SUBMITTAL TO THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

ITEM 3.29
(ID # 7950)

MEETING DATE:
Tuesday, October 23, 2018

FROM : TLMA-TRANSPORTATION:

SUBJECT: TRANSPORTATION AND LAND MANAGEMENT AGENCY/TRANSPORTATION: Approval of the Engineering and Environmental Services Agreement between CNS Engineers and the County of Riverside for Engineering and Environmental Services for the replacement of six timber bridges (2-Railroad Avenue and 4-Chuckwalla Valley Road). Fiscal Years 18/19-23/24. Districts 4 and 5. [$2,983,071 Total; 100% HBP Funds]

RECOMMENDED MOTION: That the Board of Supervisors:

1. Approve and Execute the Engineering and Environmental Services Agreement between CNS Engineers and the County of Riverside for Engineering and Environmental Services for the replacement of six timber bridges (2-Railroad Avenue and 4-Chuckwalla Valley Road) for $2,983,071 for Fiscal Years 18/19-23/24.

ACTION: Policy

Patricia Romo, Director of Transportation 10/3/2018

MINUTES OF THE BOARD OF SUPERVISORS

On motion of Supervisor Jeffries, seconded by Supervisor Tavaglione and duly carried by unanimous vote, IT WAS ORDERED that the above matter is approved as recommended.

Ayes:	Jeffries, Tavaglione, Washington, Perez and Ashley
Nays:	None
Absent:	None
Date:	October 23, 2018
xc:	Transp.

Kecia Harper-Ihem
Clerk of the Board
By: _____ Deputy

FINANCIAL DATA	Current Fiscal Year:	Next Fiscal Year:	Total Cost:	Ongoing Cost
COST	$879,000	$688,000	$ 2,983,071	$ 0
NET COUNTY COST	$ 0	$ 0	$ 0	$ 0

SOURCE OF FUNDS: Federal Highway Bridge Program Funds (100%), There are no General Funds used in this project.	**Budget Adjustment:** No
	For Fiscal Year: 18/19-23/24

C.E.O. RECOMMENDATION: Approve

BACKGROUND:

Summary

The County of Riverside is proposing to replace six (6) timber bridges, two in the Cabazon area and four in the Desert Center area. These bridges were built in the early 1930s. Each being older than 80 years, they have acompleted their useful service life and exhibit various structural and hydraulic deficiencies.

The two bridges proposed to be replaced near Cabazon are on Railroad Avenue, approximately 2.9 miles and 0.2 miles to the west of the Interstate 10 and Haugen-Lehmann Way Interchange. Based on defects observed in various structural components, both bridges are eligible for major rehabilitation using federal Highway Bridge Program (HBP) funds. The Railroad Avenue bridges have also been identified as Scour Critical by the State Department of Transportation (CALTRANS) with the potential to destabilize and fail during a major flooding event. The Plan of Action that was prepared by the County to identify scour countermeasures recommends total replacement as the most prudent and feasible solution, which has been concurred and approved by the State.

The four bridges proposed to be replaced near Desert Center are on Chuckwalla Valley Road, approximately 0.2 miles to 6.3 miles east of Corn Springs Road. Because of the age and the structural condition of the bridges, the County Board of Supervisors approved Resolution 2012-062 on April 10, 2012 establishing maximum load limits, which restricts heavy truck traffic on the Chuckwalla Valley Road bridges. These bridges are also eligible for total replacement using federal Highway Bridge Program funds.

The existing structures have two traffic lanes, one in each direction. Although the traffic volumes on these roads are fairly low, the roads occasionally carry detoured traffic from I-10 when the freeway is impassible due to emergency incidents or temporary closures for construction. They also provide maintenance access for Union Pacific Railroad (UPRR) and various utilities. Therefore, maintaining the structural integrity of the bridges to keep the roads open is critical for regional traffic circulation. The County was also able to secure the use of federal funds at 100 percent for the replacement of these six bridges, rather than the standard 88.53 percent. These bridges are shown on attached vicinity map and are described as follows:

1. Railroad Avenue Bridge over Fornat Wash (Br. No. 56C0099)
2. Railroad Avenue Bridge over East Channel Stubbe Wash (Br. No. 56C0101)
3. Chuckwalla Valley Road Bridge over Aztec Ditch (Br. No. 56C0102)
4. Chuckwalla Valley Road Bridge over Tarantula Ditch (Br. No. 56C0103)
5. Chuckwalla Valley Road Bridge over Sutro Ditch (Br. No. 56C0104)
6. Chuckwalla Valley Road Bridge over Acari Ditch (Br. No. 56C0108)

The County advertised a Request for Qualifications for Consulting Engineering firms and received ten qualification packages. After interviewing the four short listed firms, the County selected CNS Engineers to provide the necessary environmental and engineering services for this project. The Engineering and Environmental Services Agreement between CNS Engineers and the County of Riverside defines the scope and fee to perform the engineering, environmental documentation, and construction support for these six timber bridges.

Project Numbers;

1. Railroad Avenue Bridge over Fornat Wash - Project Number C4-0063
2. Railroad Avenue Bridge over East Channel Stubbe Wash - Project Number C4-0064
3. Chuckwalla Valley Road Bridge over Aztec Ditch - Project Number C5-0058)
4. Chuckwalla Valley Road Bridge over Tarantula Ditch - Project Number C4-0062)
5. Chuckwalla Valley Road Bridge over Sutro Ditch - Project Number C4-0061)
6. Chuckwalla Valley Road Bridge over Acari Ditch - Project Number C4-0060)

Impact on Residents and Businesses

The new bridges will be designed in accordance with the latest state of the art seismic and hydraulic design criteria, and are expected to improve the safety and reliability of travel.

SUPPLEMENTAL:

Additional Fiscal Information:

CNS Engineers will perform preliminary engineering, environmental clearance, final design, and construction support for all six bridges for the negotiated fee of $2,983,071. The contract terminates on June 30, 2024.

No County funds will be used.

ATTACHMENTS:

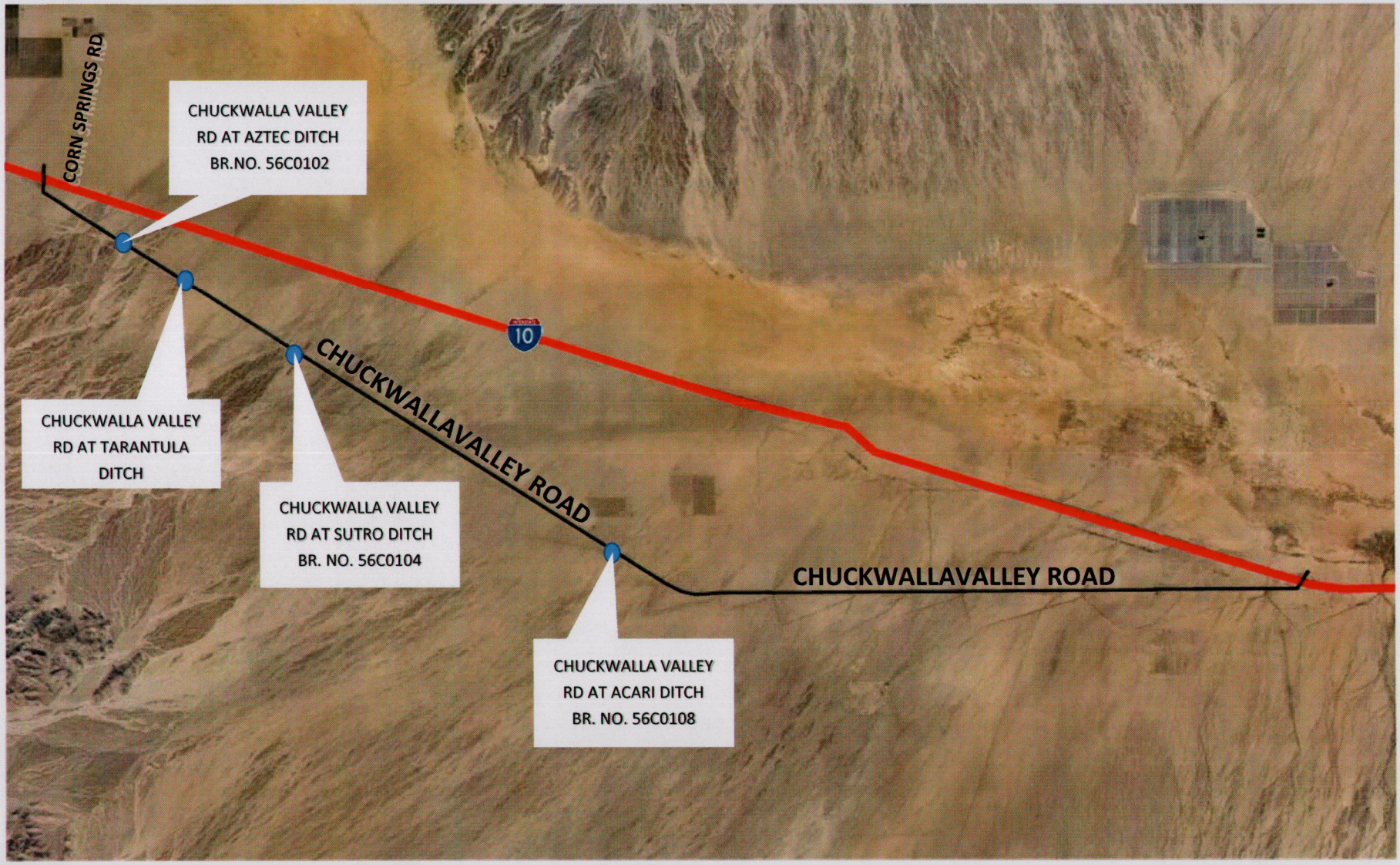
Vicinity Map
Agreement

Scott Bruckner 10/15/2018

Gregory P. Priamos, Director County Counsel 10/11/2018

RAILROAD AVENUE BRIDGE REPLACEMENT
VICINITY MAP

CHUCKWALLA VALLEY ROAD BRIDGE REPLACEMENT
VICINITY MAP



Federal Project No. **BRLO-5956(228), BRLO-5956(229), BRLO-5956(239), BRLO-5956(227), BRLO-5956(226), BRLO-5956(225)**

Contract No. _____
Riverside County Transportation

ENGINEERING AND ENVIRONMENTAL SERVICES AGREEMENT

for

Replacement of Six Timber Bridges on Chuckwalla Valley Road and Railroad Avenue

(Bridge No. 56C0099, 56C0101, 56C0102, 56C0103, 56C0104, 56C0108)

between

County of Riverside • Transportation Department

And

CNS Engineers, Inc.

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Federal Project No. **BRLO-5956(228), BRLO-5956(229), BRLO-5956(239), BRLO-5956(227), BRLO-5956(226), BRLO-5956(225)**

Contract No. 18-08-010
Riverside County Transportation

ENGINEERING AND ENVIRONMENTAL SERVICES AGREEMENT

for

Replacement of Six Timber Bridges on Chuckwalla Valley Road and Railroad Avenue

(Bridge No. 56C0099, 56C0101, 56C0102, 56C0103, 56C0104, 56C0108)

between

County of Riverside • Transportation Department

And

CNS Engineers, Inc.

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ENGINEERING SERVICES AGREEMENT

This Agreement is entered into this _____ day of _____, 2018, by and between COUNTY OF RIVERSIDE, hereinafter referred to as "COUNTY", and CNS Engineers, Inc. (CNS), hereinafter referred to as "ENGINEER", located at the following addresses:

County of Riverside • Transportation Department	CNS Engineers, Inc.
4080 Lemon Street, 8th Floor	11870 Pierce Street, Suite 265
Riverside, CA 92502	Riverside, CA 92505

COUNTY and CNS do hereby agree as follows:

ARTICLE I • DESIGNATED CONTACTS

Coordination of ENGINEER, and COUNTY activities shall be accomplished through an ENGINEERING PROJECT MANAGER, and a COUNTY PROJECT MANAGER.

The ENGINEERING PROJECT MANAGER for ENGINEER shall be:

James Lu

The COUNTY PROJECT MANAGER for COUNTY shall be:

Tayfun Saglam

ARTICLE II • PROJECT DEFINITION

ENGINEER shall furnish all technical and professional services including labor, material, equipment, transportation, supervision, and expertise to fully and adequately perform and complete the covenants set forth in Appendix A, Scope of Services, which is attached hereto and incorporated herein by reference. All services and deliverables associated with the performance and accomplishment of the covenants described in the Scope of Services is hereinafter collectively referred to as the "PROJECT".

ARTICLE III • COOPERATIVE AGENCIES

A. Lead Agency

COUNTY is designated as the lead agency for PROJECT and is working cooperatively with other agencies in the effort to complete PROJECT.

B. Cooperative Agencies

The cooperating agencies are listed below and will hereinafter be collectively referred to as the "AGENCIES".

Federal Highway Administration (FHWA)

Caltrans

Riverside County Departments

Utility Companies

Regulatory Agencies including:

U.S. Army Corps of Engineers (USACE)

U.S. Fish and Wildlife Service (USFWS)

California Department of Fish and Wildlife (CDFW)

Regional Water Quality Control Board (RWQCB)

Riverside County Flood Control & Water Conservation District (RCFC & WCD)

Coachella Valley Water District (CVWD)

State Historic Preservation Office (SHPO)

Southern California Air Quality Management District (SCAQMD)

C. COUNTY/AGENCIES Standards

All deliverables shall be prepared in accordance with the current COUNTY and AGENCIES practices, regulations, policies, procedures, manuals and standards where applicable. All deliverables are subject to review and approval by COUNTY.

ARTICLE IV • CONDITIONS

A. Notifications

All notices hereunder and communications regarding interpretation of the terms of this agreement and changes thereto shall be effected by the mailing thereof by registered or certified mail, return receipt requested, postage prepaid and addressed to the attention of the ENGINEERING PROJECT MANAGER or the COUNTY PROJECT MANAGER at the respective addresses provided on page one of this contract.

B. Fiscal and Federal Provisions (Verbatim)

In addition to the provisions set forth under this agreement, ENGINEER and the subconsultants shall comply with Appendix D Mandatory Fiscal and Federal Provisions, which is attached hereto and incorporated herein. If any provisions set forth under this agreement is in conflict with Appendix D, Appendix D provisions shall prevail.

C. Assignment

Without written consent of COUNTY, this contract is not assignable by ENGINEER either in whole or in part.

D. Subcontracts

1. ENGINEER shall perform the services contemplated with resources available within its own organization. No portion of the services pertinent to this contract shall be subcontracted without written authorization by the COUNTY PROJECT MANAGER, except that which is expressly identified in this contract.
2. In the event ENGINEER subcontracts any portion of ENGINEER's duties under this contract, ENGINEER shall require its subcontractors to comply with the terms of this contract in the same manner as required of ENGINEER including, but not limited to; indemnification of the COUNTY, requiring the same insurance of Subcontractors as required of ENGINEER, and having Subcontractor's insurance name the COUNTY as Additional Insured for each type of insurance where this Agreement requires ENGINEER's insurance to name COUNTY as Additional Insured.
3. Any substitution of subconsultant(s) must be approved in writing by COUNTY's PROJECT MANAGER prior to the start of work by the subconsultant(s).
4. ENGINEER shall pay its subconsultants within ten (10) calendar days from receipt of each payment made to ENGINEER by COUNTY.
5. Nothing contained in this contract or otherwise, shall create any contractual relation between COUNTY and any subconsultant(s), and no subcontract shall relieve ENGINEER of its responsibilities and obligations hereunder. ENGINEER agrees to be as fully responsible to COUNTY for the acts and omissions of its subconsultant(s) and of persons either directly or indirectly employed by any of them as it is for the acts and omissions of persons directly employed by ENGINEER. ENGINEER's obligation to pay its subconsultant(s) is an independent obligation from COUNTY'S obligation to make payments to the ENGINEER.

E. Modifications

1. This contract may be amended or modified only by mutual written agreement of the parties. No alteration or variation of the terms of this contract will be valid unless made in writing and signed by the parties hereto and no oral understanding or agreement not incorporated herein, will be binding on any of the parties hereto.

2. Minor modifications are changes that do not substantially affect the Scope of Service. Minor modifications may be: a shift of funds between tasks within a budget category; the shifting of work and/or funding from one phase to another; use of contingency pursuant to Article VI.B.1. All requests for minor modifications must be approved in writing by the Director of Transportation, or his designee, prior to implementing the change.
3. There shall be no change in the ENGINEERING PROJECT MANAGER or key members of the PROJECT team without prior written approval by the COUNTY PROJECT MANAGER.
4. All modifications that do not fit within the definition of a minor modification to the contract shall be considered a major change and must be approved in writing by the ENGINEER and COUNTY Board of Supervisors prior to implementing the major change.

F. COUNTY Directives

ENGINEER shall receive contract directions and interpretations from the COUNTY PROJECT MANAGER.

G. Liability

1. ENGINEER has total responsibility for the accuracy and completeness of all data, reports, plans, specifications and estimates prepared for this PROJECT and shall check all such material accordingly. COUNTY will review all work product deliverables. The responsibility for accuracy and completeness of such items remains solely that of ENGINEER. Neither COUNTY'S review or approval shall give rise to any liability or responsibility on the part of COUNTY, or waive any of COUNTY'S rights, or relieve ENGINEER of its professional responsibilities or obligations under this contract.
2. The plans, designs, estimates, calculations, reports and other documents furnished in accordance with the Scope of Services shall meet the criteria for acceptance and be a product of neat appearance, well organized, technically and grammatically correct, checked and having the preparer and checker identified. The minimum standard of appearance, organization and contents shall be of similar types produced by COUNTY and AGENCIES. If any work product submitted is not complete and ready for use by COUNTY, it shall be marked "Draft" or similar designation to indicate it is not ready for use by COUNTY. COUNTY expects that all work product not so designated is ready for and can be used on PROJECT.
3. The page identifying preparers of engineering reports, the title sheet for specifications and each sheet of

plans, shall bear the professional seal, certificate number, registration classification, expiration date of the certificate, and signature of the professional engineer(s) responsible for their preparation.

4. COUNTY and ENGINEER agree that plans, drawings or other work products prepared by ENGINEER are for the exclusive use of COUNTY and will be used by COUNTY for the project for which they were specifically designed. ENGINEER shall not be responsible for use of such plans, drawings or other work products if used on a different project without the written authorization or approval by ENGINEER.
5. ENGINEER acknowledges that the plans, drawings and/or other work products may be used by COUNTY for the PROJECT regardless of any disputes that may develop between ENGINEER and COUNTY. All plans, drawings, or other work product shall be deemed the sole and exclusive property of COUNTY and ownership thereof is irrevocably vested in COUNTY whether the PROJECT is executed or not.
6. ENGINEER, and the agents and employees of ENGINEER, in the performance of this contract, shall act in an independent capacity and not as officers, employees or agents of COUNTY.

