

Appendix A
County of Riverside Transportation Department
Date Palm Drive Interchange on Interstate 10 Scope of Services

<u>1 - Project Description</u>	2
1.1 Project Controls System Development	2
1.2 Monthly Project Progress Meetings and Reports	3
1.3 Document Management System	4
1.4 Neighborhood Liaison Strategy	5
1.5 Sub-Consultant Management:	5
<u>2 – Pre-Construction Phase Services</u>	6
2.1 Construction Management Plan	6
2.2 Storm Water Pollution Prevention Plan (SWPPP)	6
2.3 Local Assistance Documentation / Federal Contract Management Requirements	7
2.4 Pre-construction walk with contractor	8
<u>3 – Construction Management Services</u>	9
3.1 Pre-construction Conferences	9
3.2 Communications and Correspondence	10
3.3 Change Management	10
3.4 Monthly Construction Progress Reports	11
3.5 Schedule Monitoring	12
3.6 Cost Monitoring	12
3.7 Progress / Coordination Meetings	13
3.8 Payment Recommendations	13
3.9 Safety	14
3.10 Environmental Coordination & Biological Monitoring	15
3.11 Neighborhood Communication /Public Information	17
3.12 Submittal Management and Review	18
3.14 Document Management	20
3.15 Construction Change Order Assistance	20
3.16 Review Certified Payrolls	22
<u>4 – Construction Inspection Services</u>	22
4.1 Inspection and Documentation	22
4.2 Materials Testing, Construction Testing & Quality Assurance Program (QAP)	23
4.3 Surveying	24
4.4 Review and maintain “As Constructed Schedule”	25
4.5 Maintain Photographic and Video Records of Construction Progress	26
4.6 Review and Maintain “As Built” Drawings	26
4.7 Final Acceptance – Punch List Assistance	27
4.8 Final Inspection and Punch-list	27
<u>5 – Construction Closeout Activities</u>	28
5.1 Contract Closeout	28
5.2 Project As-Built Drawings	28
5.3 Final Project Report	29
5.4 Final Payment, Final Report of Expenditure Checklist	29
<u>6 – Field Office and Employee Equipment</u>	30

1 - Project Description

The COUNTY proposes the reconstruction and improvement of the Date Palm Drive Interchange on Interstate 10 (I-10) in Riverside County and the City of Cathedral City. The improvements will include the widening of the existing Date Palm Drive bridge over I-10, from 4.62 kilometers north of WB I-10 ramp to 0.57 kilometers north of Vista Chino Drive, reconstruction of the interchange ramps and signalization of the ramp termini. The project is expected to take two years and is currently anticipated to start in April, 2011.

The existing interchange on I-10 at Date Palm Drive includes a bridge with two lanes (one lane in each direction). The existing on-ramps and off-ramps for Date Palm Drive are single lane tee ramps. The approved Project includes constructing Date Palm Drive to a width of 11 to 34 meters. The existing bridge overcrossing I-10 will be replaced by a new overcrossing that will be constructed using Precast Concrete "Bulb Tee" Girders with a combination of pretensioning and posttensioning reinforcement. The new overcrossing will span approximately 91.4 meters and will be 34 meters wide.

The County shall provide copies of applicable permits and conditions of approval to the Consultant prior to commencement of the work contemplated by this Agreement.

1.1 Project Controls System Development

Purpose:

To provide ENGINEER managers and County staff with current information regarding schedule, budgets, expenditures, and change orders in an integrated cost and schedule information system.

The master schedule of the Project Controls System (PCS) will enable critical activities and interrelationships between the contractors, suppliers, the County, the County's Project Manager, design engineers, utility companies, biologist and construction manager (including its subcontractors) to be monitored efficiently during the construction phase of the project. The master schedule will identify permit constraints, work area restrictions and other known work and/or coordination constraints.

The cost-monitoring element of the PCS will enable project-wide monitoring of expenditures for comparison with the original budgets and budget updates resulting from change orders processed during the life of the project. Monthly reporting will enable accurate cost forecasting at any time.

The automation of the above information will enable timely analysis, intervention, and decision making to enable efficient control of the project.

Approach:

ENGINEER will develop the PCS using software similar to Primavera *P3* and *Expedition*, Microsoft *Word* and *Excel* software. A master schedule will be developed summarizing all significant activities of project related entities including the contractor, equipment suppliers, the County project manager, design consultants, biologist, and the construction manager. The schedule will be structured to include the following:

- Primary contractor work activities, including major submittals required accomplishing the work.
- Principal work activities of the ENGINEER' construction manager, the County's project manager, design consultants, biologist, contractors, and suppliers.
- Activities necessary for regulatory compliance.
- Activities related to utility relocations.
- Relationships between submittals, approvals, procurement, and delivery of materials.
- Milestones associated with permitting and approvals.
- Any activity requiring coordination with the County, Caltrans oversight, City of Cathedral City and other local utility/regulatory agencies.
- Substantial and final completion dates.

The cost accounting format will use a work breakdown structure and cost categories that will be compatible with the County's cost accounting system. The work breakdown structure will be based on contractor's activities and will provide the basis for cost-loading activities in the schedule.

Assumptions:

1. The initial master project schedule will be developed based on information available before the award of contracts for construction.
2. The County will provide a description of the County invoicing requirements and guidelines for project work breakdown structure and cost reporting format.
3. County will provide copies of all consultant contracts including scope of services and budgets.

Deliverables:

1. Implementation of Project Control System.
2. Draft master project schedule.
3. Initial master project schedule following review and approval by the County.
4. Initial project cost.

1.2 Monthly Project Progress Meetings and Reports

Purpose:

To apprise County management and other stakeholders of ENGINEER's activities under this contract via written report and monthly meeting.

Approach:

ENGINEER will provide a brief written report covering a summary of the status and expenditures associated with each of the tasks described in this scope of work; including highlights of any unusual contractual issues that arise during the reporting period.

ENGINEER will schedule monthly progress meetings, which will provide for discussion of progress reports and issues related to (a) this agreement and (b) the construction agreements.

Assumptions:

1. The project monthly progress report will be provided throughout the contract period for an estimated duration of 18 months.
2. A regular monthly meeting date and time will be established. Meeting date is typically the first week of each month, the same day of the week, i.e., Monday, Tuesday, etc.
3. Written progress reports will be provided to the County at least 5 working days in advance of each progress meeting.
4. County to submit proposed changes/amendments to the monthly progress reports, in writing, to ENGINEER for its use.

Deliverables:

1. Monthly project progress report.
2. One page summary report.
3. Monthly progress review meetings with minutes/summaries.

1.3 Document Management System

Purpose:

To establish a system for the timely logging, filing, and tracking of project related correspondence to assure timely responses, provide a record of communications to enable efficient retrieval and establish the chronology of events for use in dispute resolution.

