFY that I am the President and duly authorized representative of the firm of CORNERSTONE STRUCTURAL ENGINEERING GROUP, whose address is 986 W. Alluvial Avenue, Suite 201, Fresno, CA 93711 and that, except as hereby expressly stated, neither I nor the above firm that I represent have:

(a) employed or retained for a commission, percentage, brokerage, contingent fee, or other consideration, any firm or person (other than a bona fide employee working solely for me or the above consultant) to solicit or secure this agreement; nor

(b) agreed, as an expressed or implied condition for obtaining this contract, to employ or retain the services of any firm or person in connection with carrying out the agreement; nor

(c) paid or agreed to pay, to any firm, organization or person (other than a bona fide employee working solely for me or the above consultant) any fee, contribution, donation, or consideration of any kind for, or in connection with, procuring or carrying out this agreement.

I acknowledge that this Certificate is to be made available to the California Department of Transportation (Caltrans) in connection with this agreement involving the participation of Federal-aid Highway funds, and is subject to applicable State and Federal laws, both criminal and civil.

\_\_\_\_\_  
Date:

\_\_\_\_\_  
Todd M. Goolkasian, P.E.  
President,  
CORNERSTONE STRUCTURAL  
ENGINEERING GROUP, Ltd.

**EXHIBIT F**

**CERTIFICATION OF LOCAL AGENCY**

I HEREBY CERTIFY that I am the Contract Administrator of the Tulare County Resource Management Agency, and that the consulting firm of CORNERSTONE STRUCTURAL ENGINEERING GROUP or its representative has not been required (except as herein expressly stated), directly or indirectly, as an expressed or implied condition in connection with obtaining or carrying out this Agreement for the MOUNTAIN ROAD M319 BRIDGE PROJECT, preliminary engineering, environmental documents and final engineering for plans, specifications and estimates to:

(a) Employ, retain, agree to employ or retain, any firm or person; or

(b) Pay or agree to pay, to any firm, person or any organization, any fee, contribution, donation or consideration of any kind.

I acknowledge that this Certificate is to be made available to the California Department of Transportation (Caltrans) in connection with this Agreement involving participation of Federal-aid Highway funds, and is subject to applicable State and Federal laws, both criminal and civil.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Kuna Muthusamy, P.E.  
Engineer IV

**EXHIBIT G**

**Avenue 416 - Project Personnel**

Name	Title	Phone Number	E-mail
Todd M. Gookasian	Project Manager	(559) 320-3200	tgookasian@cseq.com
Thomas L. Swayze	Quality Control Manager	(559) 320-3200	tswayze@cseq.com
William D. Hooper	Quality Control Engineer	(559) 320-3200	dhooper@cseq.com
Benjamin Ruiz	Senior Engineer	(559) 320-3200	bruiz@cseq.com
Shawn Cullers	Project Engineer	(559) 320-3200	sculler@cseq.com
Jason Vivian	Staff Engineer	(559) 320-3200	jvivan@cseq.com
Andrew Borrelli	Staff Engineer	(559) 320-3200	aborrelli@cseq.com
Joel Pancoast	Staff Engineer	(559) 320-3200	jpancoast@cseq.com
Robin Dansby	Structural Designer II	(559) 320-3200	rdansby@cseq.com
Benjamin Holton	Structural Designer II	(559) 320-3200	bholton@cseq.com
Melanie Rubia	Structural Designer II	(559) 320-3200	mrubia@cseq.com
Chris Meade	Structural Designer II	(559) 320-3200	cmeade@cseq.com
Mark Weaver	Structural Designer I	(559) 320-3200	mweaver@cseq.com
Dan Arredondo	Computer Drafter	(559) 320-3200	daredondo@cseq.com
Maureen Gookasian	Project Administrator	(559) 320-3200	mgookasian@cseq.com
Rob Brantley (Parsons)	Senior Supervising Bridge Engineer	(602) 852-9195	rob.brantley@parsons.com
Ronald Boyle (Omni-Means)	Principal	(916) 782-8688	RBOYLE@omnimeans.com
Craig Newton (Omni-Means)	Associate	(916) 782-8688	CNEWTON@omnimeans.com
Christine Johnson (Clear Path Land Evolvement)	President	(530) 887-1410	christine@clear-path.net
Oscar Ramirez (Tri-City Engineering)	Principal	(559) 447-9075	gramirez@tricityengineering.com
Gary Parikh (Parikh Consultants)	President	(408) 452-9000	gparikh@parikhnet.com
Michael Vondergeest (ICF Jones & Stokes)	Regulatory Compliance Specialist	(916) 737-3000	mvondergeest@isanel.com
T'Shaka Toure (Toure Associates)	Senior Biologist	(559) 433-6519	tsbaka@toureassociates.com
Joan Lynn (Egred Inc.)	President	(707) 556-9500	egreinc@sbcglobal.net
George Hunter (VMS)	Value Engineering Team Leader	(760) 741-5518	george@vms-inc.com
Cathy Avila (Avila & Associates)	Hydraulics Manager	(925) 673-0549	cavila@avilaassociates.com
Jesus Sierra (Sierra Engineering Group)	Principal	(510) 487-9192	jsierra@sierraeng.com