H. Indemnification and Defense

1. To the fullest extent permitted by applicable law, ENGINEER agrees to and shall indemnify, defend and hold harmless the County of Riverside, its Agencies, Districts, Departments and Special Districts, their respective directors, officers, Board of Supervisors, elected and appointed officials, employees, agents, volunteers and representatives (hereinafter individually and collectively referred to as "Indemnitees") from all liability, including, but not limited to loss, suits, claims, demands, actions, or proceedings caused by any alleged or actual negligence, recklessness, or willful misconduct of ENGINEER, its directors, officers, partners, employees, agents, subconsultants or representatives or any person or organization for whom ENGINEER is responsible, arising out of or from the performance of services under this Agreement. In no event shall the cost to defend charged to the ENGINEER exceed the ENGINEER's proportionate percentage of fault.
2. The duty to indemnify does not include loss, suits, claims, demands, actions, or proceedings caused by actual negligence of Indemnitees; however, any actual negligence of Indemnitees will only affect the duty to indemnify for the specific act adjudged by the findings of a court of competent jurisdiction to be negligence of the Indemnitees, and will not preclude a duty to indemnify for any negligence, recklessness, or willful misconduct of ENGINEER.
3. To the fullest extent permitted by applicable law, ENGINEER shall defend and pay, at its sole expense, all

costs and fees, including but not limited to attorney fees, cost of investigation, and defense, in any loss, suits, claims, demands, actions, or proceedings based or alleged to be based on any negligence, recklessness, or willful misconduct of ENGINEER arising out of or from the performance of services under this Agreement. The duty to defend applies to any alleged or actual negligence, recklessness, or willful misconduct of ENGINEER. The duty to defend shall apply whether or not ENGINEER is a party to the lawsuit, and shall apply whether or not ENGINEER is directly liable to the plaintiffs in the lawsuit. The duty to defend applies even if Indemnitees are alleged or found to be actively negligent, unless the negligent act, error or omission at issue was caused by the sole active negligence of Indemnitees.

4. The specified insurance provisions and limits required in this contract shall in no way limit or circumscribe ENGINEER'S obligations to indemnify and hold harmless Indemnitees from third party claims.

5. In the event there is conflict between the indemnity and defense provisions and California Civil Code Sections 2782 and 2782.8, the indemnity and defense provisions shall be interpreted to comply with Civil Code sections 2782 and 2782.8.

I. Quality Control

ENGINEER shall implement and maintain the following quality control procedures during the preparation of the plans and documents relating to PROJECT. ENGINEER shall have a quality control plan in effect during the entire time services are being performed under this contract. The plan shall establish a process whereby calculations are independently checked, plans checked, corrected and back-checked, and all job related correspondence and memoranda routed and received by affected persons and then bound in appropriate job files. Where several drawings show different work in the same area, means shall be provided to avoid conflicts and misalignment in both new and existing improvements. Evidence that the quality control plan is functional may be requested by the COUNTY PROJECT MANAGER. All plans, calculations documents and other items submitted to the COUNTY PROJECT MANAGER for review shall be marked clearly as being fully checked and that the preparation of the material followed the quality control plan established for the work.

J. Value Engineering

1. Elements of PROJECT may be considered for Value Engineering Studies. To this end, the COUNTY PROJECT MANAGER may direct the ENGINEER to examine the various elements of a design segment and submit an informal written statement or memorandum addressing those elements where it appears

significant savings and other advantages can be realized. The statement shall be sufficiently informative to enable COUNTY to determine whether to direct a detailed Value Engineering Study or possibly direct immediate design changes where the value of the change is apparent without the need of detailed study and analysis.

2. ENGINEER or its subcontractors shall not incorporate in the design materials or equipment of single or sole source origin without written approval of COUNTY. Proprietary names of material or equipment shall not be used in the plans and specifications.

K. Extra Work

1. ENGINEER shall not perform Extra Work until receiving written authorization from the COUNTY PROJECT MANAGER.
2. In the event that COUNTY directs ENGINEER to provide services constituting Extra Work, COUNTY shall provide extra compensation to the ENGINEER. Allowable compensation for approved extra work will be based on the provisions of Appendix C, Budget, which is attached hereto and incorporated herein by reference.
3. An amendment to this contract providing for such compensation for Extra Work shall be issued by COUNTY to ENGINEER. Such Amendment shall not be effective until executed by both parties.

L. Disputes

1. In the event ENGINEER considers any work demanded of him to be outside the requirements of the contract, or if he considers any order, instruction, or decision of COUNTY to be unfair, he shall promptly upon receipt of such order, instruction or decision, ask for a written confirmation of the same whereupon he shall proceed without delay to perform the work or to conform to the order, instruction, or decision; but unless ENGINEER finds such order, instruction, or decision satisfactory, he shall within 20 days after receipt of same, file a written protest with COUNTY stating clearly and in detail his objections and reasons therefore. Except for such protests or objections as are made of record in the manner specified and within the time stated herein, and except for such instances where the basis of a protest could not reasonably have been foreseen by ENGINEER within the time limit specified for protest, ENGINEER hereby waives all grounds for protests or objections to the orders, instruction, or decisions of COUNTY and hereby agrees that, as to all matters not included in such protests, the orders, instructions and decisions of COUNTY will be limited to matters properly falling within COUNTY's authority.

2. Any controversy or claim arising out of or relating to this contract which cannot be resolved by mutual agreement may be settled by arbitration in accordance with the rules of the American Arbitration Association, provided that the parties mutually agree to submit to arbitration.
3. Neither the pendency of a dispute nor its consideration by arbitration will excuse ENGINEER from full and timely performance in accordance with the terms of the contract.

M. Termination Without Cause

1. COUNTY reserves the right to terminate this contract at COUNTY's discretion and without cause, upon thirty (30) calendar days written notice to ENGINEER.
2. In the event of termination of the Agreement, upon demand, ENGINEER shall deliver to COUNTY all field notes, surveys, studies, reports, plans, drawings, specifications, and all other materials and documents prepared by or provided to ENGINEER in the performance of this contract. All such documents and materials shall be property of COUNTY.
3. In the event that this contract is terminated, ENGINEER is entitled to full payment for all services performed up to the time written notice of contract cancellation is received by ENGINEER. Payment shall be made for services performed to date based upon the percentage ratio that the basic services performed bear to the services contracted for, less payments made to date; plus any amount for authorized, but unpaid, extra work performed and costs incurred.

N. Termination for Lack of Performance

COUNTY may terminate this contract and be relieved of the payment of any consideration to ENGINEER should ENGINEER fail to perform the covenants herein contained at the time and in the manner herein provided. In the event of such termination, COUNTY may proceed with the work in any manner deemed proper by COUNTY. In such event, ENGINEER shall be paid only for work completed and delivered to COUNTY in a timely and successful manner.

O. Insurance

Without limiting or diminishing the ENGINEER'S obligation to indemnify or hold the COUNTY harmless, ENGINEER shall procure and maintain or cause to be maintained, at its sole cost and expense, the following insurance coverage's during the term of this Agreement. As respects to the insurance section only, the COUNTY herein refers to the County of Riverside, its Agencies, Districts, Special Districts, and Departments, their respective directors, officers, Board of Supervisors, employees, elected or appointed officials, agents or

representatives as Additional Insureds.

1. Workers' Compensation:

   If the ENGINEER has employees as defined by the State of California, the ENGINEER shall maintain statutory Workers' Compensation Insurance (Coverage A) as prescribed by the laws of the State of California. Policy shall include Employers' Liability (Coverage B) including Occupational Disease with limits not less than $1,000,000 per person per accident. The policy shall be endorsed to waive subrogation in favor of The County of Riverside.

2. Commercial General Liability:

   Commercial General Liability insurance coverage, including but not limited to, premises liability, unmodified contractual liability, products and completed operations liability, personal and advertising injury, and cross liability coverage, covering claims which may arise from or out of ENGINEER'S performance of its obligations hereunder. Policy shall name the COUNTY as Additional Insured. Policy's limit of liability shall not be less than $1,000,000 per occurrence combined single limit. If such insurance contains a general aggregate limit, it shall apply separately to this agreement or be no less than two (2) times the occurrence limit.

3. Vehicle Liability:

   If vehicles or mobile equipment are used in the performance of the obligations under this Agreement, then ENGINEER shall maintain liability insurance for all owned, non-owned or hired vehicles so used in an amount not less than $1,000,000 per occurrence combined single limit. If such insurance contains a general aggregate limit, it shall apply separately to this agreement or be no less than two (2) times the occurrence limit. Policy shall name the COUNTY as Additional Insureds.

4. Professional Liability

   ENGINEER shall maintain Professional Liability Insurance providing coverage for the ENGINEER's performance of work included within this Agreement, with a limit of liability of not less then $1,000,000 per occurrence and $2,000,000 annual aggregate. If ENGINEER's Professional Liability Insurance is written on a claims made basis rather than an occurrence basis, such insurance shall continue through the term of this Agreement and ENGINEER shall purchase at his sole expense either 1) an Extended Reporting Endorsement (also, known as Tail Coverage); or 2) Prior Dates Coverage from new insurer with a retroactive date back to the date of, or prior to, the inception of this Agreement; or 3) demonstrate through

Certificates of Insurance that ENGINEER has Maintained continuous coverage with the same or original insurer. Coverage provided under items; 1), 2), or 3) will continue as long as the law allows.

5. General Insurance Provisions - All lines:

   a. Any insurance carrier providing insurance coverage hereunder shall be admitted to the State of California and have an A M BEST rating of not less than A: VIII (A:8) unless such requirements are waived, in writing, by the County Risk Manager. If the County's Risk Manager waives a requirement for a particular insurer such waiver is only valid for that specific insurer and only for one policy term.

   b. The ENGINEER must declare its insurance self-insured retention for each coverage required herein. If any such self-insured retention exceed $500,000 per occurrence each such retention shall have the prior written consent of the County Risk Manager before the commencement of operations under this Agreement. Upon notification of self-insured retention unacceptable to the COUNTY, and at the election of the Country's Risk Manager, ENGINEER'S carriers shall either; 1) reduce or eliminate such self-insured retention as respects this Agreement with the COUNTY, or 2) procure a bond which guarantees payment of losses and related investigations, claims administration, and defense costs and expenses.

   c. ENGINEER shall cause ENGINEER'S insurance carrier(s) to furnish the County of Riverside with either 1) a properly executed original Certificate(s) of Insurance and certified original copies of Endorsements effecting coverage as required herein, and 2) if requested to do so orally or in writing by the County Risk Manager, provide original Certified copies of policies including all Endorsements and all attachments thereto, showing such insurance is in full force and effect. Further, said Certificate(s) and policies of insurance shall contain the covenant of the insurance carrier(s) that thirty (30) days written notice shall be given to the County of Riverside prior to any material modification, cancellation, expiration or reduction in coverage of such insurance. In the event of a material modification, cancellation, expiration, or reduction in coverage, this Agreement shall terminate forthwith, unless the County of Riverside receives, prior to such effective date, another properly executed original Certificate of Insurance and original copies of endorsements or certified original policies, including all endorsements and attachments thereto evidencing coverage's set forth herein and the insurance required herein is in full force and effect. ENGINEER shall not commence operations until the COUNTY has been furnished original Certificate (s) of Insurance and certified

original copies of endorsements and if requested, certified original policies of insurance including all endorsements and any and all other attachments as required in this Section. An individual authorized by the insurance carrier to do so on its behalf shall sign the original endorsements for each policy and the Certificate of Insurance.

d. It is understood and agreed to by the parties hereto that the ENGINEER'S insurance shall be construed as primary insurance, and the COUNTY'S insurance and/or deductibles and/or self-insured retention's or self-insured programs shall not be construed as contributory.

e. If, during the term of this Agreement or any extension thereof, there is a material change in the scope of services; or, there is a material change in the equipment to be used in the performance of the scope of work; or, the term of this Agreement, including any extensions thereof, exceeds five (5) years; the COUNTY reserves the right to adjust the types of insurance and the monetary limits of liability required under this Agreement, if in the County Risk Manager's reasonable judgment, the amount or type of insurance carried by the ENGINEER has become inadequate.

f. ENGINEER shall pass down the insurance obligations contained herein to all tiers of subconsultants working under this Agreement.

g. The insurance requirements contained in this Agreement may be met with a program(s) of self-insurance acceptable to the COUNTY.

h. ENGINEER agrees to notify COUNTY of any claim by a third party or any incident or event that may give rise to a claim arising from the performance of this Agreement.

P. Conflict of Interest

1. ENGINEER warrants, by execution of this contract, that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by ENGINEER for the purpose of securing business. For breach or violation of this warranty, COUNTY has the right to annul this contract without liability, pay only for the value of the work actually performed, or in its discretion to deduct from the contract price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee. ENGINEER may be requested to complete a Conflict of Interest Statement prior to, during, or after execution of this contract. ENGINEER understands that as a condition of this contract

ENGINEER agrees to complete the Conflict of Interest Statement when requested to do so by COUNTY.

2. ENGINEER shall disclose any financial, business, or other relationship with COUNTY that may have an impact upon the outcome of this contract, or any ensuing COUNTY construction project. ENGINEER shall also list current clients who may have a financial interest in the outcome of this contract, or any ensuing COUNTY construction project, which will follow.
3. ENGINEER hereby certifies that it does not now have, nor shall it acquire any financial or business interest that would conflict with the performance of services under this contract.
4. ENGINEER hereby certifies that neither ENGINEER, nor any firm affiliated with ENGINEER will bid on any construction contract, or on any contract to provide construction inspection for any construction project resulting from this contract. An affiliated firm is one, which is subject to the control of the same persons through joint-ownership, or otherwise.
5. Except for subconsultants whose services are limited to providing surveying or materials testing information, no subconsultant who has provided design services in connection with this contract shall be eligible to bid on any construction contract, or on any contract to provide construction inspection for any construction project resulting from this contract.
6. All subcontracts entered into by ENGINEER as a result of this contract shall contain paragraphs 2 through 5 of this Section O.

Q. Legal Compliance

ENGINEER shall comply with all Federal, State and local laws, statutes, ordinances, rules and regulations, and the orders and decrees of any courts or administrative bodies or tribunals currently in effect and in any manner affecting the performance of this contract, including, without limitation, workers' compensation laws and licensing and regulations.

R. Nondiscrimination

1. ENGINEERS's signature affixed herein, and dated, shall constitute a certification under penalty of perjury under the laws of the State of California that ENGINEER has, unless exempt, complied with, the nondiscrimination program requirements of Government Code Section 12990 and Title 2, California Administrative Code, Section 8103.
2. During the performance of this contract, ENGINEER and its Subcontractors shall not act unlawfully against any employee or applicant for employment because of race, religion, color, national origin,

ancestry, physical handicap, medical condition, marital status, age or sex. ENGINEER and Subcontractor shall comply with the provisions of the Fair Employment and Housing Act (Government Code, Section 12900 et seq.) and applicable regulations promulgated thereunder (California Administrative Code, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12900, set forth in Chapter 5 of Division 4 of Title 2 of the California Administrative Code are incorporated into this contract by reference and made a part hereof as if set forth in full. ENGINEER and its Subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

3. ENGINEER will provide all information and reports required by the Regulations, or orders and instructions issued pursuant thereto, and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by COUNTY or AGENCIES to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of ENGINEER is in the exclusive possession of another who fails or refuses to furnish this information, ENGINEER shall so certify to COUNTY, or the Federal Highway Administration as appropriate and shall set forth what efforts he has made to obtain the information.
4. In the event of ENGINEER's noncompliance with the nondiscrimination provisions of this contract, COUNTY shall impose such contract sanctions as it determines to be appropriate, including, but not limited to:
    - Withholding of payments to ENGINEER under the contract until ENGINEER complies;
    - Cancellation, termination, or suspension of the contract in whole or in part.
5. ENGINEER shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under this contract.
7. ENGINEER shall comply with Title VI of the Civil Rights Act of 1964, as amended. Accordingly, 49 CFR 21 through Appendix H and 23 CFR 710.405(b) are applicable to this contract by reference. Title VI provides that the recipients of federal assistance will implement and maintain a policy of nondiscrimination in which no person in the state of California shall, on the basis of race, color, national origin, religion, sex, age, disability, be excluded from participation in, denied the benefits of or subject to discrimination under any program or activity by the recipients of federal assistance or their assignees and

successors in interest.

8. The ENGINEER, with regard to the work performed by it during the Agreement shall act in accordance with Title VI. Specifically, the ENGINEER shall not discriminate on the basis of race, color, national origin, religion, sex, age, or disability in the selection and retention of Subconsultants, including procurement of materials and leases of equipment. The ENGINEER shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the U.S. DOT's Regulations, including employment practices when the Agreement covers a program whose goal is employment

S. Labor Code and Prevailing Wages

1. Certain Classifications of Labor under this contract may be subject to prevailing wage requirements.
2. Reference is made to Chapter 1, Part 7, Division 2 of the California Labor Code (commencing with Section 1720). By this reference said Chapter 1 is incorporated herein with like effect as if it were here set forth in full. The parties recognize that said Chapter 1 deals, among other things with discrimination, penalties and forfeitures, their disposition and enforcement, wages, working hours, and securing worker's compensation insurance and directly affect the method of prosecution of the work by ENGINEER and subject it under certain conditions to penalties and forfeitures. Execution of the contract by the parties constitutes their agreement to abide by said Chapter 1, their stipulation as to all matters which they are required to stipulate as to by the provisions of said Chapter 1, constitutes ENGINEER's certification that he is aware of the provisions of said Chapter 1 and will comply with them and further constitutes ENGINEER's certification as follows: "I am aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work of this contract."
3. Pursuant to Section 1773 of the Labor Code, the general prevailing wage rates, including the per diem wages applicable to the work, and for holiday and overtime work, including employer payments for health and welfare, pension, vacation, and similar purposes, in the county in which the work is to be done have been determined by the Director of the California Department of Industrial Relations. These wages are available from the California Department of Industrial Relations' Internet website at http://www.dir.ca.gov.
4. Should a portion of the project contain Federal funding, Federal minimum wages shall be used. The Federal minimum wage rates for this project as determined by the United States Secretary of Labor are

available from the U.S Department of Labor, Employment Standards Administration, Wage and Hour Division's Internet website at http://www.access.gpo.gov/davisbacon. If there is a difference between the minimum wage rates determined by the Secretary of Labor and the general prevailing wage rates determined by the Director of the California Department of Industrial Relations for similar classifications of labor, the ENGINEER and subcontractors shall pay not less than the higher wage rate. The Department will not accept lower State wage rates determinations. This includes "helper" (or other classifications based on hours of experience) or any other classification not appearing in the Federal wage determinations. Where Federal wage determinations do not contain the State wage rate determination otherwise available for use by the ENGINEER and subcontractors, the ENGINEER and subcontractors shall pay not less than the Federal minimum wage rate which most closely approximates the duties of the employees in question.