Approach:

ENGINEER will set up a document tracking system; using software similar to Primavera Expedition to maintain project files.

Assumptions:

1. Actual logging, filing, and tracking of project information will be performed under separate tasks and subtasks.
2. The ENGINEER File Index will conform to the Caltrans filing numbering system.

Deliverables:

Implementation of a computerized document management system including written procedures for use of the ENGINEER project team.

1.4 Neighborhood Liaison Strategy

Purpose:

To provide a strategy for dealing with issues related to the impacts of construction on the residential neighborhoods and businesses located adjacent to and within the limits of the project.

Approach:

ENGINEER will develop in conjunction with the County a strategy for neighborhood and local community communication related to construction phase impacts and mitigation.

Assumptions:

ENGINEER will be responsible for development of the neighborhood liaison strategy. However, the County will provide general guidelines for community and neighborhood affairs, dictate protocol, and initiate contact with local elected officials, if required. The County will be responsible for the review and approval of the overall plan.

Deliverables:

1. ENGINEER: Draft Action Plan
2. County: Review and comment on action plan.
3. ENGINEER: Draft Neighborhood affairs strategy memorandum.
4. County: Comments on draft strategy memorandum.
5. ENGINEER: Final Neighborhood affairs strategy memorandum.

1.5 Sub-Consultant Management:

Purpose:

To coordinate and manage sub-consultant services contracted with ENGINEER. Sub-consultants include inspectors, materials testing consultants, and biologists, and /or others, to be determined at a later date and secured at reasonable rates.

Approach:

ENGINEER will coordinate and manage the utilization of sub-consultants for the County in order to comply with the terms of the contract documents and the requirements of regulatory agencies.

At the County's direction, ENGINEER will negotiate and enter into sub-consultant agreements with select sub-consultants.

ENGINEER will work with consultants contracted directly with the County. ENGINEER will review and approve invoices provided by County consultants and forward said invoices to the County for processing and payment.

Assumptions:

1. The County will retain final approval rights over invoices for County contracted consultants.
2. All costs associated with ENGINEER's sub-consultant services will be billed to the County in conjunction with ENGINEER's services on a monthly basis.

Deliverables:

1. Copies of all sub consultant reports. Original reports will remain with ENGINEER until project closeout, at which time all originals will be forwarded to the County with the project documentation.
2. Copies of all sub-consultant invoices billed through ENGINEER.
3. Original invoices reviewed and approved by ENGINEER for County contracted consultants.

2 – Pre-Construction Phase Services

ENGINEER shall provide specialized services during the project Pre-Construction phase, including the bidding periods of the project. These services are intended to involve the construction manager early in the project and to provide advanced planning for construction phase activities.

2.1 Construction Management Plan

Purpose:

To provide the County and ENGINEER with uniform procedures and standards for the administration of the construction contract.

Approach:

ENGINEER will develop a procedures manual that is usable for the construction project utilizing the **Caltrans Construction Management Manual** and portions of the **Local Assistance Manual**. The Manual will be a compilation of both manuals, using various parts from both manuals as appropriate and incorporating a section concerning emergencies. The County approved manual will be used by the County, as it deems appropriate.

Assumptions:

The final project manual will be bound in a three ring binder to facilitate future revisions.

Deliverables:

1. Draft project manual for review by the County. ENGINEER will provide two (2) copies of the draft.
2. After review and comments, provide two (2) copies of final project manual to the County.

2.2 Storm Water Pollution Prevention Plan (SWPPP)

Purpose:

To protect the County from potential fines from regulatory agencies by monitoring contractors' activities regarding pollution prevention controls and/or activities for general compliance with the contractor's SWPPP Best Management Practices (BMP).

Approach:

ENGINEER will observe the contractor's work area for general compliance with the SWPPP Best Management Practices (BMP) and notify the contractor if the pollution prevention controls are not in accordance with the SWPPP. Failure to revise and correct conditions will be cause to have the County take corrective action. Immediate shutdown of the contractor's work may be required, if conditions are in non-compliance with the SWPPP or other permit conditions.

Assumptions:

1. ENGINEER will not provide full time inspections of contractor's work areas for compliance with the contractor(s) SWPPP and BMP.
2. ENGINEER will not be responsible for contractor(s) means and methods for complying with the BMP listed in the SWPPP.
3. ENGINEER will not be responsible for costs incurred by the contractor(s) for its failure to comply with its SWPPP.
4. ENGINEER will document site conditions with respect to SWPPP and BMP weekly and maintain a separate file for said reports.

Deliverables:

Contractor(s)' SWPPP monitoring reports and ENGINEER documentation of site conditions kept in project file for the record.

2.3 Local Assistance Documentation / Federal Contract Management Requirements

Purpose:

To assist the County in field observation, testing and preparation of documentation required for compliance with FHWA Contract Management Requirements as detailed in the Caltrans's Local Assistance Procedures Manual.

Approach:

ENGINEER in conjunction with the County will review the Local Assistance Procedures Manual to insure that all contract administration procedures, documentations, and filing system is being prepared in accordance with Chapters 15, 16, and 17 of the Local assistance Procedures Manual. All subsections included in these chapters have been discussed in details throughout various sections of this Scope of Services:

- Chapter 1, Introduction and Overview
- Chapter 5, Accounting/Invoices Contents
- Chapter 7, Field Review
- Chapter 12, Plans, Specifications & Estimate
- Chapter 14, Utility Facility
- Chapter 15, Advertise and Award Project; including the following sections:
 - Approval for Local Agency to Administer Projects.
 - Project Advertisement,
 - Contract Bid Opening, Contract Award, and Award Package
- Chapter 16, Administer Construction Contracts includes the following:
 - Project Supervision and inspection
 - Pre-construction meeting and partnering
 - Contract time

- Sub-contractors
- Engineer's daily reports
- Project files
- Construction records and procedures
- Safety Provisions
- Labor compliance
- Equal employment opportunity
- Quality Assurance Program
- Contract claims
- Traffic safety in highway and street work zones
- Construction engineering review by the State.
- Chapter 17, Project Completion includes the following:
 - Acceptance procedures
 - As-built plans
 - Report of expenditures
 - Consequences
- Chapter 19, Progress Reviews

The County and ENGINEER will incorporate specific deliverables within the scope of services and designate the party or parties responsible.

Assumptions:

The County will review the attached scope of services and deliverables to ensure that all tasks required are identified and an individual party is assigned responsibility for that task.

Deliverables:

This Scope of Services. Individual tasks required for compliance with the Local Assistance Procedures Manual are identified as specific tasks including all required checklists, forms, filing system, procedures for progress payments, change orders, claims, correspondence, as-builts, reporting, permit compliance, permit renewals, final invoicing and claims mitigations and resolutions.