**EXHIBIT H**

**COMPUTER SERVICES**

<b>ITEM</b>	<b>FORMAT/DENOTATION</b>
1. Email	Required for each "Vital Personnel" listed in Exhibit G
2. Computer Aided Drafting	Auto Cad 2007
3. Word Processing	MS Word 2003
4. Spreadsheet	MS Excel 2003
5. Project Schedule	MS Project 2003



**EXHIBIT J**

**Exhibit 10-1 Notice to Proposers DBE Information**

**LOCAL AGENCY LETTERHEAD  
(DATE)**

**NOTICE TO PROPOSERS  
DISADVANTAGED BUSINESS ENTERPRISE  
INFORMATION**

The Agency has established an Underutilized DBE goal for this Agreement of \_\_\_\_\_ %

OR

The Agency has not established an Underutilized goal for this Agreement. However, proposers are encouraged to obtain DBE participation for this Agreement.

**1. TERMS AS USED IN THIS DOCUMENT**

- The term "Disadvantaged Business Enterprise" or "DBE" means a for-profit small business concern owned and controlled by a socially and economically disadvantaged person(s) as defined in Title 49, Part 26.5, Code of Federal Regulations (CFR).
- The term "Underutilized Disadvantaged Business Enterprise" or "UDBE." DBE classes that have been determined in the 2007 Caltrans Disparity Study to have a statistically significant disparity in their utilization in previously awarded transportation contracts. UDBEs include: African Americans, Native Americans, Asian-Pacific Americans, and Women.
- The term "Agreement" also means "Contract."
- Agency also means the local entity entering into this contract with the Contractor or Consultant.
- The term "Small Business" or "SB" is as defined in 49 CFR 26.65.

**2. AUTHORITY AND RESPONSIBILITY**

- A. DBEs and other small businesses are strongly encouraged to participate in the performance of Agreements financed in whole or in part with federal funds (See 49 CFR 26, "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs"). The Contractor should ensure that DBEs and other small businesses have the opportunity to participate in the performance of the work that is the subject of this solicitation and should take all necessary and reasonable steps for this assurance. The proposer shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of subcontracts.
- B. Proposers are encouraged to use services offered by financial institutions owned and controlled by DBEs.

## EXHIBIT J

### 3. SUBMISSION OF UDBE AND DBE INFORMATION

If there is a UDBE goal on the contract, a "Local Agency Proposer UDBE Commitment (Consultant Contract)" (Exhibit 10-O1) form shall be included in the Request for Proposal. In order for a proposer to be considered responsible and responsive, the proposer must make good faith efforts to meet the goal established for the contract. If the goal is not met, the proposer must document adequate good faith efforts. Only UDBE participation will be counted towards the contract goal; however, all DBE participation shall be collected and reported.

A "Local Agency Proposer DBE Information (Consultant Contract)" (Exhibit 10-O2) form shall be included with the Request for Proposal. The purpose of the form is to collect data required under 49 CFR 26. For contracts with UDBE goals, this form collects DBE participation by DBEs owned by Hispanic American and Subcontinent Asian Americans males (persons whose origin are from India, Pakistan, Bangladesh, Bhutan, Maldives Islands, Nepal or Sri Lanka). For contracts with no goals, this form collects information on all DBEs, including UDBEs. Even if no DBE participation will be reported, the successful proposer must execute and return the form.