5. ENGINEER shall comply with the State of California's General Prevailing Wage Rate requirements in accordance with California Labor Code, Section 1770, and all Federal, State, and local laws and ordinances applicable to the work.
6. Any subcontract entered into as a result of this contract, if for more than $25,000 for public works construction or more than $15,000 for the alteration, demolition, repair, or maintenance of public works, shall contain all of the provisions of this Article.
7. When prevailing wages apply to the services described in the scope of work, transportation and subsistence costs shall be reimbursed at the minimum rates set by the Department of Industrial Relations (DIR) as outlined in the applicable Prevailing Wage Determination. See http://www.dir.ca.gov.

T. Review and Inspection

ENGINEER and any Subcontractors shall permit COUNTY and/or AGENCIES to review and inspect PROJECT activities including review and inspection on a daily basis.

U. Record Retention / Audits

1. ENGINEER, Subcontractors, and COUNTY shall maintain all books, documents, papers, accounting records, and other evidence pertaining to the performance of the contract, but not limited to, the costs of administering the contract. All parties shall make such materials available at their respective offices at all reasonable times during the contract period and for ten years from the date of final payment under the

contract or ten years from project closeout, whichever is later.

2. COUNTY, Caltrans, the State Auditor General, FHWA or any duly authorized representative of the Federal Government shall have access to any books, records, and documents of ENGINEER that are pertinent to the contract for audits, examinations, excerpts, and transactions, and copies thereof shall be furnished if requested.

V. Audit Review Procedures

1. Any dispute concerning a question of fact arising under an interim or post audit of this contract that is not disposed of by agreement, shall be reviewed by COUNTY'S Chief Financial Officer.
2. Not later than 30 days after issuance of the final audit report, ENGINEER may request a review by COUNTYS Chief Financial Officer of unresolved audit issues. The request for review will be submitted in writing.
3. ENGINEER and subconsultant contracts, including cost proposals and ICR, are subject to audits or reviews such as, but not limited to, a contract audit, an incurred cost audit, an ICR Audit, or a CPA ICR audit work paper review. If selected for audit or review, the contract, cost proposal and ICR and related work papers, if applicable, will be reviewed to verify compliance with 48 CFR, Part 31 and other related laws and regulations. In the instances of a CPA ICR audit work paper review it is ENGINEER's responsibility to ensure federal, state, or local government officials are allowed full access to the CPA's work papers including making copies as necessary. The contract, cost proposal, and ICR shall be adjusted by ENGINEER and approved by COUNTY PROJECT MANAGER to conform to the audit or review recommendations. ENGINEER agrees that individual terms of costs identified in the audit report shall be incorporated into the contract by this reference if directed by COUNTY at its sole discretion. Refusal by ENGINEER to incorporate audit or review recommendations, or to ensure that the federal, state or local governments have access to CPA work papers, will be considered a breach of contract terms and cause for termination of the contract and disallowance of prior reimbursed costs.
4. ENGINEER Cost Proposal is subject to a CPA ICR Audit Work Paper Review by Caltrans' Audit and Investigation (Caltrans). Caltrans, at its sole discretion, may review and/or audit and approve the CPA ICR documentation. The Cost Proposal shall be adjusted by the ENGINEER and approved by the COUNTY Contract Manager to conform to the Work Paper Review recommendations included in the management letter or audit recommendations included in the audit report. Refusal by the ENGINEER to

incorporate the Work Paper Review recommendations included in the management letter or audit recommendations included in the audit report will be considered a breach of the contract terms and cause for termination of the contract and disallowance of prior reimbursed costs.

a. During a Caltrans' review of the ICR audit work papers created by the ENGINEER's independent CPA, Caltrans will work with the CPA and/or ENGINEER toward a resolution of issues that arise during the review. ENGINEER agrees to use its best efforts to resolve any audit disputes in a timely manner. If Caltrans identifies significant issues during the review and is unable to issue a cognizant approval letter, COUNTY will reimburse the ENGINEER at a provisional ICR until a FAR compliant ICR {e.g. 48 CFR, part 31; GAGAS (Generally Accepted Auditing Standards); CAS (Cost Accounting Standards), if applicable; in accordance with procedures and guidelines of the American Association of State Highways and Transportation Officials Audit Guide; and other applicable procedures and guidelines}is received and approved by A&I. Provisional rates will be as follows:

   aa. If the proposed rate is less than 150% - the provisional rate reimbursed will be 90% of the proposed rate.

   bb. If the proposed rate is between 150% and 200% - the provisional rate will be 85% of the proposed rate.

   cc. If the proposed rate is greater than 200% - the provisional rate will be 75% of the proposed rate.

b. If Caltrans is unable to issue a cognizant letter per paragraph 3.a. above, Caltrans may require ENGINEER to submit a revised independent CPA-audited ICR and audit report within three (3) months of the effective date of the management letter. Caltrans will then have up to six (60 days to review the ENGINEER's and/or the independent CPA's revisions.

c. If the ENGINEER fails to comply with the provisions of this Section 3, or if Caltrans is still unable to issue a cognizant approval letter after the revised independent CPA-audited ICR is submitted, overhead cost reimbursement will be limited to the provisional ICR that was established upon initial rejection of the ICR and set forth in paragraph 1.a. above for all rendered services. In this event, this provisional ICR will become the actual and final ICR for reimbursement purposes under this contract.

d. ENGINEER may submit to COUNTY final invoice only when all of the following items have occurred: (1) Caltrans approves or rejects the original or revised independent CPA-audited ICR; (2) all work under this contract has been completed to the satisfaction of COUNTY; and, (3) Caltrans has issued its final ICR review letter. The ENGINEER MUST SUBMIT ITS FINAL INVOICE TO COUNTY no later than 60 days after occurrence of the last of these items.

The provisional ICR will apply to this contract and all other contracts executed between COUNTY and the ENGINEER, either as a prime or subconsultant, with the same fiscal period ICR.

W. Rebates, Kickbacks, or Other Unlawful Consideration

ENGINEER warrants that this contract was not obtained or secured through rebates kickbacks or other unlawful consideration, either promised or paid to any COUNTY employee. For breach or violation of this warranty, COUNTY shall have the right in its discretion; to terminate the contract without liability; to pay only for the value of the work actually performed; or to deduct from the contract price; or otherwise recover the full amount of such rebate, kickback or other unlawful consideration.

X. Debarment and Suspension Certification

1. ENGINEER's signature affixed herein, shall constitute a certification under penalty of perjury under the laws of the State of California, that ENGINEER has complied with Title 2 CFR, Part 180, "OMB Guidelines to Agencies on Government wide Debarment and Suspension (nonprocurement)", which certifies that he/she or any person associated therewith in the capacity of owner, partner, director, officer, or manager, is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency; has not been suspended, debarred, voluntarily excluded, or determined ineligible by any federal agency within the past three (3) years; does not have a proposed debarment pending; and has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three (3) years. Any exceptions to this certification must be disclosed to COUNTY.
2. Exceptions will not necessarily result in denial of recommendation for award, but will be considered in determining ENGINEER responsibility. Disclosures must indicate to whom exceptions apply, initiating agency, and dates of action.
3. Exceptions to the Federal Government Excluded Parties List System maintained by the General Services Administration are to be determined by the Federal highway Administration.

Y. Prohibition of Expending COUNTY, State, or Federal Funds for Lobbying

1. ENGINEER certifies to the best of his or her knowledge and belief that:

   a. No state, federal or COUNTY appropriated funds have been paid, or will be paid by-or-on behalf of ENGINEER to any person for influencing or attempting to influence an officer or employee of any state or federal agency; a Member of the State Legislature or United States Congress; an officer or employee of the Legislature or Congress; or any employee of a Member of the Legislature or Congress, in connection with the awarding of any state or federal contract; the making of any state or federal grant; the making of any state or federal loan; the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any state or federal contract, grant, loan, or cooperative agreement.

   b. If any funds other than federal appropriated funds have been paid, or will be paid to any person for influencing or attempting to influence an officer or employee of any federal agency; a Member of Congress; an officer or employee of Congress, or an employee of a Member of Congress; in connection with this federal contract, grant, loan, or cooperative agreement; ENGINEER shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, US. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. ENGINEER also agrees by signing this document that he or she shall require that the language of this certification be included in all lower-tier subcontracts, which exceed $100,000, and that all such sub recipients shall certify and disclose accordingly.

Z. Ownership of Data

Ownership and title to all reports, documents, plans, specifications, and estimates produced as part of this contract will automatically be vested in COUNTY and no further agreement will be necessary to transfer ownership to COUNTY.

AA. Confidentiality of Data

1. All financial, statistical, personal, technical or other data and information which is designated confidential by COUNTY or AGENCIES, and made available to ENGINEER in order to carry out this contract, shall be protected by ENGINEER from unauthorized use and disclosure.
2. Permission to disclose information on one occasion for a public hearing held by COUNTY or AGENCIES relating to the contract shall not authorize ENGINEER to further disclose such information or disseminate the same on any other occasion.
3. ENGINEER shall not comment publicly to the press or any other media regarding the contract, including COUNTY or Agencies actions regarding this contract. Communication shall be limited to COUNTY, Agency or ENGINEER's staff that are involved with the project, unless ENGINEER shall be requested by COUTY to attend a public hearing or respond to questions from a Legislative committee.
4. Each subcontract shall contain provisions similar to the foregoing related to the confidentiality of data and nondisclosure of the same.
5. ENGINEER shall not issue any news release or public relations item of any nature whatsoever regarding work performed or to be performed under this contract without prior review of the contents thereof by COUNTY and receipt of COUNTY's written permission.

AB. Funding Requirements

1. All obligations of COUNTY are subject to appropriation of resources by various Federal, State and local agencies.
2. This contract is valid and enforceable only if sufficient funds are made available to COUNTY for the purpose of this PROJECT. In addition, this contract is subject to any additional restrictions, limitations, conditions or any statute enacted by Congress, State Legislature or COUNTY that may affect the provisions, terms or funding of this contract in any manner.
3. It is mutually agreed that if sufficient funds for the program are not appropriated, this contract will be amended or terminated to reflect any reduction in funds.

ARTICLE V • PERFORMANCE

A. Performance Period

1. This contract shall begin upon notification to proceed by the COUNTY PROJECT MANAGER.
2. ENGINEER is advised that any recommendation for contract award is not binding on COUNTY until the

proposed contract is fully executed and approved by COUNTY.

3. ENGINEER shall perform PROJECT services in accordance with the provisions set forth in Appendix B, Schedule of Services, which is attached hereto and incorporated herein by reference.
4. Where ENGINEER is required to prepare and submit studies, reports, plans, etc., to COUNTY, these shall be submitted in draft as scheduled, and the opportunity provided for COUNTY to offer comments prior to final submission.
5. When COUNTY determines that ENGINEER has satisfactorily completed the PROJECT services, COUNTY may give ENGINEER a written Notice of Final Acceptance. ENGINEER shall not incur any further costs hereunder unless so specified in the Notice of Final Acceptance. ENGINEER may request a Notice of Final Acceptance determination when, in its opinion, it has satisfactorily completed all covenants as stipulated in this contract.
6. Time is of the essence in this contract.

B. Time Extensions

1. Any delay in providing PROJECT services required by this contract occasioned by causes beyond the control and not due to the fault or negligence of ENGINEER, shall be the reason for granting an extension of time for the completion of the aforesaid work. When such delay occurs, ENGINEER shall promptly notify COUNTY in writing of the cause and of the extent of the delay whereupon COUNTY shall ascertain the facts and the extent of the delay and grant an extension of time for the completion of the work when, in COUNTY's judgment, their findings of fact justify such an extension of time.
2. COUNTY's findings of fact shall be final and conclusive to the parties hereto. However, this is not intended to deny ENGINEER it's civil legal remedies in the event of a dispute.

C. Reporting Progress

1. As part of the monthly invoice ENGINEER shall submit a progress report in accordance with COUNTY Engineering Services Progress Reporting Guidelines. Progress Reports shall indicate the progress achieved during the previous month in relation to the Schedule of Services. Submission of such progress report by ENGINEER shall be a condition precedent to receipt of payment from COUNTY for each monthly invoice submitted.
2. To ensure understanding and performance of the contract objectives, meetings between COUNTY, AGENCIES, and ENGINEER shall be held as often as deemed necessary. All work objectives,

ENGINEER's work schedule, the terms of the contract and any other related issues will be discussed and/or resolved. ENGINEER shall keep minutes of meetings and distribute copies of minutes as appropriate.

D. Evaluation of ENGINEER

ENGINEER's performance will be evaluated by COUNTY for future reference.

ARTICLE VI • COMPENSATION

A. Work Authorization

ENGINEER shall not commence performance of any work or project services until so directed by the County Project Manager. No payment will be made prior to approval of this contract.

B. Basis of Compensation

1. PROJECT services as provided under this contract and as described in the Scope of Services, shall be compensated for as defined in Appendix C, Budget, which is attached hereto and incorporated herein by reference. The total amount of the contract is not to exceed $2,983,071.34 and reimbursement is to be made at actual cost plus fixed fee for the following contractors:

Prime	$1,435,013.83
WSP | Parsons Brinckerhoff	$660,975.05
Applied Earthwork	$173,640.10
ICF Jones & Stokes	$192,676.16
Aguilar Consulting	$126.872.18
Group Delta Consultants	$153,685.14
CASC Engineering and Consulting	$80,365.20
KOA Corporation	$72,619.02
Overland, Pacific & Cutler	$87,224.66

If a contingency budget is provided, COUNTY shall hold such contingency in reserve for unforeseen Extra Work that may arise during the performance of this agreement. Contingency budget shall only be used at the discretion of the COUNTY PROJECT MANAGER, and with prior written authorization by the COUNTY PROJECT MANAGER.

No additional compensation for Extra Work will be paid except upon the issuance of an Extra Work Order by COUNTY.

2. Prior authorization in writing by the COUNTY PROJECT MANAGER will be required before ENGINEER enters into any non-budgeted purchase order or subcontract exceeding $5000 for supplies, equipment or consultant services. ENGINEER shall provide an evaluation of the necessity or desirability of incurring such costs.
3. For purchase of any item, service or consulting work not covered in ENGINEER's proposal and exceeding $5000, with prior authorization by the COUNTY PROJECT MANAGER, three competitive quotations shall be submitted with the request, or the absence of bidding shall be adequately justified.
4. Any equipment purchased as a result of this contract is subjected to the following: ENGINEER shall maintain an inventory of all nonexpendable property. Nonexpendable property is defined as having a useful life of at least two years and an acquisition cost of $5000 or more. If the purchased equipment needs replacement and is sold or traded in, COUNTY shall receive a proper refund or credit. At the conclusion of the contract or if the contract is terminated, ENGINEER may either keep the equipment and credit COUNTY in an amount equal to its fair market value or sell such equipment at the best price obtainable at a public or private sale in accordance with established COUNTY procedures and credit COUNTY in an amount equal to the sales price. If ENGINEER elects to keep the equipment, fair market value shall be determined, at ENGINEER's expense, on the basis of a competent independent appraisal of such equipment. Appraisals shall be obtained from an appraiser mutually agreeable by COUNTY, and ENGINEER. If it is determined to sell the equipment, the terms and conditions of such sale must be approved in advance by COUNTY and AGENCIES.
5. The consideration to be paid ENGINEER, as provided herein, shall be in compensation for all of ENGINEER's expenses incurred in the performance hereof, including travel and per diem, unless otherwise expressly so provided.
6. ENGINEER agrees that the Contract Cost Principles and Procedures, CFR 48, Federal Acquisition Regulations Systems, Chapter 1, Part 31, shall be used to determine the allow ability of individual items of cost.
7. ENGINEER also agrees to comply with Federal procedures in accordance the Code of Federal Regulations Section 49, Part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments.
8. Any costs for which payment has been made to ENGINER that are determined by subsequent audit to be

unallowable under 49 CFR, Part 18 and 48 CFR, Federal Acquisition Regulations System, Chapter 1, Part 31.000 et seq., are subject to repayment by ENGINEER to COUNTY.

9. In the event of errors or omissions in the plans for PROJECT, ENGINEER shall perform the necessary engineering services required to correct such errors and omissions without additional charge to COUNTY.

C. Progress Payments

1. ENGINEER shall submit monthly invoices for PROJECT Services in accordance with Appendix C, Budget, and in accordance with COUNTY Engineering Services Invoicing Procedures.
2. ENGINEER shall submit an invoice each month for PROJECT services performed during the preceding month. Invoices shall be submitted to the COUNTY PROJECT MANAGER and shall be included with a Progress Report covering the same period as the submitted invoice.
3. Progress payments will be based on PROJECT services provided and actual costs incurred. Payments made prior to the completion of each phase will not exceed the amount allowed in ENGINEER's cost proposal for the completion of that phase and prior phases, unless approved in writing by the COUNTY PROJECT MANAGER.
4. Progress payments will be made as promptly as fiscal procedures will permit upon receipt by the COUNTY PROJECT MANAGER of itemized invoices.
5. Invoices shall follow the format stipulated for the approved Cost Proposal and shall reference this contract number and project title. Final invoice must contain the final cost and all credits due COUNTY including any equipment purchased under the provisions of Article VI Compensation of this contract. The final invoice should be submitted within 60 calendar days after completion of ENGINEER's work
6. COUNTY will withhold the last 10 percent of the budget for preparation of PS&E documents. The 10 percent retainage is to be held after 90% of the PS&E phase has been billed and is not to be deducted from each invoice. The amount retained will be paid to ENGINEER after COUNTY has approved ENGINEER's plans, specifications and estimate.
7. ENGINEER will be reimbursed, as promptly as fiscal procedures will permit upon receipt by COUNTY's COUNTY PROJECT MANAGER of itemized invoices in triplicate. Invoices shall be submitted no later than 45 calendar days after the performance of work for which ENGINEER is billing. Invoices shall detail the work performed on each milestone and each project as applicable. Invoices shall follow the format stipulated for the approved Cost Proposal and shall reference this contract number and project title. Final

invoice must contain the final cost and all credits due COUNTY including any equipment purchased under this contract. The final invoice should be submitted within 60 calendar days after completion of ENGINEER's work. Invoices shall be mailed to COUNTY's PROJECT MANAGER at the following address:

TLMA Account Payable

Tayfun Saglam, PE, County Project Manager

PO BOX 1605

Riverside, CA 92502

8. Salary increases will be reimbursable if the new salary is within the salary range identified in the approved Cost Proposal and is approved by County's PROJECT MANAGER. For personnel subject to prevailing wage rates as described in the California Labor Code, all salary increases, which are the direct result of changes in the prevailing wage rates are reimbursable.

ARTICLE VII • GIS INFORMATION

A. "GIS Information" shall include GIS digital files (including the information or data contained therein) and any other information, data, or documentation from County GIS (regardless of medium or format) that is provided pursuant to this contract.

B. ENGINEER acknowledges that the unauthorized use, transfer, assignment, sublicensing, or disclosure of the GIS information, documentation, or copies thereof will substantially diminish their value to COUNTY. ENGINEER acknowledges and agrees that COUNTY GIS information is a valuable proprietary product, embodying substantial creative efforts, trade secrets, and confidential information and ideas. COUNTY GIS information is and shall remain the sole property of COUNTY; and there is no intention of COUNTY to transfer ownership of COUNTY GIS information.