Also using the Caltrans Construction Manual, Traffic Manual, CAL OSHA Safety Orders, SWPPP & PMP preparation Handbook, and all Bridge Manuals as applicable.

All above Chapters and sections have specific formats, checklists, and procedures that would be implemented as required by the Local Assistance Procedures Manual and Contract Provisions.

2.4 Pre-construction walk with contractor

Purpose:

To document existing project site and neighboring site conditions prior to the start of construction; to ensure that all parties are aware of and agree to the condition of existing project site and neighboring site conditions prior to the start of construction.

Approach:

Prior to the issuance of a Notice to Proceed, ENGINEER, the Contractor, utility company representatives, biologist, County and City representatives will walk the entire project and record existing conditions via a written log, still photographs, and videotape where required. ENGINEER will provide copies of all documentation to the Contractor and the County. ENGINEER will keep documentation originals in the project files until project completion.

Assumptions:

Project walk will not take longer than two days with approximately the same amount of time to log, file and copy the information.

Deliverables:

A written log, still photographs and any videotape depicting existing site conditions, as recorded prior to the start of construction.

3 – Construction Management Services

ENGINEER, on behalf of the County, will provide construction management services for a single construction contract. The project involves the reconstruction and improvement of the Date Palm Drive Interchange on Interstate 10 (I-10) in Riverside County and the City of Cathedral City, more completely described above. Construction Management services will encompass the enforcement of all construction contract requirements.

3.1 Pre-construction Conferences

Purpose:

To provide a forum for all essential project participants to meet prior to the start of work. This meeting will outline the County's administration of the contract, introduction of the participants, and record all comments and questions submitted by the contractor. Provides an understanding of the procedures to be used on the project and what the Contractor can expect from the County and its consultants.

Approach:

ENGINEER will schedule, prepare the agenda, chair and take minutes of the pre-construction meeting. The meeting will outline project specifics and inform the Contractor of project administration procedures.

Assumptions:

1. The County will provide the meeting venue.
2. The County will assist ENGINEER in developing the attendee list.
3. ENGINEER will prepare a draft agenda for the County approval prior to the meeting.

Deliverables:

1. Written agenda and minutes of pre-construction conference.
2. Electronic copies of pre-construction meeting minutes to the attendees.
3. Review and comment on contractor's base-line schedule.

4. Establish ground rules of coordination & communications with contractor and designer concerning the processing and reviewing of submittals and RFI's.
5. Maintain construction documents per federal requirements and as detailed in Chapters 15, 16, 17 and other relevant Chapters of the Local Assistance procedures Manual.
6. Enforcement DBE requirements.
7. Enforcement of Labor Compliance Requirements, including completion federal Labor Compliance Pre-job Checklist.
8. Enforcement of Quality Assurance Program
9. Completion of the Federal Resident Bridge Engineer's Construction Contract Administration Checklist, including all necessary attachments as detailed in Local Assistance Procedures Manual.
10. Discussion of environmental permits requirements.
11. Discussion of utility company requirements.
12. Preparation of invoices for federal reimbursement.

3.2 Communications and Correspondence

Purpose:

To provide and/or facilitate effective communication, on behalf of the County, among all stakeholders in the administration of the construction contract.

Approach:

ENGINEER will obtain all pertinent information as required to develop a project directory of all key personnel working on the project. ENGINEER will develop a graphic chart indicating the proper flow of correspondence. ENGINEER will log all information received from the Contractor and others, in *Expedition*. Lastly, ENGINEER will prepare and/or forward appropriate responses, obtaining County approval when required.

Assumptions:

1. The ENGINEER Correspondence Log will be used for all correspondence received from the County, the Contractor and others.
2. All original correspondence will remain with the ENGINEER project files. Only copies will be distributed, with the exception of shop drawing submittals.
3. The ENGINEER project files will be turned over to the County upon the conclusion of the project.

Deliverables:

1. Communication flow chart.
2. Written logs of information received from the County, the Contractor, design consultants, biologist, testing firm, citizens and/or others.

3.3 Change Management

Purpose:

To provide a system for logging and tracking all changes on the project.

Approach:

ENGINEER will review potential change orders for contractual and technical merit, prepare independent cost estimates and schedule analysis of work as necessary, and negotiate change order costs with the Contractor. ENGINEER will prepare change orders with all required support documentation for execution by the County. ENGINEER will keep the County apprised of cumulative changes in project cost and project duration.

Assumptions:

1. ENGINEER will be allowed to use its own judgment regarding how best to handle cost negotiations with the Contractor, but will keep the County informed throughout the process.
2. ENGINEER will obtain final approval of all project cost and/or project time changes from the County prior to authorizing the Contractor to proceed with changes.
3. ENGINEER will prepare official change order documentation to be processed with the Contractor's regular application for payment.
4. Change Orders will require County's approval.

Deliverables:

1. Independent cost estimates.
2. Change orders ready for execution.
3. Change order summary reports.

3.4 Monthly Construction Progress Reports

Purpose:

To keep the County apprised of the project status during the prescribed construction period.

Approach:

ENGINEER will prepare a monthly report that provides construction status to the County and other involved parties. The monthly report shall contain the following:

1. Status of contractor's schedule and what the contractor is doing to maintain or catch up if the schedule has slipped. While the focus will be on critical path items, other items that might become critical will be discussed in the report.
2. Construction and construction manager's costs incurred for the month.
3. Cash flow projections for both the contractor and Construction manager.
4. Identify actual and potential problems associated with the construction project and consult with the Project Manager and design engineer.
5. Evaluate Cost Reduction Incentive Proposals (CRIP) and provide recommendations to the Engineer for acceptance or denial.
6. Potential Issues, pending change orders and executed change orders.
7. Photographs to show construction activities and for clarity for special issues.
8. Other information deemed necessary for the County to have a concise understanding of the construction Projects.

Assumptions:

The County will assist ENGINEER in the initial formatting of the first report.

Deliverables:

1. Monthly progress report.
2. One page summary report for distribution to Senior County staff or elected officials.

3.5 Schedule Monitoring

Purpose:

To monitor and review the Contractor's schedule, after acceptance of baseline schedule, to ensure project is not being delayed over issues within the control of the Contractor.

Approach:

ENGINEER will develop procedures, using available software, to review the Contractor's monthly schedule updates for logic, duration, and resource changes. ENGINEER will notify the Contractor of discovered changes and document the Contractor's response, for the record. ENGINEER will keep the County apprised of the Contractor's current construction schedule.

Assumptions:

Contract specifications will require the Contractor to use Critical Path Method (CPM) scheduling tools/software. The preferred scheduling software is P3 or Suretrak by Primavera. Gant charts will be strictly forbidden.

Deliverables:

1. ENGINEER will prepare and transmit to the Contractor schedule review comments.
2. Monthly review of contractor's schedule updates and provide summary to County on schedule status and impact of changes to completion date.
3. Monitor and facilitate utility coordination with various utility companies and the Contractor. Incorporate relocations in the schedule and report any delays and impacts to completion date.