### 4. DBE PARTICIPATION GENERAL INFORMATION

It is the proposer's responsibility to be fully informed regarding the requirements of 49 CFR, Part 26, and the Department's DBE program developed pursuant to the regulations. Particular attention is directed to the following:

- A. A DBE must be a small business firm defined pursuant to 13 CFR 121 and be certified through the California Unified Certification Program (CUCP).
- B. A certified DBE may participate as a prime contractor, subcontractor, joint venture partner, as a vendor of material or supplies, or as a trucking company.
- C. A UDBE proposer not proposing as a joint venture with a non-DBE, will be required to document one or a combination of the following:
  - 1. The proposer is a UDBE and will meet the goal by performing work with its own forces.
  - 2. The proposer will meet the goal through work performed by UDBE subcontractors, suppliers or trucking companies.
  - 3. The proposer, prior to proposing, made adequate good faith efforts to meet the goal.
- D. A DBE joint venture partner must be responsible for specific contract items of work or clearly defined portions thereof. Responsibility means actually performing, managing, and supervising the work with its own forces. The DBE joint venture partner must share in the capital contribution, control, management, risks and profits of the joint venture commensurate with its ownership interest.
- E. A DBE must perform a commercially useful function pursuant to 49 CFR 26.55, that is, a DBE firm must be responsible for the execution of a distinct element of the work and must carry out its responsibility by actually performing, managing and supervising the work.
- F. The proposer shall list only one subcontractor for each portion of work as defined in their proposal and all DBE subcontractors should be listed in the bid/cost proposal list of subcontractors.
- G. A prime contractor who is a certified DBE is eligible to claim all of the work in the Agreement toward the DBE participation except that portion of the work to be performed by non-DBE subcontractors.

## EXHIBIT J

### 5. RESOURCES

- A. The CUCP database includes the certified DBEs from all certifying agencies participating in the CUCP. If you believe a firm is certified that cannot be located on the database, please contact the Caltrans Office of Certification toll free number 1-866-810-6346 for assistance. Proposer may call (916) 440-0539 for web or download assistance.
- B. Access the CUCP database from the Department of Transportation, Civil Rights, Business Enterprise Program web site at: <http://www.dot.ca.gov/hq/bep/>.
- Click on the link in the left menu titled *Disadvantaged Business Enterprise*
  - Click on *Search for a DBE Firm* link
  - Click on *Access to the DBE Query Form* located on the first line in the center of the page
  - Searches can be performed by one or more criteria
  - Follow instructions on the screen
- C. How to Obtain a List of Certified DBEs without Internet Access
- D. DBE Directory: If you do not have Internet access, Caltrans also publishes a directory of certified DBE firms extracted from the online database. A copy of the directory of certified DBEs may be ordered at: <http://caltrans-opac.ca.gov/publicat.htm>
6. MATERIALS OR SUPPLIES PURCHASED FROM DBES COUNT TOWARDS DBE CREDIT, AND IF A DBE IS ALSO A UDBE, PURCHASES WILL COUNT TOWARDS THE UDBE GOAL UNDER THE FOLLOWING CONDITIONS:
- A. If the materials or supplies are obtained from a DBE manufacturer, count 100 percent of the cost of the materials or supplies. A DBE manufacturer is a firm that operates or maintains a factory, or establishment that produces on the premises the materials, supplies, articles, or equipment required under the Agreement and of the general character described by the specifications.
- B. If the materials or supplies purchased from a DBE regular dealer, count 60 percent of the cost of the materials or supplies. A DBE regular dealer is a firm that owns, operates or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the Agreement are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. To be a DBE regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question. A person may be a DBE regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone or asphalt without owning, operating or maintaining a place of business provided in this section.

## EXHIBIT J

C. If the person both owns and operates distribution equipment for the products, any supplementing of regular dealers' own distribution equipment shall be, by a long-term lease agreement and not an ad hoc or Agreement-by-Agreement basis. Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not UDBE regular dealers within the meaning of this section.

D. Materials or supplies purchased from a DBE, which is neither a manufacturer nor a regular dealer, will be limited to the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on the job site, provided the fees are reasonable and not excessive as compared with fees charged for similar services.

**7. FOR DBE TRUCKING COMPANIES: CREDIT FOR DBES WILL COUNT TOWARDS DBE CREDIT, AND IF A DBE IS A UDBE, CREDIT WILL COUNT TOWARDS THE UDBE GOAL UNDER THE FOLLOWING CONDITIONS:**

- A. The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular Agreement, and there cannot be a contrived arrangement for the purpose of meeting the UDBE goal.
- B. The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the Agreement.
- C. The DBE receives credit for the total value of the transportation services it provides on the Agreement using trucks it owns, insures, and operates using drivers it employs.
- D. The DBE may lease trucks from another DBE firm including an owner-operator who is certified as a DBE. A DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the Agreement.
- E. The DBE may also lease trucks from a non-DBE firm, including an owner-operator. A DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement. A DBE does not receive credit for the total value of the transportation services provided by the lessee, since these services are not provided by the DBE.

F. For the purposes of this Section D, a lease must indicate that the DBE has exclusive use and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, as long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.