C. COUNTY GIS information is made available to ENGINEER solely for use in the normal course of ENGINEER's business to produce reports, analysis, maps and other deliverables only for this PROJECT and as described within the Scope of Services.

D. ENGINEER agrees to indemnify and hold harmless COUNTY, its officers, employees and agents from any and all liabilities, claims, actions, losses or damages relating to or arising from ENGINEER's use of COUNTY GIS information.

E. GIS information cannot be used for all purposes; and GIS information may not be complete for all purposes.

Additional investigation or research by ENGINEER into other sources will be required. GIS information is intended only as an information base and is not intended to replace any legal records. COUNTY has used and will continue to use its best efforts to correctly input into COUNTY GIS the information contained in various legal and other records; but COUNTY accepts no responsibility for any conflict with actual legal records or for information not transferred from legal records to COUNTY GIS. COUNTY has attempted to update GIS information as often as is practically feasible. However, ENGINEER should be aware that GIS information may not be current and changes or additions to the information contained in COUNTY GIS may not yet be reflected in COUNTY GIS.

F. COUNTY accepts no responsibility for the use of GIS information; and COUNTY provides no warranty for the use of COUNTY GIS or COUNTY GIS information by ENGINEER. THE WARRANTIES SPECIFICALLY SET FORTH IN THIS AGREEMENT ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE; AND SUCH OTHER WARRANTIES ARE HEREBY EXCLUDED.

G. Final plans, drawings or PROJECT work products will be provided in an electronic format suitable for inclusion within the COUNTY GIS or CADD Systems by ENGINEER and will contain the appropriate meta data and will be geographically registered using a appropriate coordinate system such as the California State Plane Coordinate System NAD 83.

ARTICLE VIII • APPROVALS

COUNTY Approvals

RECOMMENDED FOR APPROVAL:

Dated: 10-4-2018

PATRICIA ROMO

Director of Transportation

APPROVED AS TO FORM:

GREGORY P. PRIAMOS, COUNTY COUNSEL

Dated: 10-11-18

By Deputy SYNTHIA M. GUNZEL, Chief Deputy

APPROVAL BY THE BOARD OF SUPERVISORS

Dated: OCT 23 2018

CHUCK WASHINGTON
PRINTED NAME

Chairman, Riverside County Board of Supervisors

ATTEST:

Dated: OCT 23 2018

KECIA HARPER-IHEM

Clerk of the Board (SEAL)

ENGINEER Approvals

ENGINEER:

Dated: 3/12/2018

JONG-JIANN James Li
PRINTED NAME

president
TITLE

ENGINEER:

Dated: 3/12/18

Hui-Min Huang
PRINTED NAME

CFO
TITLE

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APPENDIX A - SCOPE OF SERVICES

ARTICLE AI • INTRODUCTION

A. PROJECT DESCRIPTION

The County of Riverside (COUNTY) in cooperation with the State of California Department of Transportation (CALTRANS) has determined that the bridges listed below have reached their useful service life. Considering the age and the condition assessment of these bridges as described in the Bridge Inspection Reports prepared by CALTRANS Structure Maintenance and Investigations (SM&I), the total replacement of the bridges is considered the most feasible and prudent approach:

- Railroad Avenue Bridge over Fornat Wash (Br. No. 56C0099)
- Railroad Avenue Bridge over East Channel Stubbe Wash (Br. No. 56C0101)
- Chuckwalla Valley Road Bridge over Aztec Ditch (Br. No. 56C0102)
- Chuckwalla Valley Road Bridge over Tarantula Ditch (Br. No. 56C0103)
- Chuckwalla Valley Road Bridge over Sutro Ditch (Br. No. 56C0104)
- Chuckwalla Valley Road Bridge over Acari Ditch (Br. No. 56C0108)

Railroad Avenue Bridges:

The two Railroad Avenue Bridges are located approximately 2.9 miles and 0.2 miles to the west of the Haugen-Lehmann Way/Interstate 10 (I-10) Interchange near Whitewater area in County of Riverside, California.

Both bridges are listed in the federal Eligible Bridge List (EBL) with a status flag of "Structurally Deficient (SD)" and a low Sufficiency Rating (SR) of 62.9 and 59.1, respectively. Since the bridges are rated "SD" with an SR lower than 80, they are eligible for major rehabilitation per CALTRANS Highway Bridge Program (HBP) guidelines. The SRs of the bridges exceed the threshold of 50.0 to qualify for total bridge replacement. The COUNTY prepared bridge scour Plans of Action (POAs) in August 2010. The POAs recommend total replacement of the bridges due to the extent of the scour, the resulting structural instability, and the material deterioration. As a result, COUNTY determines that the most cost-effective

rehabilitation alternative is to replace the 80-year old, structurally and hydraulically deficient bridges. The recommended approach has been concurred and approved by CALTRANS Structures Local Assistance (SLA).

Railroad Avenue is approximately five miles long. It carries two lanes of traffic, one lane in each direction. The road runs parallel to I-10 Freeway and Union Pacific Railroad (UPRR). Railroad Avenue connects the Haugen-Lehmann Way/I-10 Interchange at the east end and to the Main Street/I-10 Interchange at the west end in Cabazon. Although the traffic volumes on this road are low, the road occasionally carries the detoured traffic from I-10 when the freeway is impassible due to emergency incidents or temporary closures for construction. The road also provides maintenance access for UPRR and various utilities. The structures serve as part of a strategic detour road for I-10, which has a high Average Daily Traffic (ADT) volume in excess of 94,000. Therefore, maintaining the structural integrity of the bridges to keep the road open at all times is critical for the regional traffic circulation system.

The two existing timber bridges were constructed in 1934 and widened in 1948. Both structures are approximately 59 feet long and 36 feet wide and are skewed about 35 degrees and 28 degrees respectively. The bridge deck consists of transverse timber planks and a 6-inch thick reinforced concrete deck overlaid by an approximately 8½-inch thick asphalt concrete wearing surface. The concrete deck is cast continuously over the bents without expansion joints. The bridge superstructure consists of treated redwood stringers supported on timber bents and abutments. The bent consists of a timber cap beam supported on timber pile columns. The abutment seat is a pile cap supported by timber pile columns. The timber pile columns are approximately 12 inches in diameter. The approach embankment fill at the abutments is retained by timber bulkhead planks laterally supported by the abutment columns.

COUNTY proposes replacing the existing 2-lane timber bridges with new 2-lane concrete bridges with a curb to curb roadway width of 32 feet at the same location. The proposed road width consists of two 12-foot wide travel lanes, one lane in each direction, and one 4-foot wide shoulder on each side. Modern traffic barriers/railings meeting current CALTRANS safety design standards shall be constructed. The proposed bridges will be approximately 60 feet long with two equal spans. The superstructure will be

supported on a concrete pile column bent and two strutted or diaphragm-type abutments supported on pile footings. The superstructure type will be conventional reinforced concrete slab that offers a shallow structure depth of approximately 16 to 24 inches.

Chuckwalla Valley Road Bridges

The four Chuckwalla Valley Road Bridges are located approximately 0.2 miles to 6.3 miles east of Corn Springs Road near Desert Center in County of Riverside, California.

The four timber bridges are listed in the federal Eligible Bridge List (EBL) with a status flag of "Structurally Deficient (SD)" and a low Sufficiency Rating (SR) ranging from 39.3 to 49.2. Since the bridges are rated "SD" with an SR lower than the threshold of 50, the bridges are eligible for replacement in accordance with the CALTRANS Highway Bridge Program (HBP) guidelines. CALTRANS Structures Local Assistance has concurred with the bridge replacement alternative.

Chuckwalla Valley Road is an approximately 16-mile long rural road. It carries two lanes of traffic, one lane in each direction, located in the County of Riverside south of the Interstate 10 (I-10) Freeway in the remote portion of the desert between Blythe and Desert Center. Chuckwalla Valley Road predated the construction of I-10 Freeway and was originally known as Route 64. The remaining portion of Route 64 is now Chuckwalla Valley Road and spans from the Corn Springs Road Exit on I-10, located approximately eight miles east of Desert Center to about sixteen miles east rejoining the I-10 Freeway at the Ford Dry Lake Road Interchange. During the construction of Route 64, earth berms were constructed to collect flow from storms in several ditches. The roadway grade rises at timber bridges that allow the drainage to flow north under the road.

Chuckwalla Valley Road is approximately twenty four feet wide, from the edge of pavement to the edge of pavement with a varying width graded shoulder. The road right-of-way width is 200 feet wide at the Aztec Ditch, Tarantula Ditch and Sutro Ditch, and is reduced to 100 feet wide at the Acari Ditch. Chuckwalla Valley Road primarily serves as access to existing electric transmission towers and occasionally carries

detoured traffic from I-10 when the freeway is impassable due to emergency incidents or temporary closures for construction.

The four timber bridges were constructed in 1931 and widened in 1944. The structures are approximately 60 feet long and 26 feet wide. The bridge deck consists of transverse timber planks and a 6-inch thick reinforced concrete deck overlaid with an approximately 4-inch thick asphalt concrete wearing surface. The concrete deck is cast continuously over the bents without expansion joints. The bridge superstructure consists of treated redwood stringers supported on timber bents and abutments. The bent consists of a timber cap beam supported by timber pile columns. The abutment seat is a pile cap supported by timber pile columns. The timber pile columns are approximately 16 inches in diameter. The approach embankment fill at the abutments is retained by timber bulkhead planks laterally supported by the abutment columns.

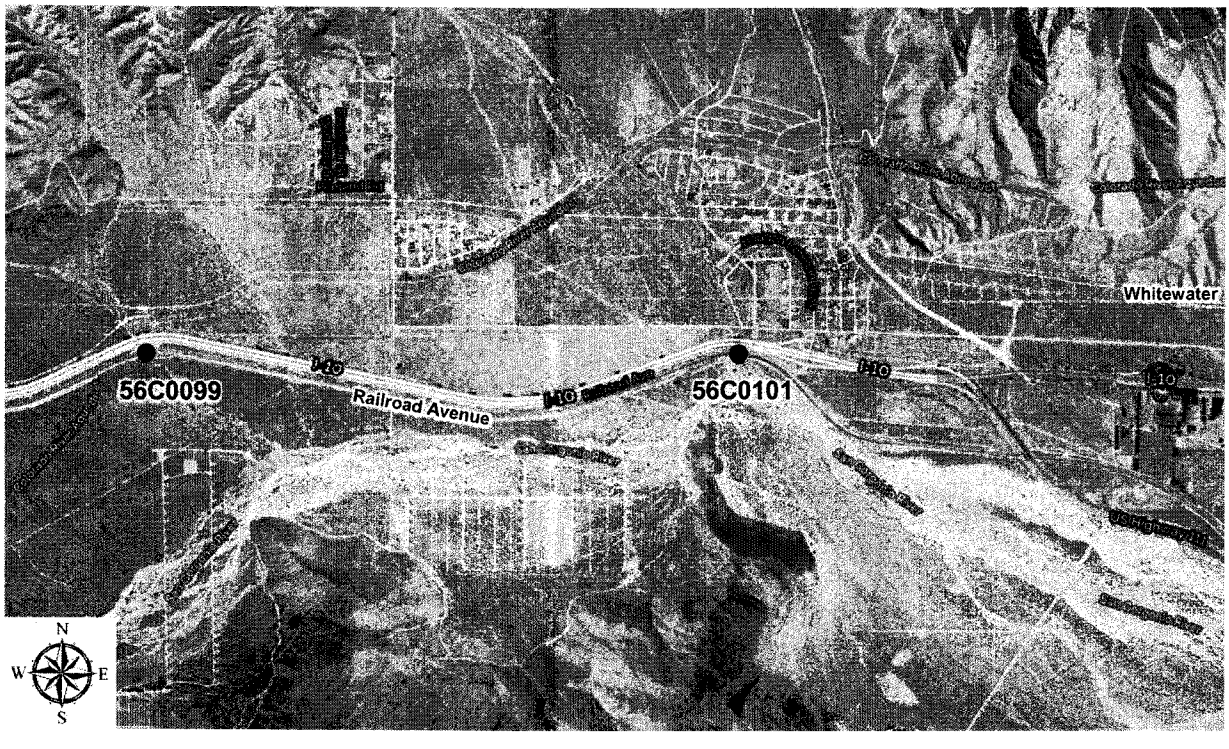
COUNTY proposes replacing the existing 2-lane timber bridges with new 2-lane concrete bridges with a curb to curb roadway width of 32 feet at the same location. The proposed road width consists of two 12-foot wide travel lanes, one lane in each direction, and a 4-foot wide shoulder on each side. Modern traffic barriers/railings meeting current CALTRANS safety design standards shall be constructed. The proposed bridges will be approximately 60 to 80 feet long with two equal spans. The superstructure will be supported on a concrete pile column bent and two strutted or diaphragm-type abutments supported on pile footings. The superstructure type will be conventional reinforced concrete slab that offers a shallow structure depth of approximately 16 to 24 inches.

The proposed replacement of six timber bridges is an exempt undertaking under the California Environmental Quality Act (CEQA) per 15302 Class 2(c) and an excluded action under the National Environmental Policy Act (NEPA) under Categorical Exclusion (CE) Assignment 23 CE (CE 771.117(d)(13). COUNTY will be the CEQA lead agency, and CALTRANS District 8 Local Assistance (CALTRANS) will be the NEPA lead agency. In this scope of work it has been assumed that ENGINEER will work closely with CALTRANS on the preparation of the Categorical Exclusion (CE), CE Checklist, Air Quality Checklist and the Environmental Commitment Record (ECR).

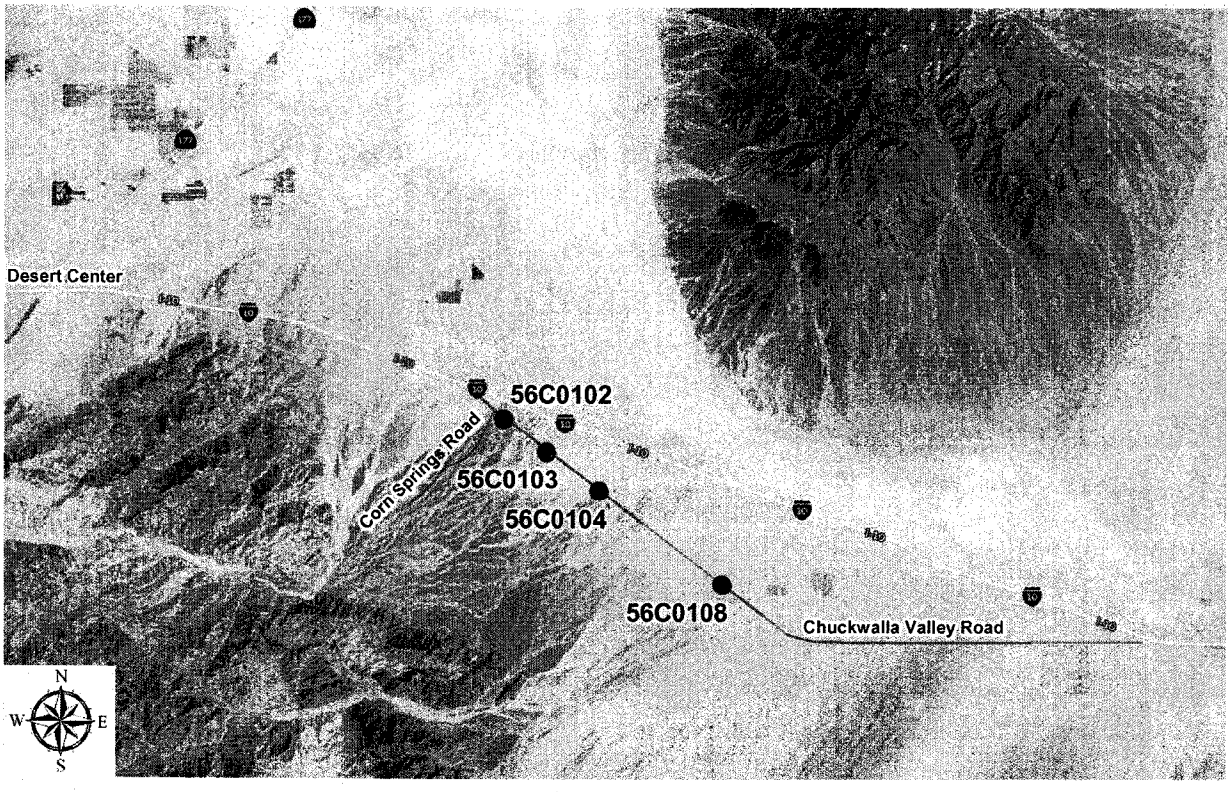
ENGINEER will perform all tasks according to NEPA and CEQA requirements, as well as per the policies and procedures contained in CALTRANS' Environmental Handbook and Local Assistance Procedures Manual.

B. LOCATION

The two Railroad Avenue Bridges (Br. No. 56C0099 and 56C0101) are located approximately 2.9 miles and 0.2 miles to the west of the Haugen-Lehmann Way/Interstate 10 (I-10) Interchange near Whitewater in County of Riverside, California.



The four Chuckwalla Valley Road Bridges (Br. No. 56C0102, 56C0103, 56C0104 and 56C0108) are located approximately 0.2 miles to 6.3 miles to the east of Corn Springs Road near Desert Center in County of Riverside, California.



C. COORDINATION

ENGINEER shall coordinate with other involved agencies for compatible design and phasing of construction with existing conditions. Coordination may include, but will not necessarily be limited to the following:

Federal Highway Administration (FHWA)

Caltrans

Riverside County Departments

Utility Companies

Regulatory Agencies including:

U.S. Army Corps of Engineers (USACE)

U.S. Fish and Wildlife Service (USFWS)

California Department of Fish and Wildlife (CDFW)

Regional Water Quality Control Board (RWQCB)

Riverside County Flood Control & Water Conservation District (RCFC & WCD)

Coachella Valley Water District (CVWD)

State Historic Preservation Office (SHPO)

Southern California Air Quality Management District (SCAQMD)

CALTRANS may exercise review and approval function through the COUNTY PROJECT MANAGER at key points in the development process. All contacts with CALTRANS will be directed through COUNTY. Milestone PROJECT submittal reviews will be performed for the specific products and deliverables listed herein. The COUNTY PROJECT MANAGER will conduct these reviews, in addition to the monthly project status reports and meetings. All meetings with other outside agencies will be scheduled by ENGINEER with approval of COUNTY.

D. PHASES

The services performed by ENGINEER shall include the following Phases:

Phase I – Preliminary Engineering / Environmental Clearance / Technical Report

Phase II – Plans, Specifications and Estimates (PS&E)

Phase III – Construction Bidding and Award Support

Phase IV - Design Support during Construction

This agreement covers Phase I thru Phase IV scope of services and fee, which will commence upon written notice to proceed by COUNTY.