3.6 Cost Monitoring

Purpose:

To provide the County with a system that is easy to understand and provides up-to-date cost information for making timely decisions.

Approach:

Using a combination of software like *Expedition* and *Excel*, ENGINEER will generate spreadsheets and graphs for the purpose of monitoring anticipated and actual cost outlays.

Assumptions:

The County will provide direction regarding desired cost monitoring information and report formats.

Deliverables:

1. Monthly cost monitoring reports in a format to be determined.
2. Monthly progress report for the County describing key issues, cost vs. budget status, and schedule status.

3.7 Progress / Coordination Meetings

Purpose:

To provide a forum for the review of the project status, the look-ahead schedule, outstanding RFIs and submittals, and project issues.

Approach:

ENGINEER will conduct regular progress/coordination meetings, to be attended by the County, the Contractor, ENGINEER and other invitees. ENGINEER will request the County and the Contractor to submit agenda items for the meetings. Using the proposed agenda items and agenda items developed in house, ENGINEER will prepare a comprehensive agenda for the meeting and distribute the agenda to all parties scheduled to attend. Following the meeting, ENGINEER will distribute meeting minutes, requesting either the concurrence of those who attended, or suggested corrections to the minutes. Minutes will be filed as either approved or amended.

Assumptions:

1. The County's and Contractor's staffs will be able to meet on a regular basis with minimal absences.
2. The meeting room will be able to seat a minimum of 15 people.
3. Meetings will not take place more than once a week and will not last longer than one hour.
4. The Contractor will submit a look-ahead schedule (2 or 3 week) at each meeting.

Deliverables:

1. Agenda with status of open items from previous meetings.
2. Meeting minutes, for review, with action items noted.
3. Amended meeting minutes, if required.
4. Submittal, Issues log, Change Order log and RFI and RFQ working logs.

3.8 Payment Recommendations

Purpose:

To verify that the Contractor's request for payment does not represent more than an amount that is reasonable for the work done on a monthly basis. To prepare progress payment recommendations on behalf of the County for work completed and materials stored on hand (if allowed).

Approach:

ENGINEER will review and approve the Contractor's monthly progress based on the percentage of work activities complete. The Contractor will submit a certified application for payment to ENGINEER for final review. Once approved, ENGINEER will prepare a payment application certificate, using software similar to *Expedition*, for approval and execution by the County.

Assumptions:

1. The County will make payments in accordance with the contract stipulations and State Law to the Contractor once each month.
2. The software is acceptable to the County for preparing progress payment application certificates.

Deliverables:

1. Contractor's certified application for payment.
2. Progress payment request documents suitable for approval and execution by the County.

3.9 Safety

Purpose:

To review the Contractor's work site safety and notify the Contractor of unsafe conditions, as observed. Implement the CAL OSHA Safety Orders requirements for providing safe work site conditions.

Approach:

ENGINEER will observe contractors' work area. Contractors to be informed if unsafe work conditions and/or areas are observed. Immediate shutdown of contractors' work may be required if conditions endanger property and/or life. Random attendance of contractor's tailgate meeting. ENGINEER will conduct its own bi-weekly staff safety meeting to discuss specific safety procedures and issues relating to current or upcoming construction activities requiring unique safety procedures.

Assumptions:

1. Contract document requires Contractor to submit its safety program and safety officer prior to the start of work
2. Contract documents or Contractor's safety program requires contractor to submit accident reports.
3. ENGINEER assumes no responsibility for safety of Contractor's work areas.
4. ENGINEER assumes no responsibility for implementation of Contractor safety program or its construction means and methods.

Deliverables:

1. Accident reports from Contractor.
2. Bi-weekly safety meeting minutes
3. Copies of safety issues discussed during contractors tailgate meetings.

3.10 Environmental Coordination & Biological Monitoring

Purpose:

To verify the contractor has copies of applicable permits and that the work activities abide by the requirements of the permits granted by regulatory agencies. All permits shall be kept current and renewed prior to expiration throughout the project duration.

Approach:

ENGINEER will review and enforce requirements stipulated in permits issued by regulatory agencies. ENGINEER will mobilize the services of its sub-consultant for Biological Monitoring who will provide a certified Biologist.

Assumptions:

1. All permits will be provided to ENGINEER for review.
2. All permits will be included in the contract documents.
3. A certified Biologist will be provided by ENGINEER' sub-consultant.
4. The USFWS must approve the Biological monitor. Biological Monitor will be responsible for oversight of Programmatic Biological Opinion for Five Interchanges and Associated Arterial Improvement Projects along Interstate 10 and the Tiered Biological Opinion for the Palm Drive/Gene Autry Trail – Interstate 10 Interchange Improvement Project in Eastern Riverside County, California (1-6-04-F-3282.4; EA: 08-455800)conservation measures. The biological monitor should have experience with the Coachella Valley habitats and species, and specifically with the Coachella Valley fringe-toed lizards.

Deliverables:

1. Develop an employee education program. Each employee (including temporary, contractors, and subcontractors) will receive a training/awareness program within two weeks of working on the proposed project. They will be advised of the potential impact to the listed species and the potential penalties for taking such species. At a minimum, the program will include the following topics: occurrence of the listed and sensitive species in the area, their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violation of Federal and State laws, reporting requirements, and project features designed to reduce the impacts to these species and promote continued successful occupation of the project area environs. Included in this program will be color photos of the listed species, which will be shown to the employees. Following the education program, the photos will be posted in the resident engineer's office and contractor's office, where they will remain throughout the duration of the project. The RESIDENT ENGINEER, CONTRACTOR, and Service-approved biological monitor will be responsible for ensuring that employees are aware of the listed species.
2. Be present for all ESA fence construction. Ensure all areas outside of the project footprint will be delineated as Environmentally Sensitive Areas (ESAs). Inform all parties associated with this project to strictly avoid these areas and that no construction activities, materials, or equipment will be permitted in the ESAs. Ensure that these areas must be placed on the design plans. Ensure that ESAs will be designated by erecting protective fencing delineating the project impact boundary and sensitive habitats and that this barrier fencing will be constructed in such a way as to restrict the movement of reptiles into impacted areas. Minimum monitoring frequency after fence constructed: Weekly