E. STANDARDS

The preliminary plans / technical report, and environmental document shall be prepared in accordance with current CALTRANS regulations, policies, procedures, manuals and standards including compliance with Federal Highway Administration (FHWA) requirements and/or COUNTY Road Standards as appropriate. Caltrans guidelines for the technical studies and the environmental document will follow the guidance available as of contract date. The technical report prepared to support the environmental document will follow the similar format for Caltrans Project Reports. Improvements of local roads may be prepared in accordance with COUNTY standards in lieu of CALTRANS standards as directed by the COUNTY PROJECT MANAGER. ENGINEER will prepare fact sheets for County approval, documenting the exceptions to mandatory and advisory design standards. All documents shall be prepared using English Standard Units and dimensions.

1. Environmental

The procedures to be followed and the content of the environmental surveys, environmental technical reports and environmental documents are set forth in CALTRANS Project Development Procedures Manual (PDPM), CALTRANS Environmental Handbook, CALTRANS Transportation Laboratory technical manuals for environmental studies, FHWA's Technical Advisory T6640.8A and on CALTRANS Standard Environmental Reference (SER) at the CALTRANS website.

Federal and State requirements for environmental analysis and impact assessment, as set forth in the National Environmental Policy Act (NEPA), the California Environmental Quality Act (CEQA) and other applicable Federal and State regulations, must be satisfied.

2. Preliminary Survey/Aerial Topographical Mapping

   All preliminary surveys and aerial mapping shall be performed by COUNTY.

3. Design

   Roadway design shall be in accordance with the current CALTRANS Highway Design Manual and its revisions and/or COUNTY Road Standards as appropriate. Traffic design shall be in accordance with the Manual of Uniform Traffic Control Devices (MUTCD) and the California Supplement. Microstation (compatible with current County version) software will be used as the design software.

4. Project Files

   Project files shall be indexed in accordance with CALTRANS Project Development Uniform File System.

F. KEY PERSONNAL

The ENGINEER has represented to the COUNTY that certain key personnel will perform the services. If one or more of such personnel should become unavailable, ENGINEER may substitute other personnel of at least equal competence only after prior written approval by the COUNTY PROJECT MANAGER has been secured. The key personnel for performance of this PROJECT are:

Assignment	Key Personnel
Principal in Charge and Project Manager	James J. Lu (CNS)
Roadway Engineer	Steve Hosford (CNS)
Structures Engineer	Quyet Nguyen (CNS)
Environmental Team Leader	Lorraine Ahlquist (WSP Parsons Brinckerhoff)
QA/QC Engineer	James J. Lu (CNS)

Cultural Study	John Eddy (Applied EarthWorks)
Biological Assessment	Brian Calvert (ICF Jones & Stokes)
Drainage	Ceazar Aguilar (ACI)
Geotechnical Investigations	Curt Scheyhing (Group Delta)
Water Quality	Jeff Endicott (CASC)
Traffic Study	Min Zhou (KOA)
Utility Relocation Coordination	Mike Parker (OPC)

G. COUNTY RESPONSIBILITIES

The following includes tasks to be completed by the COUNTY:

- Prepare topographic mapping in Caltrans format
- Obtain orthorectified aerial photograph in digital format
- Prepare existing R/W and parcel mapping in Caltrans format
- Perform field design surveys as requested by the ENGINEER
- Coordinate Permits for Right of Entry with property owners
- Conduct R/W appraisals and acquisitions
- Secure R/W certification from CALTRANS

H. DELIVERABLES

The following list identifies the deliverables to the COUNTY by ENGINEER. All deliverables will be provided in hard copy format and in electronic format (pdf) as identified in this scope of work unless otherwise noted.

ARTICLE AII • PROJECT TASKS LIST

1.1 PROJECT MANAGEMENT

Coordination and Communications

a. Establish and implement a project document/correspondence management and distribution system to assure that information flows between all parties of the Project as intended.

b. Communicate regularly with the County and project development team by telephone, email, written correspondence, and face-to-face meetings on monthly basis throughout the term of the contract.

c. Maintain a project contact list with names and contact information for all project development team members.

d. Prepare, maintain, and update an Action Item Log for review during monthly PDT meetings.

e. Prepare a project chronology listing all key decisions made over the life of the project and update for review during monthly PDT meetings.

f. Prepare a Submittal/Deliverable Log and update for review during PDT meetings.

Scheduling

Prepare a detailed project baseline schedule using a work breakdown structure (WBS) consistent with this Scope of Work. Update and distribute one week in advance of each PDT Meeting. The schedule will include the following information:

a. Task dependencies as predecessors and successors

b. Anticipated task durations with beginning and end dates

c. Critical path with milestones

Budgeting

Monitor the budget for design services using a work breakdown structure consistent with this Scope of Work. Perform Earned Value Analysis on monthly basis.

Project Administration

a. Set up project accounting system consistent with the County's invoicing and tracking requirements.

b. Prepare subconsultant agreements.

c. Monitor subconsultant progress and review/approve invoices.

d. Prepare monthly progress reports and invoices in accordance with County guidelines. Monthly reports providing actual physical progress will be provided with every invoice.

Deliverable(s): *Monthly Progress Reports and Invoice Packages*

1.2 PROJECT TEAM MEETINGS

Organize, schedule, and chair meetings and conference calls as necessary to provide progress updates, coordinate between technical disciplines, and facilitate overall project communication. The engineering design and environmental team leaders shall attend the Project Development Team (PDT) meetings as appropriate. Prepare meeting agendas and minutes for all meetings.

a. Kickoff Meeting (1 Meeting)

b. PDT Meetings: Monthly face-to-face meetings at the County Annex Office, (30 Meetings for Phase I, 18 Meetings for Phase II, one Meeting for Phase III, and 3 Meetings for Phase IV)

c. Additional meetings with Caltrans, as needed (2 Meetings)

d. Public Information Meetings for NEPA and CEQA compliance (2 Meetings)

Deliverable(s): *Meeting notices, agendas, special exhibits and minutes*

1.3 QUALITY CONTROL AND QUALITY ASSURANCE (QC/QA)

Establish and implement a quality control process to ensure that all deliverables are complete and accurate, including but not limited to, ensuring that design calculations are independently checked and that exhibits and plans are checked, corrected, and back-checked for accuracy and completeness. Subconsultant report submittals will be reviewed to ensure that appropriate background information, study methodology, interpretation of data, and format and content are completed in accordance with current standards. The QC/QA Plan will be submitted for County review and approval at the kickoff Meeting.

Deliverable(s): *QC/QA Plan*

PHASE I – PRELIMINARY ENGINEERING / ENVIRONMENTAL CLEARANCE / TECHNICAL REPORT

2.0 RESEARCH AND DATA GATHERING

2.1 COLLECT AND REVIEW EXISTING INFORMATION

Existing topographic mapping, photos, bridge reports, maintenance reports, right-of-way maps, "as-built" plans, record maps and surveys, study reports, assessor maps, contract documents, and any other data shall be obtained and reviewed.

2.2 CONDUCT FIELD REVIEW

A site visit, by all members of the team (including CALTRANS Local Assistance, CALTRANS Environmental, FHWA, and the COUNTY), shall be conducted to obtain information on current conditions, constraints, and potential solutions. ENGINEER will complete the Field Review paperwork (CALTRANS LAPM Exhibit 7-B) and coordinate with CALTRANS to obtain approval.

3.0 PRELIMINARY ENGINEERING

3.1 TRAFFIC STUDIES (TECHNICAL MEMORANDUM / TRAFFIC SUMMARY)

<u>Railroad Avenue Bridges (Technical Memorandum)</u>

ENGINEER shall prepare a brief technical memorandum involving traffic management plan (TMP) for the

two Railroad Avenue Bridges to evaluate road and bridge closure impacts during construction and potential detour routes. Included will be the analysis of the existing traffic, roadway capacity, as well as the future buildout roadway capacity of the bridge if needed. The study area will include the Railroad Avenue and Interstate 10 (I-10). The study will utilize volume to capacity analysis. Daily traffic counts may be taken on the road to capture the existing volumes if necessary. Traffic data for the I-10 will be taken from CALTRANS PEMS network. The Technical Memorandum will be submitted to the COUNTY for review. Revisions will be incorporated into the memo.

Chuckwalla Valley Road Bridges (Traffic Summary)

ENGINEER will prepare a brief traffic summary to evaluate road and bridge closure impacts during construction and potential detour routes. The impacts to I-10 Freeway and the emergency/maintenance accesses will be evaluated and documented in the traffic summary.

Deliverable(s): *Technical Memorandum for Railroad Avenue Bridges (Draft and Final)*

Traffic Summary for Chuckwalla Valley Road Bridges (Draft and Final)

3.2 PRELIMINARY UTILITY MAPPING

ENGINEER shall perform a utility search for affected facilities in the project area. Discussions and preliminary research with utility owners within the Railroad Avenue Bridge areas confirmed the presence of utility facilities that will be impacted by the construction. There currently are three utility conduits that appear to be either attached to, go through or around the existing Railroad Avenue Bridges. If the planned construction is to shut down Railroad Avenue and demolish the existing structures, then build the new facility, steps will need to be taken to develop a temporary relocation plan for either the relocation and/or protection of these facilities.

Discussions and preliminary research with utility owners within the Chuckwalla Valley Road Bridge areas did not confirm the presence of any utility facilities that will be impacted by the construction. It is anticipated that utility relocation will not be required for the project; however, research to confirm the absence of utilities within the project area will need to be completed.

The search shall include field review and review of available as-built plans for the project area. ENGINEER shall research records for both public and franchise utilities and shall plot the location of all

existing facilities. ENGINEER shall include preparation of a database of utility records indicating the type of utility, owner, drawing number, and other vital information. The identified utility companies shall be sent a letter on County's letterhead requesting information regarding existing and proposed utilities. Using the information obtained, ENGINEER shall prepare a utility base map which shall be the basis of the Utility Information Sheet. ENGINEER shall prepare a Utility Information Sheet. The names of all utilities and points of contact shall be developed. A description of the location, existing facility and potential conflicts with the project shall be prepared.

ENGINEER shall coordinate with COUNTY and other agencies to arrange with the respective utility owners to pothole their facilities, including issuing Notice to Owner to Pothole, if required. Engineer shall provide the potholing services, if utility companies are unable to complete the potholing services. Eight (8) potholes for each of the Railroad Avenue Bridges are assumed and included in this scope. ENGINEER shall coordinate the use of COUNTY field survey crews to locate potholed utilities by coordinates and elevations based on the project's survey controls.

ENGINEER shall prepare potholing exhibits as needed to adequately locate underground utilities, shall enter into a contract with a licensed contractor for the potholing of utilities, and shall ensure that appropriate permits are obtained from all appropriate jurisdictions prior to the start of work.

The contract between the ENGINEER and the potholing contractor shall require that the Contractor's insurance policies name the ENGINEER, the County of Riverside, and any other affected jurisdictions as additionally insured with respect to the contractor's general liability, excess liability and automobile liability policy. The contractor shall meet the insurance requirements, as set forth elsewhere in this agreement, except that the contractor will not be required to provide professional liability coverage. Review and approval of the Contractor's insurance certificate and endorsements by the COUNTY's representative shall be obtained prior to the start of potholing work.

ENGINEER shall evaluate the potholing data, and shall include the information on the utility plans in table format, with numbered or letter references to the location of the potholes. ENGINEER shall determine

whether or not the facilities are in conflict, and the limits of the conflict, both of which shall be shown on the utility plans with construction notes.

Deliverable(s): *Database of Utility Records, Utility Base Map with Potholing Data, Utility Information Sheet*

3.3 PERMITS

ENGINEER will coordinate with the COUNTY and all required agencies in order to obtain all required encroachment permits and rights-of-entry needed for Phase I activities. As directed by COUNTY, ENGINEER shall prepare and submit all permit applications. All permit filing fees are to be paid by COUNTY.

3.4 SURVEYING AND RIGHT-OF-WAY MAPPING (BY COUNTY)

Surveying, Topographic and Right-of-Way mapping will be provided by COUNTY forces. ENGINEER is available to provide any surveying and topographic services the COUNTY requires. The COUNTY surveyor will also provide the waterway surveyed cross-sections.

3.5 PRELIMINARY GEOTECHNICAL STUDIES

A Preliminary Foundation Report (PFR) shall be prepared documenting existing available geotechnical information and providing preliminary foundation, pavement, and embankment recommendations for use in preparation of preliminary plans, environmental documents, and bridge type selection report. The PFR shall be prepared in general accordance with CALTRANS Foundation Report Preparation for Bridge Foundations (December 2009). The PFRs shall include one report for the Railroad Avenue Bridges and another separate report for the Chuckwalla Valley Road Bridges.

Initially, a geologic reconnaissance of each bridge site shall be performed, and borehole locations shall be marked for utility clearance. Available existing subsurface information for the project area shall be collected and reviewed, including as-built Logs of Test Borings (LOTBs), aerial photographs, geologic maps, fault maps, and ground water well information.

Based on the review of available data and the geologic reconnaissance, ENGINEER shall provide seismic, geologic, and groundwater information and preliminary foundation recommendations for bridge type selection, preliminary plans, and environmental documents. ENGINEER shall identify any seismic

and geologic hazard that will have a significant impact on the design and construction of the project. A PFR shall be prepared to document the results of the review based on existing data prior to field investigation.

Field investigation will commence concurrently with PFR development, and the results of the field investigation will be presented in the final Foundation / Geotechnical reports.

At each of the six bridge locations, one 50-foot to 60-foot deep boring shall be drilled from the existing roadway. Boreholes shall be drilled using a hollow stem auger drill rig; shallow groundwater is not anticipated. Spoils generated from the boring excavations, if tested free of hazardous materials, shall either be used to backfill the boreholes or spread over the top of existing unpaved ground. If spoils are used to backfill boreholes, the spoils will be mixed with cement and/or bentonite and water. Excess spoils from the borehole excavations, tested with contaminants, shall be placed in drums at the bridge site, then removed from the bridge site, and disposed of to a landfill site where accepts hazardous waste. Boreholes shall be advanced in unpaved areas if possible. If necessary to drill in paved areas, asphalt concrete cold-patch or rapid-set Portland cement concrete shall be used to patch pavement.

ENGINEER shall prepare borehole location plans. These plans shall be provided to COUNTY, prior to the field investigation, for the purpose of securing the required encroachment permits. Prior to drilling borehole locations shall be marked and cleared through DigAlert. It is assumed that due to the remote location only limited traffic control such as placement of cones will be required. ENGINEER shall collect soil samples for laboratory testing, including bulk samples of near-surface soils and driven Standard Penetration Test (SPT) and California Ring samples of deeper soils. The driven soil samples shall be collected at vertical intervals of 5 feet or 10 feet. Groundwater depth shall be measured during and after drilling if encountered. Samples of subsurface soils shall be logged during the field investigation, secured in their containers or collected in plastic bags, and transported to a laboratory.

<u>Laboratory Testing</u>

ENGINEER shall select representative soil samples for laboratory testing. Various laboratory tests shall be performed to estimate physical and engineering characteristics of soils. The actual tests performed shall be based on conditions encountered. For planning purpose, the tests shall include in-place moisture and density, Passing #200 Sieve, grain size distribution, direct shear tests, collapse potential, maximum density/optimum moisture content, R-value and soil corrosion tests. Tests shall be conducted in general accordance with California Test (CT) methods or American Society for Testing and Materials (ASTM) standards.

Geotechnical Engineering Analyses

Results obtained from the field investigation and laboratory testing shall be used to characterize subsurface soils and conditions and create idealized profiles for design purposes. The following analyses in accordance with CALTRANS standards shall be performed for the project:

- Evaluate seismicity, estimate Peak Ground Accelerations, and determine an Acceleration Response Spectrum (ARS) curve.
- Evaluate liquefaction potential and seismically-induced settlement.
- Determine axial and lateral capacity of bridge foundations.
- Evaluate settlement and global stability of new or widened embankments.
- Evaluate settlement and bearing capacity of spread footings for retaining walls.
- Evaluate soil corrosivity.
- Evaluate the subgrade resistance (R-values) values for pavement design.

All of the above work shall be included in the Final Foundation / Geotechnical Report prepared by the ENGINEER in Phase II.

Deliverable(s): *Preliminary Foundation Report for Railroad Avenue Bridges (Draft and Final)*

Preliminary Foundation Report for Chuckwalla Valley Road Bridges (Draft and Final)

3.6 RIGHT-OF-WAY REQUIREMENTS MAP

Based on the Right-of-Way Mapping provided by the COUNTY and the project improvements established during the Geometric Approval Drawings task, ENGINEER shall prepare a 40-Scale right-of-way requirements map showing the right-of-way lines, parcels, and anticipated limits of

the additional permanent street easement and temporary construction easements necessary for the construction of the project improvements. The right-of-way requirements map shall include a table identifying the amount of area needed as a TCE or a street easement for each affected parcel.

Deliverable(s): *Right-of-Way Requirements Maps for All Bridges (Draft and Final)*

3.7 GEOMETRIC APPROVAL DRAWINGS

ENGINEER shall develop the horizontal and vertical layout of the bridge replacement based on the results of the preliminary hydrologic and hydraulic studies, geotechnical studies, the findings of the project mapping, and review of available data. Consultation with the ENGINEER's environmental team with input from COUNTY shall be conducted to create a Geometric Approval Drawing for each bridge site. Geometric design data and key project features shall be depicted. Original ground, traveled way, shoulders, cut/fill slopes, known utilities, and existing/proposed right-of-way shall be shown. The grading design shall aid in the development of the project footprint for subsequent environmental studies, project cost, adherence to slope standards, drainage design and direct/indirect project impacts. The Geometric Approval Drawings shall be a design level of 30% complete and shall contain 20-scale roadway plans consisting of one title sheet, one typical section and detail sheet, and one plan and profile sheet for each bridge site. Limits of construction, project dimensions, and general identification of work as well as the centerline and edge of pavement design shall be shown on the Geometric Approval Drawings.

The horizontal layout shall incorporate the existing horizontal curve of the Railroad Avenue and consist of transitioning the width of the existing pavement section to the proposed roadway section of 32 feet at the bridge abutments. The length of the horizontal transition is assumed to be approximately 200 feet from either end of the bridge.

The vertical alignment shall be based on the findings of the hydraulic studies to determine if the roadway needs to be raised to comply with hydraulic capacity requirements to ensure that no portion of the bridge soffit, girders or deck encroach the 100-year flood or the design flood water surface and the required freeboard. The existing profile grade shall be maintained to the maximum extent possible with minor changes not exceeding one foot. The limits of roadway improvements are estimated to be approximately

200 feet for the Railroad Avenue Bridges and the Chuckwalla Valley Road Bridges from the beginning and the end of the new bridges. The profile shall be designed by providing grade breaks of 0.5% or less. The design speed of any changes to the vertical alignment shall not be less than the design speed of the existing condition.

It is assumed that due to remote location and low traffic volumes both the Railroad Avenue and Chuckwalla Valley Road will be closed during construction and the traffic will be detoured. Stage construction design is not required. However, ENGINEER shall provide detour plans in Phase II.

Deliverable(s): *Geometric Approval Drawings (Draft and Final)*

3.8 STRUCTURE ADVANCE PLANNING STUDY

ENGINEER shall study up to two structure alternatives for each bridge site, and provide general plans and cost estimates for the preferred structure alternative. It is expected that the conventional reinforced concrete slab bridge shall be the preferred alternative to fit the constraints in cost and geometric design. The bridge planning study shall be prepared per CALTRANS guidelines with a goal to select a preferred structure type that can be used as the basis to support environmental, hydraulic and geotechnical studies. The ENGINEER shall prepare the Advance Planning Study (APS) plan sheets using the standard COUNTY Bridge General Plan sheet format.

ENGINEER shall prepare a Design Memo summarizing critical assumptions and considerations involved in developing alternatives. ENGINEER shall prepare a Preliminary Cost Estimate for the bridge type based on approximate quantities and historical construction costs for similar projects.

Detouring existing traffic instead of stage construction shall be considered in the design. It is assumed that due to remote location, minimal bridge aesthetic treatments will be required. Bridge railings are expected to receive special attention to mitigate historical findings.

Due to the small scale of the project, remote location, replacement of the existing bridges on the same alignments with similar profiles, it is assumed that technical project reports are not required. However, a detailed project description including a summary of preliminary roadway, geotechnical and hydraulic

studies will be included in the Structure Advance Planning Study Reports to support environmental documents.

Deliverable(s): *Structure Advance Planning Study Report for Railroad Avenue Bridges (Draft and Final)*

Structure Advance Planning Study Report for Chuckwalla Valley Road Bridges (Draft and Final)

3.9 HYDROLOGIC, HYDRAULIC AND SCOUR STUDIES

Railroad Avenue Bridges

ENGINEER shall perform a reconnaissance site survey and review all relevant hydrologic, hydraulic and sedimentation data and studies of the channels.

ENGINEER shall research current FEMA and CALTRANS data and coordinate with the Riverside County Flood Control & Water Conservation District (RCFC&WCD) to obtain the design flows for the Fornat Wash and East Channel Stubbe Wash at the project site.

ENGINEER shall perform the hydraulic analysis for the washes at the proposed project sites to determine the flow characteristics of the design flows, including water surface elevations (flow depths) and flow velocities. The analyses shall be performed for both the existing and proposed conditions.

ENGINEER shall perform a floodplain risk assessment for the bridge site to address any potential project impacts to the existing flooding and natural floodplain values. ENGINEER shall prepare a Location Hydraulic Study Report and a Flood Plain Evaluation Report (if required) to summarize the findings and recommendations.

ENGINEER shall perform a bridge scour analysis to determine the scour potential for the bridge crossings per the methodology specified in the FHWA's technical manuals (HEC-18 and the Los Angeles County Flood Control District Levee Toe-Down Depth chart "velocity versus scour depth"). It is assumed that the bridge abutment footings shall be placed below the scour depth and the pier foundations shall be

designed to accommodate the scour depth; and therefore, scour protections such as riprap in the channel are not required.

ENGINEER shall prepare a Bridge Hydraulics Report to summarize the recommendations and results from the hydraulic and scour analyses for the proposed bridge crossings. This scope assumes that a sediment transport study or alluvial fan study is not required.

Chuckwalla Valley Road Bridges

(Hydrology Study): ENGINEER shall prepare a 2-year, 10-year, 50-year, and 100-year hydrology study based upon the existing land-use and drainage conditions for drainage areas tributary to Chuckwalla Valley Road Bridges. Since the tributary drainage area is considered an alluvial fan, ENGINEER shall prepare the hydrology study based on two potential drainage boundary conditions: (1) the entire upstream Creek is assumed to discharge onto the project site, and (2) only a portion of upstream Creek is assumed to discharge onto the project site based on the upstream apex of the two existing levees of the existing bridge. The following tasks shall be performed as part of the hydrology study:

- Perform unit hydrograph calculations using the Riverside County Flood Control District Hydrology method to determine the tributary flow rates.
- Prepare a hydrology map delineating the tributary off-site watershed boundaries, drainage areas in acres or square miles, flow lengths in feet, flow rates in CFS, and nodal points and elevations in support of the hydrology calculations.
- Prepare hydrologic soils map and rainfall maps in support of the hydrology calculations.

(Hydraulic and Scour Studies): ENGINEER shall perform floodplain and bridge hydraulic analyses based upon the existing and with-project conditions. The hydraulic study under the existing condition shall first be examined to establish the baseline condition. Alternative with-project conditions shall then be assessed, and the potential impacts to channel stability shall be determined. In order to quantify the impacts of the proposed bridges to the existing hydraulic and stability characteristics of the Ditches through the project reach, ENGINEER shall utilize the current steady-state hydraulic model (HEC-RAS computer model) but modified to integrate the proposed bridge footprint. The HEC-RAS model shall determine the preliminary channel capacities and floodplain elevations for the existing and with-project

conditions. The model shall also identify any deficiencies with the existing channel at the bridge crossing. HEC-18 and the Los Angeles County Flood Control District Levee Toe-Down Depth chart "velocity versus scour depth" will be used to preliminarily estimate the magnitude of the local pier scour and general scour expected under design flow conditions for both the existing and with-project conditions. ENGINEER shall review and identify the extent of scour protection measures required for the project. ENGINEER shall recommend the minimum bridge freeboard for the with-project condition. ENGINEER shall review and identify the extent of channel improvements and scour protection measures required for the project. ENGINEER shall perform preliminary channel design showing proposed grades, modifications to the existing channel walls near and through the bridge abutments and scour protection. This scope assumes that a sediment transport study or alluvial fan study is not required. ENGINEER shall prepare a Location Hydraulic Study Report and a Flood Plain Evaluation Report (if required) to summarize the findings and recommendations.

Deliverable(s): *Hydraulic and Scour Studies Report, Location Hydraulic Study Report and Flood Plain Evaluation Report for Railroad Avenue Bridges (Draft and Final)*

Hydraulic and Scour Studies Report, Location Hydraulic Study Report and Flood Plain Evaluation Report for Chuckwalla Valley Road Bridges (Draft and Final)

3.10 ADVISORY AND MANDATORY FACT SHEETS

ENGINEER shall complete all work necessary in the preparation of Fact Sheets for an exception to advisory and mandatory design standards.

A design memorandum (Fact Sheet) shall be prepared for each design feature that does not comply with COUNTY's minimum design standards. The memorandum shall identify the design standard that is not being met, discuss the reason why it is not being met, and provide a brief description including a construction cost estimate of the work required for the project to meet the minimum design standard. The fact sheets shall be submitted to the COUNTY for review and approval.

Deliverable(s): *Advisory and Mandatory Fact Sheets (Draft and Final)*

3.11 ENGINEER'S ESTIMATE

ENGINEER shall develop preliminary engineer's estimate for one alternative. The estimate shall be in CALTRANS estimate format using cost escalation factors.

Deliverable(s): *Engineer's Cost Estimate Spreadsheets (Draft and Final)*

4.0 ENVIRONMENTAL CLEARANCE AND DOCUMENTATION

The proposed replacement of the existing six timber bridges is an exempt undertaking under the California Environmental Quality Act (CEQA) per 15302 Class 2(c) and an excluded action under the National Environmental Policy Act (NEPA) under Categorical Exclusion (CE) Assignment 23 CE (CE 771.117(d)(13). The existing structure, which occasionally carries detoured traffic from Interstate 10 (I-10) during construction closures or due to incidents, is rated structurally deficient as a result of structural instability and deterioration. The proposed bridge replacement would remove the existing structure and replace it with a new bridge at the same location and with the same number of traffic lanes. COUNTY will be the CEQA lead agency and CALTRANS District 8 Local Assistance Office (CALTRANS) will be the NEPA lead agency. ENGINEER will work closely with CALTRANS on the preparation of the Categorical Exclusion (CE), CE Checklist, Air Quality Checklist and the Environmental Commitment Record (ECR).

ENGINEER shall perform all required environmental research and analysis necessary for the Project, pursuant to the CEQA and the NEPA requirements, as well as the policies and procedures contained in CALTRANS' Environmental Handbook and Local Programs Manual. To obtain environmental approval, key issues to be addressed in the environmental studies include: biology, wetlands, water quality, visual, hazardous waste, trails, 4(f) resources and cultural resources. ENGINEER shall perform all environmental documentation and coordination, which shall include the following:

4.1 PROJECT INITATION

As part of project initiation, ENGINEER shall coordinate an initial public information meeting to inform local area residents and businesses about the project. ENGINEER shall conduct all necessary activities to prepare for the meeting regarding preparing and circulating notices (mailing list of property owners shall be provided by the COUNTY), conducting team meetings needed to prepare for the meeting, and making presentations at the meeting itself. COUNTY staff will be responsible for obtaining a meeting location. ENGINEER shall be responsible for preparing any large scale exhibits of the project area for use in the meeting. Two public meetings are budgeted.

Following a scheduled field visit with the COUNTY and CALTRANS, ENGINEER shall prepare a PES form for the National Environmental Policy Act (NEPA) work plan.

Deliverable(s): *Meeting Notices, Presentation Boards and Exhibits, Public Comments Matrix*

4.2 PRELIMINARY ENVIRONMENTAL STUDY (PES)

A Preliminary Environmental Study (PES) shall be prepared for the project in accordance with CALTRANS Local Assistance Guidance for Environmental Documents. One PES shall be prepared for the Railroad Avenue Bridges while a separate PES shall be prepared for the Chuckwalla Valley Road Bridges. The PES will serve as the point of coordination with CALTRANS to obtain concurrence on the level of environmental documentation and type of technical studies that need to be prepared. Task 4.3 identifies the technical studies that are anticipated to support the NEPA CE and CEQA NOE. If additional environmental technical studies are identified by CALTRANS, then a separate scope and budget will be prepared and submitted to COUNTY.

Deliverable(s): *Administrative Draft PES (electronic copy to COUNTY for review)*

Draft PES (electronic copy to COUNTY and six hard copies to CALTRANS)

Final PES (electronic copy and two signed hard copies to COUNTY plus six hard copies to CALTRANS)

4.3 TECHNICAL STUDIES

ENGINEER shall coordinate and prepare all required technical studies to support the NEPA CE and CEQA NOE. Preparation of all technical analyses and reports shall follow local, state and federal environmental guidelines, primarily consisting of the CALTRANS Standard Environmental Reference (SER) website, CALTRANS Local Assistance Procedures Manual, local and state CEQA Guidelines and FHWA Guidance on preparing and processing Environmental and Section 4(f) documents. The formats to be used for the technical studies will follow the guidance available on the CALTRANS SER website as of the date that those studies are initiated.

Unless otherwise noted, the deliverables for the technical studies will be a separate bound report including a standardized project description, a methodology relevant to each topic area, description of the affected environment, impact assessment and mitigation measures. One report for each technical study shall be prepared for the Railroad Avenue Bridges while a separate report shall be prepared for the

Chuckwalla Valley Road Bridges. Each screencheck technical study will be submitted to the COUNTY (electronic copy) for review. Following COUNTY review, the document will be revised, and a Draft of each technical study will be submitted to the COUNTY for concurrence prior to submitting the Draft to CALTRANS. Following CALTRANS and COUNTY review, a revised Draft of each technical study will be submitted to the COUNTY and CALTRANS. Following CALTRANS and COUNTY review of the revised draft, it is assumed that a revisions workshop will be held to address any outstanding comments if any comments remain. Following the revision workshop, a final version of each report will be prepared. The final technical studies will be submitted following the workshop for final concurrence (no additional comments are assumed to be received associated with the final concurrence review). If the revisions are required due to the quality of the submittal made by ENGINEER, then these revisions would not be considered out of scope.

Deliverable(s): *Screencheck technical studies (electronic copy to COUNTY for review)*

Draft technical studies (electronic copy to COUNTY and three hard copies to CALTRANS)

Revised Draft technical studies (electronic copy to COUNTY and three hard copies to CALTRANS)

Final technical studies for concurrence (electronic copy to COUNTY and three hard copies to CALTRANS)

Final approved technical studies for files (electronic and 2 hard copies to COUNTY and three hard copies to CALTRANS)

Preparation of the following technical reports if the preliminary evaluation shows they are necessary:

Hazardous Waste Study

Testing for Aerially Deposited Lead (ADL), Lead-based Paint and Asbestos (Step-2)

Water Quality Assessment Report

Biological Resources

Natural Environmental Study

Habitat Evaluation and Focused Wildlife Surveys, including Desert Tortoise and Burrowing Owl (Separate Contract)

Habitat Evaluation for Colonial Birds/Roosting Bats including Step-2 Bat Night (Separate Contract)

Habitat Evaluation and Focused Survey for Special-status Plants (Separate Contract)

CVMSHCP Consistency Finding

Biological Assessment for Formal Section 7 Consultation (Step-2)

Wetlands Delineation and Assessment

Section 4(f) Evaluation (Individual Finding)

Visual Resources (Minor Visual Impact Assessment)

Cultural Resources

Area of Potential Effect/Historical Property Survey/Archaeological Survey/Historical Resource Evaluation Report

Native American Coordination

Local Historical Society/Museum Consultation

Field Survey

Finding of Effect (Step-2)

Section 106 Memorandum of Agreement (Step-2)

4.3.1 HAZARDOUS WASTE (INITIAL SITE ASSESSMENT)

ENGINEER shall prepare a Hazardous Waste Initial Site Assessment (ISA) report which shall include project screening and completion of the ISA checklist. The work shall be performed in general accordance with Caltrans and ASTM requirements. Following is a summary of tasks:

- Review properties information.
- Conduct site reconnaissance to look for indicators of potentially hazardous materials.
- Order EDR search for various agencies such as Regional Water Quality Control Board, Department of Health Services and other City/county agencies that deal with underground leaking tanks.
- Review selected aerial photos and maps.
- Complete the ISA checklist.
- Provide scope of work for additional investigation, if needed.

This task is a paper study without any sampling and laboratory testing. The product will be an ISA report

including:

- Site Location Map;
- Site Visit Notes;
- CALTRANS ISA Checklist;
- Environmental Database Search by EDR;
- Transaction Screen Questionnaires;
- Historical Topographic Maps and Aerial Photographs;
- Selected Photographs of Site Reconnaissance.

4.3.2 PRELIMINARY SITE ASSESSMENT (STEP-2)

ENGINEER shall conduct a subsurface environmental Site Investigation (SI) if necessary, the next step following completion of the ISA during the evaluation of properties on a Project. The site investigation will serve to investigate areas of concern and recognized environmental conditions identified during the ISA. The results will assist in determining additional health and safety requirements and soil management requirements on the Project. A Phase II Site Investigation Report will be prepared.

Aerially Deposited Lead (ADL) Survey

The scope shall include testing the unpaved areas of the project at a spacing of about 100 to 200 feet for ADL contamination and presenting the findings in a report.

Task 1 – Pre-Field Activities

ENGINEER shall utilize in-house Health and Safety Plan and submit a Work Plan for field activities. The Health and Safety Plan includes guidelines for the use of personal protective equipment and sampling procedures. The work plan addresses procedures of sampling and laboratory analysis.

Task 2 – Soil Sampling

Hand augers will be used and advanced to a maximum depth of 4 feet to collect soil samples.

Task 3 – Laboratory Analysis

Samples that are sent to the laboratory shall be analyzed for lead using the EPA Method 6010B/7000. Soil with total lead concentrations in excess of 50 mg/kg shall be analyzed for soluble lead using the WET, TCLP and deionized water extract methods.

Task 4 – Analysis and Report Preparation

The results of the sampling and testing shall be statistically analyzed using methods consistent with CALTRANS requirements, and the findings shall be submitted in a project ADL report.

Asbestos and Lead Studies

The objective of the work is to assess the likelihood of asbestos-containing materials (ACMs) and/or lead-based paint (LBP) that may be present in the vicinity structures.

Task 1 – Review Bridge Plans and Prepare Base Maps

ENGINEER shall use the existing bridge plans as base maps documenting the survey findings.

Task 2 – Site Reconnaissance and Sampling Strategy

ENGINEER shall conduct a site reconnaissance to identify locations of potential ACMs. The reconnaissance shall be performed by a California Division of Occupational Safety and Health Certified Asbestos Consultant (CAC) and/or a California Certified Site Surveillance Technician (CSST) working under the direction of the CAC, and a California Certified Department of Health Services (DHS) Project Monitor certified in lead inspection and risk assessment. ENGINEER shall obtain a permit prior to conducting the sampling program if required.

Bulk samples of suspect accessible construction materials shall be collected by the asbestos and lead-paint consultant and submitted to an independent laboratory for analysis. The laboratory used shall be accredited by the National Voluntary Laboratory Accreditation Program.

This survey shall be performed in general accordance with the standard procedures recommended by the USEPA to perform ACM and LBP surveys. The USEPA sampling method to be used in this survey is based on the statistical probability that construction materials similar in color and texture contain similar amounts of asbestos. In areas where the material appears to be homogeneous in color and texture over a wide area, bulk samples shall be collected at discrete locations. In unique or nonhomogeneous areas, discrete samples of potential ACMs shall be collected.

Task 3 – Data Evaluation and Draft and Final Report Preparation

After the data has been gathered, it shall be evaluated for technical accuracy and uncertainty (data validation). A report shall be prepared to summarize the survey findings. The report shall include figures

showing the sample collection locations and summary tables that list the description of materials sampled, sample locations, laboratory analysis, findings, conclusions, opinions, and comments.

Lead-Based Painting (LBP) Striping Testing

ENGINEER shall test the striping to be removed for lead content and proper handling of the striping waste materials removal. It is assumed that ENGINEER shall perform testing of up to 2 striping lanes in each direction and collect samples on average every 0.5 miles. The statistical analysis shall be performed on the laboratory results. Findings and recommendations shall be presented in the LBP Striping report.

4.3.3 WATER QUALITY ASSESSMENT STUDIES

ENGINEER shall prepare a Water Quality Assessment Report (WQAR). The content and format of the WQAR shall be as set forth in CALTRANS WQAR guidance dated June 2012. One WQAR will be prepared for the two bridges on Railroad Avenue (Br. No. 56C0099 and Br. No. 56C0101) that discharge to the San Gorgonio River which flows to the Whitewater River, the Coachella Valley Stormwater Channel, and ultimately to the Salton Sea. Another WQAR will be prepared for the four bridges on Chuckwalla Valley Road (Br. No. 56C0102, Br. No. 56C0103, Br. No. 56C0104, and Br. No. 56C0108) that discharge via channels to Palen [Dry] Lake or Ford Dry Lake.