3. Relocate Coachella Valley fringe-toed lizards using pit fall traps or other methods acceptable to the USFWS if necessary. Relocation sites must be identified by the USFWS.
4. Be present at all pre-construction and pre-grade meetings and on site during vegetation removal.
5. Will have the authority to halt all associated project activities that may be in violation of this biological opinion. In such an event, the biologist will contact the Service within 24 hours.
6. Monitor that the construction work areas will be delineated and marked clearly in the field prior to habitat removal, and the marked boundaries maintained and clearly visible to personnel on foot and be heavy equipment operators. Shall strictly limit their personal as well as the contractor personal from activities and vehicles to the proposed project areas, staging areas, and routes of travel. The biological monitor will work with the County to contact the Service to verify that the limits of construction have been properly staked and are readily identifiable.
7. Monitor construction to ensure that vegetation removal, Best Management Practices (BMPs), ESA fencing, and all avoidance and minimization measures are properly constructed and followed.
8. Monitor that all equipment maintenance, staging, and dispensing of fuel, oil, or any other such activities, will occur in designated upland areas. The designated upland areas will be located in such a manner as to prevent any runoff from entering waters of the United States, including wetlands.
9. Monitor that the typical erosion control measures, BMPs, in the vicinity of streams will be employed in accordance with the conditions in the 401 Water Quality Certification requirements of the Regional Water Quality Control Board.
10. Monitor the restriction of the use of invasive exotic plant species in landscaped areas adjacent to or near sensitive vegetation communities. In compliance with Executive Order 13112, impacted areas will be re-vegetated with plant species native to desert habitat types and the Coachella Valley, and will be avoid the use of species listed in Lists A & B of the California Exotic Pest Plan Council's list of Exotic Pest Plants of Greatest Ecological Concern in California as of October 1999.
11. If the project start coincides with seed set phase of the Coachella valley milk vetch and plants are present within project footprint, the seed will be collected off of plants when the seed is past soft dough and prior to being naturally dispersed. The top four inches of soil surrounding the milk-vetch plants to be impacted will be collected and placed in plastic bags. This seed and soil will be distributed at an area consisting of Aeolian habitat immediately following collection. The location where seed will be dispersed will be coordinated with the Service prior to collection.
12. Monitor that all construction equipment will be inspected and cleaned prior to use in the proposed project footprint to minimize the importation of non-native plant material. Also monitor/verify that all mulch, topsoil and seed mixes used during post construction

landscaping activities and erosion control BMPs will be free of invasive plant species propagules. Ensure that a weed abatement program will be implemented should invasive plant species colonize the area within the project footprint post-construction.

13. Monitor that no off-road vehicle activity from construction personnel or other persons affiliated with the project will occur outside of the project footprint.
14. Monitor that the all trash will be placed in raven-proof containers and promptly removed from the site to reduce the attraction of ravens and crows, which may eat fringe-toed lizards.
15. Monitor that no pets or firearms will be permitted inside the project's construction boundaries or other associated work areas.
16. Monitor that all sand removal and storage activities will be restricted to the project footprint and that no maintenance activities will be authorized that extend beyond the boundaries of the project footprint.
17. Monitor to the extent possible, no sand removal activities will take place from 1 November – 30 March (to avoid winter dormancy periods for the lizards) or if ambient air temperature exceeds 102 degrees Fahrenheit (the temperature at which lizard activity tends to be reduced).
18. Monitor that proper signage be implemented to advise motorists that the vehicle speeds on unpaved access roads will be restricted to a maximum of 25 MPH.
19. Monitor that all culverts, bridges, and associated water passage structures will be maintained such that water and sediment may pass between upstream and downstream locations and so as not to block the passage of wildlife.
20. Monitor is to insure compliance with U.S. Army Corps of Engineers 404 permit authorization (SPL-2008-01147-SJH) dated 11/21/08 and the California Regional Water Quality Control Board – Colorado River Basin Region Order for Technically Conditioned Clean Water Act Section 401 Water Quality Certification for Discharge of Dredged And/Or Fill Material dated 11/14/08.
21. Monitor shall wear orange safety vests and hard hats at all times on the job site and shall be aware of the location of all heavy equipment in the vicinity as they may not be visible to the equipment operator.
22. All materials submitted will become the property of the Riverside County Transportation Department.

3.11 Neighborhood Communication /Public Information

Purpose:

To provide an efficient means for keeping traveling public, adjacent residents and businesses apprised of the work activities they will encounter during construction. To provide a local

contact telephone number that residents and businesses may contact to pose questions and discuss concerns.

Approach:

Using the Neighborhood affairs strategy memorandum, developed in Task 1, ENGINEER will prepare “Dear Neighbor” letters and door hangers as a means to communicate with adjacent residents and businesses. Attending and facilitating public meetings, responding to citizens and business owner’s inquiries. Working with the County’s, Caltrans and City’s public information offices.

Assumptions:

Any County desired changes to the final memorandum of understanding will be communicated to ENGINEER in a timely manner.

Deliverables:

1. Attend weekly (as needed) Neighborhood/Business meetings.
2. Minutes of any meetings listing questions posed by residents and business owners.
3. Work progress flyers (Dear Neighbor letters).
4. Door hangers if not provided by the Contractor.
5. Local contact number for ENGINEER.
6. 24-hour hot line
7. Provide Draft “Friday” report items to the Council and draft news releases.
8. Provide project progress updates for website and/or newsletter.

3.12 Submittal Management and Review

Purpose:

To provide an efficient means of processing and reviewing submittals, including working drawings furnished in accordance with Sections 5-1.02 and 5-1.02A of the State Standard Specifications, from the Contractor and forwarding applicable submittals to the Project Designer as may be appropriate.

Approach:

Using software similar to *Expedition*, ENGINEER will develop a comprehensive submittal list for distribution to the Contractor and the Designer. ENGINEER will update and submit status submittal logs for review at each coordination meeting. ENGINEER will work with the Contractor and Designer (where applicable) to encourage timely submission, review and approval of submittals as outlined in the Contract Documents, prior to inclusion of submitted materials in the progress of the work. In addition, ENGINEER will perform the engineering reviews and approvals for working drawings and calculations provided by the Contractor in accordance with Sections 5-1.02 and 5-1.02A of the State Standard Specifications and within the review timeframes as specified in the applicable sections of the contract documents and specifications. The following steps will be taken in reviewing the Contractor’s submittals:

1. Log all submittals by Specification Section.

2. Ensure that the Contractor has provided a complete submittal, coordinated with the work of other trades, and that all deviations have been noted. Submittal is returned to the contractor if it is not complete.
3. Construction Manager reviews submittal for general compliance with the specification.
4. Applicable Submittals are forwarded to Designer for formal review. Submittal status is logged.
5. Submittals sent to Designer are returned to ENGINEER. Submittal status is logged.
6. ENGINEER to perform engineering review of submittals consisting of working drawings and calculations furnished in accordance with Sections 5-1.02 and 5-1.02A of the State Standard Specifications. Such submittals shall be reviewed and approved by ENGINEER's Resident Engineer in accordance the above sections, other applicable sections of the State Standard Specifications and the Caltrans Inspection Manuals for the associated work (ie. Falsework, Prestressing, Trenching and Shoring, etc.).
7. Approved submittals are returned to the Contractor for use in work. Submittal status is logged.
8. ENGINEER to inform Contractor if a re-submittal is required.

Assumptions:

1. ENGINEER will not be responsible for errors or omissions in submittal lists.
2. Coordination and submission of submittals in accordance with requirements of the contract is the responsibility of the Contractor.
3. County will provide a listing of submittals to be reviewed by the Designer or others including County staff.
4. ENGINEER will not make an exhaustive review of Contractor's submittals except as noted above.
5. ENGINEER will forward to the Designer all submittals designated by the County to be reviewed and approved by Designer. These submittals are typically for pre-manufactured materials and assemblies specified in the Contract.

Deliverables:

1. Submittal status log.
2. Check Calculations, where required.
3. Copy of all approval letters, approved working drawings, submittals and final submittal log.
4. Request for Information (RFI) Management

Purpose:

To provide an efficient means of processing Requests for Information (RFIs) submitted by the Contractor. The efficient management of RFIs permits timely communication between the Designer and the Contractor.

Approach:

ENGINEER will receive, log and review all RFIs for completeness and verify the question is reasonable and understandable. ENGINEER will provide a short technical review of the RFI to determine if the issue is addressed adequately in the contract documents. ENGINEER will return the RFI if the question is unclear or, in the opinion of ENGINEER staff, the answer is contained in the contract documents, noting where the requested information can be found in the contract documents. ENGINEER will track RFIs, using the software similar to *Expedition*, and facilitate the timely response from the Designer.

Assumptions:

The Designer will respond with an answer to all RFIs within the contract stipulated time period for response. Facsimile or e-mail will be used to forward RFIs to the Designer and return responses to the Contractor, with original documents to follow.

Deliverables:

1. Comprehensive log of all outstanding RFIs and their status.
2. Prepare responses to RFI's related construction issues
3. Transmit design related RFI's to design engineer and copy County Project Manager.
4. Conduct meetings with the Contractor and other parties as needed to discuss and resolve RFI's.

3.14 Document Management

Purpose:

To provide the County with an electronic means of tracking all documents exchanged between the parties involved in the construction of the project.

Approach:

ENGINEER will use software similar to Primavera *Expedition* and the ENGINEER File Index modified to conform to the Caltrans filing system to log all documents in the project field office. Documents will be scanned into the document control system and attached to the file index categories. All documents will be filed as an electronic file and hardcopy.

Assumptions:

1. ENGINEER will use software similar to *Expedition*.
2. The County may not use the chosen software.

Deliverables:

1. Comprehensive logs of all documents in the project files (electronic and hardcopy). Electronic files shall not require special software to read or access.
2. All hardcopy project documents exchanged on the project between the various parties.
3. Establish and process project control documents to include:
 - Daily inspection and Resident Engineer's diaries
 - Weekly News Letter and Weekly Statement of Working Days
 - Monthly progress report and monthly progress pay estimate
 - RFI's, Submittals
 - Correspondences with Contractor, Caltrans, Permitting Agencies, Utility Companies, Regulatory Agencies, and other stake holders
 - Survey requests and survey notes
 - Materials receipts, materials testing results, and certificate of compliance
 - Mix designs for PCC, CTPB, AC, AB

3.15 Construction Change Order Assistance

Purpose:

To provide the County with assurance that the Contractor is not presenting requests to be paid for additional work included in the original contract. To assure the County that the associated extra work costs and time extension requests are fair and reasonable to both the County and the Contractor.

Approach:

ENGINEER will negotiate change orders on behalf of the County and will use the following approach in assisting & coordinating the process with the County:

Requests for Changes by the County

1. ENGINEER will forward a Request for Quote (RFQ) to the Contractor for pricing and stipulation of proposed time extension, if requested work can be shown to impact the project's critical path. The RFQ shall contain a description of the extra work (normally provided by the Designer) to fairly price the work.
2. ENGINEER will prepare an independent cost estimate of the extra work.
3. ENGINEER will review the cost quote from the Contractor for completeness, negotiate cost and time extension requests as required and, obtaining County concurrence throughout the process. Obtain County authorization for proceeding with the change, based on definitive cost and time extension values.
4. Should ENGINEER and the Contractor be unable to negotiate a reasonable price, the County will be consulted prior to directing the work via alternative contract change options such as proceeding on a time and material basis or proceeding by force account.

Requests for Changes by Contractor

1. ENGINEER will review requests of proposed cost and/or time impacts for merit. If ENGINEER determines the request fails on merit, the Contractor will be informed of the reasons why the request is denied. Should ENGINEER determine the request has merit; ENGINEER will proceed with steps 2 and 3.
2. ENGINEER will prepare an independent cost estimate and schedule analysis of the work.
3. ENGINEER will negotiate extra work cost and time extensions with the Contractor.
4. ENGINEER will prepare change order documents for approval and execution by the County.

Assumptions:

1. ENGINEER will have authority to make minor changes to work that it determines to have no cost or time impacts to the construction project.
2. The contract will require the Contractor to submit a project schedule dragnet to demonstrate critical path impact to the project's schedule in order to substantiate any/all Contractor requests for contract time extension.
3. Extra work costs successfully negotiated between ENGINEER and the Contractor will be submitted to the County for approval.

Deliverables:

1. Perform quantity and cost analysis as required for negotiation of change orders
2. Analyze additional compensation claims that are submitted during construction period and prepare responses.
3. Perform claims administration including coordinating and monitoring claim responses, logging claims and tracking claim status.

4. Change order documentation ready for approval and execution by the County.

3.16 Review Certified Payrolls

Purpose:

To verify the Contractor provides certified payroll reports in conformance with the provisions of the contract and applicable State and Federal Law. To verify the certified payroll reports contain information required by the Labor Code.

Approach:

ENGINEER will receive and review certified payrolls from the Contractor and each of its subcontractors. ENGINEER will check for the “Statement of Compliance” from the Contractor and/or subcontractors, and spot-check wages for each classification of laborer or craftsperson. ENGINEER will notify the County and the Contractor of all discrepancies and/or errors and request a corrected Certified Payroll.

Assumptions:

1. ENGINEER will conduct employee interviews, for the purpose of verifying payment of prevailing wages. ENGINEER will perform a minimum of one interview per trade, per contractor per month.
2. ENGINEER will not be held responsible for enforcement of the Labor Code.
3. ENGINEER will maintain a weekly list of subcontractors working on the project.
4. ENGINEER will not be responsible for identifying every worker on site.

Deliverables:

Hardcopies of the Contractor’s certified payrolls maintained in the project files.

4 – Construction Inspection Services

4.1 Inspection and Documentation

Purpose:

To provide the County with documentation of construction activities, duration of activities, manpower and equipment allocation, inspections, and work conditions.

Approach:

ENGINEER will provide the County with knowledgeable people, familiar with construction activities to be performed on the project. ENGINEER will document the Contractors’ daily activities, manpower loading, on-site equipment and items considered pertinent to the project.