The primary purpose of a WQAR is to fulfill the requirements of the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) and to provide information to assist with National Pollutant Discharge Elimination System (NPDES) permitting. The WQAR shall include a discussion of the proposed project, the physical setting of the project area, and the regulatory framework on water quality. The WQAR shall provide data on surface water and groundwater resources within the project area and their water quality health, describe water quality impairments and beneficial uses, identify potential water quality impacts/benefits associated with the proposed project, and recommend avoidance and/or minimization measures for potentially adverse impacts. The WQAR is not intended to make conclusions regarding the significance of the impacts as said determinations are to be addressed in the NEPA/CEQA documents based on information provided in the WQAR.

4.3.4 NATURAL ENVIRONMENTAL STUDY

ENGINEER shall conduct a literature search, conduct interagency coordination with the appropriate agencies (as approved by the COUNTY), and prepare a Natural Environment Study Minimal Impacts (NESMI) report analyzing potential impacts to biological resources. The following tasks shall be performed during the preparation of the reports:

Review of Project Information and Applicable Literature

1) Special status species lists from the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS);
2) Database searches of current versions of the California Natural Diversity Database (CNDDB) and the Online Inventory of Rare and Endangered Plants of the California Native Plant Society (CNPS);
3) The most recent applicable Federal Register listing package and critical habitat determination for each federally listed Endangered or Threatened species potentially occurring within the project site;
4) The most recent CDFW Annual Report on the status of California's listed Threatened and Endangered plants and animals;
5) The Coachella Valley Multiple Species Habitat Conservation Plan; and
6) Other available biological studies conducted in the vicinity of the project site.

Evaluation for Biological Resource Constraints and Focused Studies

A field evaluation for biological resources, and habitat assessments/focused studies for desert tortoise, burrowing owl, colonial birds, roosting bats, and rare plants is being conducted under a separate contract and are not included in this scope of work. The results of the reconnaissance survey and these specialized studies will be directly incorporated into the NESMI report.

Technical Report Preparation

The draft NESMI shall be developed based on results of the biological surveys and analysis and shall conform to the current CALTRANS NESMI annotated outline. The report shall describe:

(a) The study methods used in identifying and assessing the biological resources at the project site, the personnel who conducted the studies, contacts made with agencies, and any limitations associated with the study;

(b) The environmental setting including both the biological and physical setting at the project site;

(c) The results of focused studies, including special-status species present on the site, if any, and a discussion of impacts and mitigation, as necessary; and

(d) The appropriate regulatory requirements and necessary permits, if any.

Biological Resource Agency Coordination

Railroad Avenue Bridges: A portion of the Railroad Avenue Bridge over Fornat Wash (Br. No. 56C0099) project is located within the Cabazon Conservation Area of the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP). A portion of the Railroad Avenue Bridge over East Channel Stubbe Wash (Br. No. 56C0101) project is located within the Snow Creek/Windy Point Conservation Area of the CVMSHCP. Project-related impacts within the Conservation Areas will require the Joint Project Review (JPR) process to demonstrate consistency with the CVMSHCP. It is assumed that COUNTY/ CALTRANS will lead the JPR effort; however, to provide the necessary support for JPR coordination, ENGINEER shall attend up to 5 meetings to discuss the project and the proposed impacts and mitigation and avoidance and minimization measures. It is assumed that potential project impacts to state and federally listed species will be avoided or minimized to the maximum extent practicable through the implementation of avoidance and minimization measures, which will be proposed in the appropriate section of the NESMI. Therefore, it is assumed for the purpose of this scope that the JPR process, utilizing the NESMI as the appropriate form of documentation, will satisfy all project requirements under the federal and state Endangered Species Act (ESA) through consistency with the CVMSHCP.

Chuckwalla Valley Road Bridges: To provide the necessary support for Section 7 consultation with USFWS (for which CALTRANS will be the federal lead agency), ENGINEER shall attend up to 3 meetings to discuss the project and the proposed impacts and mitigation and avoidance and minimization measures. All communications with USFWS would occur with COUNTY and CALTRANS present and/or with COUNTY and CALTRANS approval. A draft agenda and meeting materials shall be provided to COUNTY and CALTRANS for review prior to any meetings. It is assumed that potential project impacts to state and federally listed species will be avoided or minimized to the maximum extent practicable through the implementation of avoidance and minimization measures, which will be proposed in the

appropriate section of the NESMI. Therefore, it is assumed for the purpose of this scope that an informal Section 7 consultation, utilizing the NESMI as the appropriate form of documentation, will take place if federally listed species (such as desert tortoise) are found to be present within the BSA.

Biological Assessment for Formal Section 7 Consultation – Chuckwalla Valley Road Bridges (Step-2)

This Step-2 task for formal Section 7 consultation with USFWS is being included in the event that the project would have a May Effect determination under Section 7. To facilitate formal Section 7 Consultation with USFWS for potential impacts to federally listed species, a Biological Assessment (BA) will be prepared for the Chuckwalla Valley Road Bridges. The BA will initiate the formal consultation with USFWS by CALTRANS under Section 7. The BA will conform to the CALTRANS SER and BA template. Project details, including project description, survey methods, environmental baseline data, and impacts will be derived from the biological report. The BA will identify what the probably impact will be on federally listed species, including desert tortoise, from construction of the proposed project, and will provide detailed measures for the avoidance, minimization, and/or mitigation of impacts to federally listed species. Formal consultation will be initiated when the BA is completed. ENGINEER shall attend up to 3 meetings (included under the Biological Resource Agency Coordination) to discuss the project and the proposed impacts and mitigation and avoidance, minimization and compensatory measures. All communications with USFWS would occur with COUNTY and CALTRANS present and/or with COUNTY and CALTRANS approval. A draft agenda and meeting materials shall be provided to COUNTY and CALTRANS for review prior to any meetings.

The following assumptions were made:

- It is assumed that an NESMI will be approved by CALTRANS as the appropriate level of document. Although not anticipated, if a full NES is necessary, a separate scope and cost can be provided.
- It is assumed that COUNTY will provide any property access that is required.
- It is assumed that all project-related impacts will occur within COUNTY-owned right-of-way, and will not involve federal or tribal lands.
- It is assumed that the JPR process, utilizing the NESMI as the appropriate form of documentation, will satisfy all project requirements under the federal and state ESA through consistency with the

CVMSHCP.

- It is assumed that a No Effect determination will be made and formal Section 7 consultation will not be required.
- It is assumed that a Biological Assessment will not be required. However, a Step-2 task for formal Section 7 Consultation has been included for Bridges 56C00102, 56C0103, 56C0104 and 56C0108 in the event that a May Affect determination is made.
- It is assumed that a CESA Incidental Take Permit will not be required.
- It is assumed that CALTRANS review and approval for documents included in this task will be conducted by the same CALTRANS staff member for Bridges 56C0099 and 56C0101.
- It is assumed that CALTRANS review and approval for documents included in this task will be conducted by the same CALTRANS staff member for Bridges 56C00102, 56C0103, 56C0104 and 56C0108.

4.3.5 WETLAND DELINEATION AND ASSESSMENT

ENGINEER's qualified regulatory specialists shall examine all relevant portions of the project area and perform a routine-level delineation of the extent of potentially jurisdictional waters under both state and federal regulations. Evaluation for federal wetlands shall follow the applicable methods in the 1987 manual from the U.S. Army Corps of Engineers (ACOE) and 2008 Arid West supplement from ACOE, along with subsequent supporting materials and applicable regulations, policy, and case law. Work shall include data sampling for wetlands and completion of Arid West Region Wetland Determination forms and Ordinary High Water Mark (OHWM) data forms, as appropriate. Clean Water Act jurisdiction shall be documented assuming that a preliminary jurisdictional determination will be submitted, requiring approval from ACOE. CDFW jurisdictional areas shall be mapped to either top-of-bank or to the drip line of the associated riparian canopy, whichever is greater. The study area for this work shall include the proposed project footprint, which is assumed to include proposed access and detour roads, and proposed staging/storage areas, along with a 100-foot buffer. Evaluation of existing functions and values for jurisdictional areas shall be addressed at a qualitative level; however, work will not include a functional or condition assessment (e.g., California Rapid Assessment Method). Mapping shall be performed to reflect the delineated boundaries of any potentially jurisdictional waters and/or wetlands present. Photographs representative of relevant site conditions shall be taken. As part of this task a Jurisdictional Delineation

Report shall be prepared that includes background information, delineation methods, and the results of this delineation in text, tabular, and graphical formats. The report shall meet the standard requirements for a delineation report in the Los Angeles District of the ACOE, Colorado River Basin Regional Water Quality Control Board (RWQCB), and CDFW Inland Deserts Region.

The following assumptions were made:

- It is assumed that COUNTY will provide any property access that is required.
- It is assumed that CALTRANS review and approval for documents included in this task will be conducted by the same CALTRANS staff member for Bridges 56C0099 and 56C0101.
- It is assumed that CALTRANS review and approval for documents included in this task will be conducted by the same CALTRANS staff member for Bridges 56C00102, 56C0103, 56C0104 and 56C0108.

4.3.6 SECTION 4(f) EVALUATION (INDIVIDUAL FINDING)

Railroad Avenue Bridge over East Channel Stubbe Wash (Br. No. 56C0101)

ENGINEER shall conduct a Section 4(f) evaluation to address potential impacts to the Pacific Crest Trail (a long-distance hiking trail running between Canada and Mexico) for the proposed project. The evaluation process will follow CALTRANS guidelines as outlined in the Standard Environmental Reference Chapters 20 (titled *Section 4(f) Resources and Related Requirements*) and 38 (titled *NEPA Assignment*). The evaluation shall identify the appropriate process; individual evaluation, programmatic evaluation, or *de minimis* impact finding (it is anticipated that an individual impact finding is what will be required). It is assumed that bridges associated with Chuckwalla Valley Road, a historic property eligible for listing on the NRHP, will be found eligible for listing on the NRHP. It is also assumed that bridges associated with Railroad Avenue may be found eligible for listing on the NRHP. Should these resources be found eligible for the National Register, Caltrans may determine these bridges qualify as Section 4(f) resources. When a Section 4(f) Evaluation is required, an Individual Section 4(f) Evaluation Document is prepared as a separate document and reviewed, approved, and circulated by Caltrans. Section 4(f) Evaluation is prepared in two phases; the Draft Evaluation, and Final Evaluation. The Draft Section 4(f) evaluation must be reviewed and recommended for signature by the appropriate HQ District Environmental Coordinator and Legal Office. The Deputy District Director or designee then signs and

approves the daft individual Section 4(f) evaluation. The Final Section 4(f) evaluation must also be reviewed and recommended for signature by the appropriate HQ District Environmental Coordinator. The appropriate Legal Office must provide Legal Sufficiency. The Deputy District Director or designee then signs and approves the individual Section 4(f) evaluation. (SER, Vol.1, Chapter 20. (http://www.dot.ca.gov/ser/vol1/sec3/special/ch204f/chap20.htm#BM4f).

Early coordination with official(s) or agencies with jurisdiction is a critical step in the evaluation and shall be conducted in coordination with COUNTY. Coordination is needed for defining the significance of the property for purposes of Section 4(f) (a historic property is significant if it is listed or eligible for listing on National Register of Historic Places), for determining use, determination of feasibility and prudence of avoidance alternative, and in developing measures to avoid or minimize harm. In case of historic properties (Pacific Crest Trail1.), the official jurisdiction is SHPO as defined in 23 CFR 774. Concurrence letter on Section 106 evaluation is used as SHPO determination letter and must be included in the Final Section 4(f) Evaluation. In addition to SHPO, the Section 4(f) Evaluation for this project must also be provided for coordination and comments to the local agency with Jurisdiction over the property, Department of the Interior, and to the Department of Agriculture.

4.3.7 VISUAL RESOURCES (MINOR VISUAL IMPACT ASSESSMENT)

ENGINEER will complete the Visual Impact Assessment (VIA) Questionnaire to assist in determining the appropriate level of documentation for the visual quality analysis. The VIA Questionnaire will also help to support the information and analysis included in the PES. It is anticipated that a noticeable visual changes to the environment is proposed. An abbreviated VIA is appropriate in this case. The assessment would briefly describe project features, impacts and any avoidance and minimization measures. Visual simulations would be optional and be based on discussion/approval from CALTRANS. The minor VIA shall be prepared in accordance with guidance provided in CALTRANS Standard Environmental Reference (SER), Chapter 27. If a document other than a minor VIA is required, a separate scope and fee will be prepared.

To complete the minor VIA, ENGINEER will assess existing visual resource conditions in the project area. The assessment will include an inventory including photographic documentation of the following;

viewpoints, notable visual resources, visual quality and character of the project area, and surrounding land uses. The photo documentation will also include the bridges themselves to help characterize and record the elements and features of each bridge that depict their current physical qualities. The photographs will be used in the analysis, for graphics, and for generating visual simulations. This scope assumes one simulation per bridge totaling no more than six simulations would be generated for the project to help communicate the proposed bridge design(s); however, this is subject to concurrence by CALTRANS staff.

The assessment will include a description of pre-project conditions, including existing visual quality and character. ENGINEER will collect and review the appropriate municipal plans for applicable guidelines, policies, and objectives pertaining to aesthetics, visual quality, scenic resources, historic resources, and community character. The assessment will include a discussion of the regulatory setting, an explanation of the methodology used for the evaluation, a description of landscape units, an explanation of viewer groups and their level of sensitivity to visual changes, and criteria used to evaluate impacts. The assessment will also include an analysis of existing visual quality and character, viewpoints and viewer sensitivity, and changes in vividness, intactness, and unity. Key viewpoints will be selected in coordination with CALTRANS for use in preparing visual simulations. The simulations will be used to compare existing and proposed conditions, to depict measures that can be used to reduce potential impacts, and to communicate anticipated changes to the COUNTY, agencies, and interested public

4.3.8 CULTURAL RESOURCES STUDY (APE/ASR/HRER/HPSR)

Four of the six timber bridges will be replaced along a six-mile stretch of Chuckwalla Valley Road. The other two bridges will be replaced along a four-mile stretch of Railroad Avenue. All six bridges were constructed in the 1930s and were widened in the 1940s, and all are listed as Category 5 bridges on the Caltrans Historic Bridge Inventory. Category 5 Bridges are not individually eligible for listing on the National Register of Historic Places (NRHP) but still must be evaluated against NRHP/CRHR criteria.

In 2011, the Bureau of Land Management (BLM) determined a 12-mile long segment of Chuckwalla Valley Road (a segment of former U.S. Highway 60/70), extending from one mile east of Corn Springs Road to Eagle Mountain Road, eligible for listing on the NRHP and CRHR under Criterion A/1 for its

association with events that made a significant contribution to history. The evaluation acknowledged the bridges as part of the segment but did not formerly evaluate them against NRHP or CRHR criteria or consider their potential contribution to the significance of Chuckwalla Valley Road. Railroad Avenue is an unrecorded segment of former U.S. Highway 60/70 that may be eligible for listing on the NRHP and CRHR. The segment has not been previously recorded or evaluated against NRHP/CRHR criteria, and an evaluation of this potential historic property and its associated bridges would be required.

In consideration of these cultural resource issues, the cultural scope of work proposes the following: 1) assistance in the preparation of the Preliminary Environmental Study (PES); 2) preparation of Area of Potential Effects maps (two discontinuous APE's for the Chuckwalla Valley Road and the Railroad Avenue Bridges); 3) Phase I cultural resource surveys resulting in two Archaeological Survey Reports (ASRs); 4) Built-environment resource evaluations documented in two Historic Resources Evaluation Reports (HRERs); 5) preparation of two Historic Property Survey Reports (HPSRs); and Step-2 tasks A) application of the Criteria of Adverse Effects resulting in two Finding of Effect reports; and B) preparation of two Memorandums of Agreement (MOAs).

The scope of work to fulfill requirements for the Projects includes the following: Task 1 (PES); Task 2 (Section 4(f) Evaluation); Task 3 (Cultural Resource Study); Step-2 Task 3a (Findings of Effect); Step-2 Task 3b (Memorandums of Agreement. The scope of work detailed in these tasks is based on a number of assumptions, which are also provided below.

Task 1: Preliminary Environmental Study

ENGINEER's cultural consultant shall assist in the preparation of a Preliminary Environmental Study in accordance with CALTRANS Local Assistance guidelines by completing and reporting the results of cultural resource records searches at the Eastern Information Center (EIC). Cultural consultant shall also review published and unpublished historic and geologic maps and literature for the area.

Task 2: Section 4(f)

Cultural consultant shall assist ENGINEER as they prepare a Section 4(f) evaluation to address potential impacts to 4(f) resources, which include historic properties. Cultural consultant shall provide consultation

on 4(f) evaluations related to historic properties, assist in the alternatives analysis, and participate in a Section 4(f) focus meeting with CALTRANS. The evaluation process shall follow CALTRANS guidelines as outlined in the Standard Environmental Reference (SER) Chapters 20 and 38. It is assumed that Chuckwalla Valley Road and Railroad Avenue, and their associated bridges, will be identified as 4(f) resources and that the potential impacts to these resources resulting from the proposed Project may require preparation of an individual 4(f).

Task 3: Cultural Resource Study

Cultural consultant shall work with CALTRANS who will delineate the Area of Potential Effects (APE) for the Projects. This will include preparation of the draft, revised draft, and final APE maps.

Cultural consultant shall assist COUNTY and CALTRANS in their respective consultation efforts by preparing letters and engaging in verbal and written communication with tribal organizations and individuals, as may be requested by the lead agencies. It is assumed that COUNTY, as lead agency under CEQA, will be responsible for all AB 52 consultations. However, the Cultural consultant shall assist COUNTY in preparation of documentation, tracking, mailing and attending meetings as needed.

Cultural Consultant shall consult local historical societies and BLM in regards to built-environment resources identified in the APE.

Cultural consultant shall perform cultural resource records searches at the EIC and review historic maps and literature for the area, assuming record searches and reviews were not previously completed during preparation of the PES.

Cultural consultant shall intensively survey the APE by walking over the surface of the APE in areas not obscured by asphalt/concrete, specifically focusing on the drainage banks and terraces. Survey shall be done systematically in 10-15 meter transects to identify all archaeological resources visible on the surface. It is assumed that no archaeological resources (prehistoric or historic) will be identified during the field survey.

Cultural consultant shall perform a reconnaissance survey of the APE to identify all built-environment resources 30 years of age and older. Built-environment resources that are not exempt from evaluation under the Caltrans Section 106 Programmatic Agreement will be recorded onto DPR 523 forms. It is assumed that the six bridges and roadway approaches will be the only built-environment resources identified within the APE.

Cultural consultant shall prepare two ASRs that document findings of the Phase I archaeological surveys; one report shall be prepared for Chuckwalla Valley Road and the other for Railroad Avenue. Reports shall follow CALTRANS format and guidelines.

Cultural consultant shall prepare two HRERs that identify and evaluate non-exempt built-environment resources within the APE against NRHP and CRHR criteria. It is assumed that the six bridges and roadway approaches will be the only built-environment resources identified within the APE and evaluated in the HRERs.