ENGINEER will either coordinate and manage the utilization of Sub-consultant’s inspectors, including special inspectors, for the purpose of providing daily inspections and/or special inspections as deemed necessary and beneficial for proper completion of the project, or, at the County’s direction, ENGINEER will negotiate and enter into a sub-consultant agreement(s) with a qualified Inspector(s), as defined in Task 1.5.

Assumptions:

1. ENGINEER shall provide inspectors who are experienced and qualified for the inspection required.
2. All inspections will be within the project limits.

Deliverables:

1. ENGINEER Resident Engineer's daily reports and Inspector's daily and/or special inspection reports maintained in the ENGINEER project files and turned over to the County at the completion of the project. Copies of these daily reports will be submitted to the on weekly basis or upon request.
2. Take and maintain digital photographs and videos as necessary to provide documentation of construction activities. All photos will be logged, dated and kept at the field office in a bound folder (hard copies and CD copy).
3. Verify field measurements for compliance with contract plans and specifications and provide quantity calculations for progress payment.
4. Continue to update an As-Built set of plans and review contractor's marked set.
5. Conduct weekly project meetings, prepare and distribute to all designated parties.
6. Review the updated construction schedule and maintain record.
7. Establish and process job control documents including:
 - Daily inspection diaries
 - Weekly Resident Engineers News Letter
 - Monthly construction progress payment
 - Request for information
 - Survey requests
 - Materials receipts
 - Weigh master certificates
 - Materials submittals
 - Weekly statements of working days
 - Construction change orders
 - Review of certified payrolls

4.2 Materials Testing, Construction Testing & Quality Assurance Program (QAP)

Purpose:

To provide project site and laboratory testing of construction materials used in the project for the purpose of determining quality and acceptability of materials and workmanship incorporated into the project and in compliance with the contract documents.

Approach:

ENGINEER will coordinate and manage the utilization of its materials and testing laboratory for the purpose of providing laboratory and field-testing of materials in accordance with test methods and frequencies specified in the contract documents, as required by the California Test Methods, and Caltrans' Quality Assurance Manual.

Assumptions:

1. ENGINEER shall provide material testers and laboratory technicians who are experienced and qualified for the inspection required.

2. ENGINEER will insure the implementation of the Quality Assurance Program for source inspections, materials acceptance, and special inspections as required by the contract.
3. All material testing, materials acceptance and special inspections will be within the project limits or as required by the contract.

Deliverables:

1. Laboratory test reports maintained in the ENGINEER project files and turned over to the County at the completion of the project.
2. Summary sheet of all test reports submitted by others to substantiate compliance with contract documents.
3. Summary sheets of all Certificates of Compliance or source release tags furnished by the Contractor along with the applicable delivered materials at the job site.
4. Testing summary sheets.
5. Coordinate source inspections and special inspections as required by the contract document and the Quality Assurance Program.

4.3 Surveying

Purpose:

To provide construction survey staking services for the construction of storm drains, curb & gutters, other utilities, street sections, sub-grades, bridge, walls and for monitoring settlement and other appurtenances as may be required for completion the reconstruction and improvement of the Date Palm Drive Interchange on Interstate 10 (I-10).

Approach:

ENGINEER will manage and provide all survey staking services necessary for the construction of this project. Resident Engineer will review contractor's survey staking request for completeness and schedule survey staking in a timely manner.

The survey staking services shall conform to Section 11 "Engineering Surveys" of the Caltrans Survey Manual and the following requirements:

1. Construction staking shall begin no later than two working days after the initial request is made through the ENGINEER Resident Engineer.
2. ENGINEER will insure that all survey-staking services are coordinated to meet the contractor's operations schedule; staking requests are submitted and reviewed in a timely manner.
3. ENGINEER will provide field office support and office space to the survey crews and check field staking notes after staking.
4. ENGINEER survey staking sub-consultant, if required and approved by the County, shall provide all labor, tools, equipment and other miscellaneous items necessary to perform their work, and providing one set of construction stakes as required by the construction contract.

Assumptions:

1. It is assumed that the County will provide the Survey services on this contract under the direction of the CM.

Deliverables:

1. Maintain log of construction staking requests
2. Maintain a construction-staking plan set in the field office for review, reference, and document any as-built changes.
3. Maintain files of all field notes for review and reference.
4. Limits of clearing and grubbing will be flagged at 100-foot intervals
5. Slope Stakes will place at 100-foot intervals; intermediate slope stakes will not be required. Rough grade will be staked at all grade breaks and at 50-foot intervals. Slope stakes will be provided for roadway.
6. Finished grading stakes for curb and gutter and edge pavement will be placed at all grade breaks, at 50-foot intervals on straight sections, and 25-foot intervals on curved sections, and at the beginning and end of curves.
7. Utilities and storm drains will be staked at 25-foot intervals, ends of pipes, and at appurtenances, Drop inlets shall be staked with two 5-foot offset stakes parallel to curb, showing offset to curb line.
8. Waterline and Appurtenances will be staked at 50-foot intervals, at grade breaks, and at appurtenances (valves, crosses, ends, etc)
9. Retaining walls, bridge abutments and bents: one set of stakes will be provided for bridge construction as follows: Three stakes will be provided at each abutment, pier or bent. One stake will be provided at the intersection of the control line and abutment/bent/pier centerline. The other two stakes will be placed on the centerline of the abutment/pier/bent, one on either side of the structure, offset as requested by the Contractor. Approach slabs will be established at limits of slabs, with one set of stakes to offset requested by the Contractor. The Contractor shall provide retaining wall staking and additional survey controls as required to construct the structure to the grades and tolerances required by the Standard Specifications and Special provisions.
10. Other improvements such as permanent delineation, signs, lighting, signals, traffic detector loops, guard rails, etc., will be staked by the Construction Engineer.

4.4 Review and maintain “As Constructed Schedule”

Purpose:

To track contractor’s progress during construction of the project.

Approach:

ENGINEER will use the daily inspection reports prepared by ENGINEER inspectors, the contractors’ schedule, site observations, and other sources of information, to track and document the contractor’s actual progress. The contractor’s baseline critical path schedule or most recent accepted update will be used as a basis for comparing planned versus actual progress. The CPM software described in Section 3 will be used to track the contractor’s progress and build a schedule based on the contractor’s activities.

Assumptions:

Monitoring will be on a continuous basis and the “as constructed” schedule will be updated monthly.

Deliverables:

An “As Constructed Schedule” with one electronic file (readable by software used by the County) and one hardcopy.

4.5 Maintain Photographic and Video Records of Construction Progress

Purpose:

To provide the County with a photographic record of the project, before, during and after construction.

Approach:

Using 35mm and digital photography, ENGINEER will record the Contractor's progress during construction. Care will be taken to record all items and/or conditions that have or may have a bearing on claimed extra work. Still photographs will be labeled with captions indicating subject matter, date taken, and any description required to further clarify the item/issue being photographed.

Assumptions:

All photographs will remain at the ENGINEER office until the end of the project.

Deliverables:

All photographic records.

4.6 Review and Maintain “As Built” Drawings

Purpose:

To provide the County with accurate record drawings for the project.

Approach:

ENGINEER will monitor the contractor's required record drawings on a monthly basis. In addition to monitoring the contractor's drawings, ENGINEER will maintain a copy of the contract plans for the project. ENGINEER will attempt to include items that are not normally shown on the contractor's set of record drawings. This information is not necessarily construction related, but is project related and may be important in future maintenance and/or construction projects.

Assumptions:

1. The County will be responsible for making the changes to the drawings prepared by its design engineers.
2. ENGINEER will assist the design engineers in answering its questions regarding the record drawings.
3. Contract documents will require contractor to maintain redline as-built drawings.

Deliverables:

One set of marked up contract drawings. This set will be in addition to the contractor's marked up set of contract drawings.

4.7 Final Acceptance – Punch List Assistance

Purpose:

To provide the County with reasonable assurance that the work of the project has been completed in compliance with the general intent of the contract documents.

Approach:

ENGINEER will coordinate a walk-through with the County, the Designer, Caltrans, the City and the Contractor. ENGINEER, with assistance from the County, the Designer and Caltrans will prepare a punch list indicating all deficiencies and/or omissions noted in the walk-through. ENGINEER will then forward the punch list to the Contractor for correction of the work in accordance with timelines defined in the contract. ENGINEER, in conjunction with the County and Caltrans as necessary, will inspect items on the punch list once the Contractor has notified ENGINEER that the work is complete. Completed items on the punch list will be signed off by ENGINEER. Upon completion of the punch list work ENGINEER will notify the County the work is complete and forward a copy of the completed punch list.

Assumptions:

Contractor will provide a preliminary punch list of outstanding work items for review by ENGINEER prior to requesting a final walk-through from the County, the Designer and Caltrans.

Deliverables:

Completed and signed-off punch-list submitted to the County with the closeout documents.

4.8 Final Inspection and Punch-list

Purpose:

To identify elements of construction requiring correction prior to final acceptance by the County.

Approach:

ENGINEER will perform a project inspection of the completed construction following substantial completion. During the inspection, ENGINEER will develop a list of contract work requiring correction or rework. The written list of deficient work (punch-list) will be delivered to the County and CONTRACTOR within three (3) working days of the final inspection. The final punch-list will include items to be corrected that were identified previously during the course of construction.

Assumptions:

1. The County will identify any key County or other permitting agency (Caltrans) personnel to be included in the final inspection.
2. ENGINEER will contact and schedule all required final inspection personnel 48 hour prior to the final inspection.
3. ENGINEER will prepare the final punch-list.

Deliverables:
Final punch-list.

5 – Construction Closeout Activities

5.1 Contract Closeout

Purpose:
To provide the County with final closeout documentation.

Approach:
ENGINEER will turnover all project files, contract correspondence and documents including final logs at time of project completion.

Assumptions:
County will file final Notice of Completion and Acceptance of Work.

Deliverables:

1. Notice of Completion form for Riverside County.
2. Copy of the Contractor's performance bond, good for the warranty period.
3. Final project documentation in accordance with the requirements of the Caltrans local assistance manual and FHWA requirements.

5.2 Project As-Built Drawings

Purpose:
To provide the County with accurate record drawings indicating all changes and as-built conditions.

Approach:
ENGINEER will monitor Contractor required record drawings on a monthly basis. In addition to monitoring the Contractor's drawings, ENGINEER will maintain a copy of up-to-date contract plans for the purpose of aiding the Designer in final review of the record drawings.

Assumptions:

1. The Contractor will be responsible for preparing the record drawings in both reproducible and electronic formats.
2. ENGINEER will assist the Designer in review and final approval of the record drawings.

Deliverables:
One set of contract drawings indicating recorded changes to the contract, as maintained by ENGINEER. This set will be in addition to the Contractor's marked up set of contract drawings. Provide one copy of the revised Mylar drawings. The design consultant will prepare the record drawings for the project.

5.3 Final Project Report

Purpose:

To provide the County with a written history of the construction contract. The contents of the final report are to fulfill federal requirements for federal financial participation.

Approach:

ENGINEER will review the project documents and prepare a written report for the County. As a minimum, the report will include the following:

1. Names of all organizations involved with the Projects, i.e., County managers, Caltrans, construction manager, contractor and any other parties that may have a significant part in the construction of the projects.
2. Chronological history of the construction effort, to include all significant dates.
3. Contract amounts at bid time with all other bids in tabular form.
4. Change order history, to include summary statement about each change, negotiated cost of each change and other information deemed necessary by ENGINEER and the County's Project Manager.
5. Summary of Requests for Information, in tabular or matrix form.
6. Summary of outstanding claims not resolved when the notice of completion is filed.
7. Summary of final contract amount.
8. Final DBE Report.
9. Project photographs.
10. "Lessons learned"

Assumptions:

County will provide input to ENGINEER regarding the form of the final report and federal required documents to be included in the report.

Deliverables:

One hard copy and one electronic file will be provided.

5.4 Final Payment, Final Report of Expenditure Checklist

Purpose:

To provide the County with the final contract cost and final balance due the Contractor. Also prepare Report of Expenditure Checklist for federal reimbursement including all necessary attachments.

Approach:

Following completion of the contract work, ENGINEER will, in accordance with the Designer, determine the final quantities and cost of all outstanding unit price work and all outstanding approved change order work. ENGINEER will prepare for the County and the Contractor, a final balancing change order quantifying the final contract amount. Contractor will include amount of final balancing change order in submission of last certified application for payment, submitted to ENGINEER. Once approved, ENGINEER will forward application for payment to the County for final approval and processing.

Assumptions:

1. There are no outstanding issues or claims.
2. The County is responsible for filing Notice of Completion and addressing all subcontractor claims prior to release of final payment.

Deliverables:

1. Final Pay Estimate including finalized bid items, claims, change orders, punch-list items, and corrected shop drawings.
2. Contractor's last certified application for payment with application certificate.
3. Report of Expenditure Checklist with attachments
4. Federal final report including all attachments.

6 – Field Office and Employee Equipment

The Construction Contractor will provide a construction trailer/office facility with sanitary facility, water supply, and air conditioning for the use of CM staff and provide venue for weekly construction progress meetings, coordination meetings with local agencies, utility companies, local businesses, residents and other stake holders. Supplies include furniture, phones, computers, fax machine, Internet services, copying/reproduction machine, file cabinets, safety equipments required for field staff to perform their work.