Cultural consultant shall prepare two HPSRs that document the results of historic property surveys. Project maps, ASRs, HRERs, and documentation of consultation shall be attached to the HPSRs.

The following assumptions were made:

- It is assumed that Railroad Avenue and all six timber bridges will require formal evaluation against NRHP and CRHR criteria and that all qualify as or contribute to the significance of a historic property/historical resource under Section 106 and CEQA, respectively. A Step-2 task is included should the Projects require application of the Criteria of Adverse Effects, which would be documented in a Finding of Effect approved by CALTRANS and requiring SHPO concurrence.
- It is assumed that no archaeological resources will be discovered on the surface of the APEs during the course of the fieldwork and no excavation of or collecting archaeological specimens is included in the current scope.
- It is assumed that the cultural consultant will participate in no more than two Section 4(f) focus meetings with CALTRANS.

- A Step-2 task is included should the Projects result in an Adverse Effect to built-environment historic properties.
- A Step-2 task is included should the Projects require MOAs. It is assumed MOAs would be prepared to resolve/mitigate adverse effects to anticipated built-environment resources only.
- It is assumed that the following deliverables will be required for the HPSR package (including APE, ASR, and HRER) and PIR/PER: 1) Screen-check submitted to COUNTY; 2) Draft technical studies; 3) Second Draft technical studies; 4) Final technical studies for concurrence; 5) Final technical studies. No more than three rounds of revisions from CALTRANS will be required.
- Under Step-2 Tasks 4.3.9A (FoE) and 4.3.9B (MOA), it is assumed that the following deliverables will be required: 1) Screen-check submitted to COUNTY; 2) Draft technical studies; 3) Second Draft technical studies; 4) Final technical studies for concurrence; 5) Final technical studies. No more than three rounds of revisions from CALTRANS will be required

4.3.9A FINDING OF EFFECT (FOE) (STEP-2)

ENGINEER's cultural consultant shall work with CALTRANS to prepare up to two Finding of Effect documents for SHPO review and approval. The effort may include consultation with local historical societies and regarding potential project impacts/effects to built-environment resources in the APE that are eligible for listing in the NRHP.

4.3.9B SECTION 106 MEMORANDUM OF AGREEMENT (MOA) (STEP-2)

ENGINEER's cultural consultant shall work with CALTRANS to prepare up to two Memorandums of Agreement for SHPO review and approval. The effort may include consultation with local historical societies and regarding to resolve adverse effects to built-environment resources in the APE that are eligible for listing in the NRHP.

4.3.10 CEQA NOTICE OF EXEMPTION (NOE)

A Notice of Exemption (NOE) shall be prepared in accordance with CEQA guidelines (Section 15602) and the Public Resources Code (Sections 21108 and 21152). Documentation in support of the NOE shall also be prepared. The documentation shall include a project description, limited analyses of readily available data to verify proposed action qualifies as categorically exempt, and conclusion statement noting whether the project triggers exceptions that would disallow the use of an exemption to clear the project under CEQA. The draft NOE and supporting documentation shall be submitted to COUNTY for

review and comment. This scope of work assumes up to two reviews by COUNTY. Comments from COUNTY shall be incorporated into the draft NOE and supporting documentation. Following approval by COUNTY, the NOE shall be filed with the County Clerk. COUNTY will pay for any filing fees, if applicable.

4.5 CEQA/NEPA INITIAL STUDY / ENVIRONMENTAL ASSESSMENT (IS/EA) (STEP-2)

In the case that the cultural analyses conducted in support of the project indicate that the proposed action would have an adverse effect on cultural resources, ENGINEER shall prepare an Initial Study/Environmental Assessment (IS/EA) in compliance with CEQA and NEPA, respectively. The combined document would be prepared in accordance with CALTRANS SER and Local Assistance Procedures Manual.

4.5.1 ADMINISTRATIVE DRAFT IS/EA

Concurrent with the preparation of any additional technical studies that are determined to be required, ENGINEER shall prepare a comprehensive Administrative Draft IS/EA for COUNTY and CALTRANS review. The format shall be based on CALTRANS/FHWA requirements and shall also meet COUNTY's CEQA compliance procedures. The IS/EA format shall follow the annotated outline for IS/EAs as noted in the CALTRANS SER.

Each submittal (except the initial submittal to COUNTY) will include a Comment/Response matrix, External QC Certification, and ED Review Checklist. The document will be submitted to COUNTY for initial review, (comments will be addressed & back-checked) prior to officially submitting to CALTRANS. Comments from CALTRANS will be provided in a formal review comment and response matrix along with a revised document for each submittal.

4.5.2 DRAFT IS/EA FOR PUBLIC REVIEW

ENGINEER shall prepare and complete revisions to the Administrative Draft IS/EA pursuant to review comments. Annotated copies of agency comments shall be provided to document how each comment was addressed. ENGINEER shall prepare and reproduce the Draft IS/EA for submittal to COUNTY and CALTRANS for approval to circulate and for public review. Once approved, ENGINEER shall circulate the Draft IS/EA to a distribution list to be provided and approved by COUNTY and CALTRANS. Copies of the Draft IS/EA shall be circulated for public review. ENGINEER shall prepare a draft public notice regarding the availability of the Draft IS/EA for public review. The ENGINEER shall be responsible for

preparing and publishing the final notice. In addition, ENGINEER shall file a Notice of Completion with the State Clearinghouse to begin the required public review period and the Public Notice to the County Clerk's office.

4.5.3 PUBLIC REVIEW

A public hearing shall be scheduled as part of a regular Board of Supervisors meeting to receive any verbal public comments on the project. ENGINEER shall attend this hearing and shall give a brief presentation on the environmental document, if necessary.

4.5.4 DRAFT MITIGATED NEGATIVE DECLARATION / FINDING OF NO SIGNIFICANT IMPACT (MND/FONSI)

ENGINEER shall confer with COUNTY and CALTRANS staff to review public comments to develop a general framework and strategies for the preparation of responses. ENGINEER shall prepare written responses to comments received on the Draft IS/EA and prepare the Draft MND/FONSI. ENGINEER shall submit copies of the comments received and draft responses as part of the Draft MND/FONSI.

4.5.5 FINAL MND/FONSI

ENGINEER shall incorporate the final comments and responses into the MND/FONSI and shall submit one master document for approval by COUNTY (MND) and CALTRANS (FONSI). As part of this task, ENGINEER shall prepare a Mitigation Monitoring and Reporting Program (MMRP)/Environmental Commitments Record (ECR) consistent with the final mitigation measures identified in the MND/FONSI. Following approval of the MND/FONSI, ENGINEER shall submit copies of the approved document for distribution to the agencies that commented on the Draft IS/EA. These documents shall be provided to commenting agencies at least 10 days prior to the local agency approval of the MND. ENGINEER shall prepare a draft Notice of Determination to be submitted to the State Clearinghouse following the approval of the MND. Following approval of the MND, CALTRANS will be responsible for approving the FONSI.

PHASE II – PLANS, SPECIFICATIONS AND ESTIMATES

5.1 FOUNDATION DESIGN REPORT

Based on the site-specific subsurface investigation, a design-level Bridge Foundation / Geotechnical Design Report shall be prepared in accordance with CALTRANS Foundation Report Preparation for Bridge Foundations (December 2009). The geotechnical report shall address the following:

- Scope of Work and Project Description;

- Exceptions to Policy;
- Field Investigation and Testing Program;
- Laboratory Testing Program;
- Site Geology and Subsurface Conditions;
- Scour Evaluation (design scour depth shall be provided by the project hydraulic engineer);
- Corrosion Evaluation;
- Seismic Recommendations;
- As-Built Foundation Data;
- Foundation Recommendations;
- Notes to Designers;
- Construction Considerations;
- Approach fill earthwork;
- Approach pavement design;

Attachments;

- Tables (as-needed);
- Figures (Vicinity Map, Boring Location Plan, General Plan);
- Field Investigation Appendix;
- Laboratory Testing Appendix; and
- Log of Test Borings.

Deliverable(s): *Foundation Design Report for Railroad Avenue Bridges (Draft and Final)*

Foundation Design Report for Chuckwalla Valley Road Bridges (Draft and Final)

5.2 STORM WATER POLUTION PREVENTATION PLAN (SWPPP)

ENGINEER shall prepare Storm Water Pollution Prevention Plans (SWPPPs) for the preferred project alternative. The SWPPPs shall meet the requirements outlined in the California Construction General Permit, Order 2009-0009-DWQ as amended by Orders 2010-0014-DWQ and 2012-0006-DWQ (California CGP). The SWPPPs shall be prepared using the CASQA Template and shall be signed by a Qualified SWPPP Developer (QSD). One SWPPP shall be prepared for the two bridges on Railroad Avenue near Cabazon (Br. No. 56C0099 and Br. No. 56C0101) that discharge to the San Gorgonio River which flows

to the Whitewater River, the Coachella Valley Stormwater Channel, and ultimately to the Salton Sea. Another SWPPP shall be prepared for the four bridges on Chuckwalla Valley Road east of Desert Center and west of Blythe (Br. No. 56C0102, Br. No. 56C0103, Br. No. 56C0104, and Br. No. 56C0108) that discharge via ditch channels to Palen [Dry] Lake or Ford Dry Lake.

In the event that any portion of the project sites or construction staging areas impinge upon Indian Tribal lands as defined at 18 U.S.C. § 1151, ENGINEER shall prepare separate Storm Water Pollution Prevention Plans (SWPPPs) for those areas of the preferred project alternative that impinges on such lands. The Indian Tribal land SWPPPs shall meet the requirements outlined in the U.S. Environmental Protection Agency's National Pollutant Discharge Elimination System General Permit for Discharges from Construction Activities (EPA CGP) issued February 16, 2012. The SWPPPs shall be prepared using the U.S. EPA 2012 SWPPP Template (EPA SWPPP Template, Version 1.1). One SWPPP shall be prepared for the two bridges on Railroad Avenue near Cabazon (Br. No. 56C0099 and Br. No. 56C0101) that discharge to the San Gorgonio River which flows to the Whitewater River, the Coachella Valley Stormwater Channel, and ultimately to the Salton Sea. Another SWPPP shall be prepared for the four bridges on Chuckwalla Valley Road east of Desert Center and west of Blythe (Br. No. 56C0102, Br. No. 56C0103, Br. No. 56C0104, and Br. No. 56C0108) that discharge via ditch channels to Palen [Dry] Lake or Ford Dry Lake.

The SWPPPs shall address the required elements including project pollutants and their sources, including control measures (BMPs); identification of non-storm water discharges and measures for their elimination, control, or treatment; BMPs that are effective and result in the reduction or elimination of pollutants in storm water and authorized non-storm water discharges; BMPs for control of site run-on; BMPs to stabilize soils disturbed by construction; and a description of post-construction BMPs incorporated into the project design to control the discharge of pollutants from the completed project.

Deliverable(s): *California SWPPP for Railroad Avenue Bridges (Draft and Final)*

California SWPPP for Chuckwalla Valley Road Bridges (Draft and Final)

EPA SWPPP for Railroad Avenue Bridges (Draft and Final)

EPA SWPPP for Chuckwalla Valley Road Bridges (Draft and Final)

5.3 UTILITY RELOCATION COORDINATION

The intent of the COUNTY is that the services of the ENGINEER shall be complete and "turn-key" with respects to all utility coordination matters, including complete coordination for the protection and relocation of existing facilities as described herein, as well as coordination, preparation of applications, and all other matters pertaining to the relocation and installation of water and electric services, except for those procedures that must be performed by COUNTY.

ENGINEER shall designate dedicated staff who shall be responsible for all coordination work related to utilities for the Project, including but not limited to relocations of existing trunk and mainline facilities, installation of new trunk and mainline facilities, relocation of existing electric and water services, and installation of new electric and water services.

ENGINEER shall coordinate with utility owners and COUNTY utility coordination staff with respect to all utility related matters. ENGINEER shall provide copies of all correspondence with utility companies and other utility related information to the COUNTY. Correspondence, as described herein, shall be prepared by ENGINEER for either ENGINEER or COUNTY signature, as appropriate, and as directed by the COUNTY PROJECT MANAGER.

ENGINEER shall coordinate with COUNTY staff to obtain record copies of utility maps from each utility owner within the project limits for existing and/or proposed utility facilities. ENGINEER shall include mapping and/or exhibits that clearly define the project limits as part of the requests for utility information.

ENGINEER shall Identify utility companies affected by the project and delineate utilities within the project's sphere of influence on the plans. ENGINEER shall prepare preliminary plans, which shall include all existing utilities (above ground and below ground) identified by location, size, type, and owner, as appropriate. ENGINEER shall check horizontal and vertical clearances for utilities and coordinate design with the various utility companies to address conflicts. In addition to information provided by the owning utility companies and through research of other record maps, field surveys shall be used to locate utility features such as manholes, valves, fire hydrants, poles, risers, etc., which shall be reflected on the

plans.

Known utility conflicts shall be shown on the plans with construction notes indicating action to be taken and by whom. Inventory numbers of poles, vaults and other surface facilities shall be shown on the plans for those facilities that have such numbers attached to the facility and as provided on the owner's inventory maps.

ENGINEER shall send preliminary design plans through COUNTY staff to owning utility companies within the project limits with requests for review and comments on the plans relevant to their respective facilities, and with requests for other project specific information.

ENGINEER shall monitor responses of utility notices received and make recommendations for mitigating conflicts. ENGINEER shall provide written responses to utility companies with regard to stated concerns and conduct design coordination meetings with utility companies as needed. Unresolved issues shall be brought to the attention of the COUNTY PROJECT MANAGER and County utility coordination staff as early as practical. Utility conflict issues shall be resolved prior to the completion of the final design plans as follows:

ENGINEER, through COUNTY staff, shall request and obtain a written acknowledgement of any conflicts from the respective utility owners.

Reasonable efforts shall be taken to accommodate utility company requests for minor design changes to accommodate their facilities. ENGINEER understands that the utility companies are generally operating within the COUNTY right-of-way, but may have prior rights to that of the COUNTY in some cases.

ENGINEER shall coordinate inclusion of special provisions in County's bid documents for adjustments and relocations of utility facilities as alternate bid items, if requested by the owning utility. Said work may require that cooperative agreements be prepared by COUNTY between the County of Riverside and the owning utility companies. Engineer shall provide information and exhibits as required to support the preparation of cooperative agreements, if needed.

ENGINEER shall conduct utility coordination meetings, as needed, regarding adjustments and relocations, to resolve conflict issues, and with respect to performing work for utility companies by COUNTY contractors. For utility conflicts that require relocating, COUNTY staff will submit the official notice / order to the utility companies to relocate conflicting facilities. ENGINEER shall make recommendations for special provision language with regard to utility issues, recommendations for construction windows of time for utility relocation activities, recommendations for inclusion of utility bid items, etc.

It is assumed that due to remote location the Railroad Avenue and Chuckwalla Valley Road project sites do not require new water and electrical services.

All utility files will be organized and maintained per CALTRANS policies and procedures. ENGINEER shall prepare utility portion of Right-of-Way Certification per Caltrans policy and submit to COUNTY for final approval.

ENGINEER shall assist with the resolution of utility related issues that may arise during the bidding process and during construction, including design modifications as needed and as approved by the COUNTY PROJECT MANAGER.

Specific issues and utility company requirements may result in deviation from the procedures outlined herein.

5.4 65% ROADWAY PLANS

Upon the acceptance of the Geometric Approval Drawings, ENGINEER shall prepare the 65% complete plans consisting of one Typical Section and Notes sheet, one Detail Sheet, and one 20-Scale Plan and Profile Sheet for each of the six project sites. All elements of the work are included in the 65% Roadway Plans. However, some details may be remaining for the 95% Submittal. Cross sections showing any modification to the roadway section are included in the 65% Roadway Plans submittal. The plan and profile sheets shall include roadway drainage improvements. The Typical Section and Notes Sheet shall include the typical street sections and notes. Nonstandard details may be provided on the Construction

Details sheet as well as a full listing of roadway construction and removal notes. The Roadway Plan and Profile shall show the existing topography, limits of work, construction notes, right-of-way, utilities, and other general design elements. Centerline, edge of pavement and vertical design shall be provided on the profile. The cost estimate shall receive a general progress update with the contingency reduced to 15%.

Deliverable(s): *65% Roadway Plans (number of sheets in parenthesis) for Railroad Avenue Bridges*

Title Sheet and Local Map (1)

Typical Section and Notes (2)

Plan and Profile (2)

Construction Details (2)

65% Roadway Plans (number of sheets in parenthesis) for Chuckwalla Valley Road Bridges

Title Sheet and Local Map (1)

Typical Section and Notes (4)

Plan and Profile (4)

Construction Details (4)

5.5 65% SIGNING, STRIPING AND DETOUR PLANS

Signing & Striping Plans

ENGINEER shall prepare signing and striping plans showing the affected construction area and all affected traffic stripes. The plans shall show the location of all proposed traffic stripes, markings, and the proper disposition of all affected existing signs and markings. Any work required to transition the proposed stripes to join with existing stripes on intersection approaches shall be provided. The final signing and striping plans shall be prepared for final plotting on D-sized sheets at 1" = 40', as appropriate. One (1) striping plan sheet is envisioned for each of the six project sites.

Detour Plans

ENGINEER shall provide construction traffic handling, including traffic control plans. Detour base plans are prepared at 1"=40' for the project location and are field-reviewed for accuracy. Each plan shall be 22"x34" and shall typically show a minimum of 2,000 feet of roadway with relevant medians, striping, and

work area. These base drawings may be used more than once, based upon the number of construction phases. The design, legend, and location of all work area signs, barricades, and necessary additional traffic controls are designated and placed on the plan sheets. General notes applying to construction traffic control, a plan legend, and County plan border information are placed on each project sheet. The plans shall be prepared to conform to the general requirements of COUNTY, with consideration for the needs of the Contractor's construction operations. The project is expected to require four (4) sheets. These plans shall include the necessary phasing and staging for the improvements to the roadway and bridge, as well as a "stick map" showing the road closures, detour routes, and signing. Specific construction staging shall depend on the bridge replacement impacts.

Deliverable(s): *65% Signing, Striping and Detour Plans (number of sheets in parenthesis) for Railroad Avenue Bridges*

Signing and Striping Plan (2)

Detour Plan (2)

65% Signing, Striping and Detour Plans (number of sheets in parenthesis) for Chuckwalla Valley Road Bridges

Signing and Striping Plan (4)

Detour Plan (2)

5.6 95% CIVIL ROADWAY PS&E

Comments from COUNTY for the 65% roadway design submittal shall be reviewed and resolved. This includes all Civil components including Roadway Improvements, Cross Sections, and Signing, Striping and Detour Plans. If needed, a meeting with the COUNTY or the review agency shall be held to seek clarification on comments. ENGINEER shall incorporate these comments into the 95% PS&E. ENGINEER shall use Microsoft Word to prepare and edit CALTRANS 2015 Standard Special Provisions (SSP) for Civil Roadway work at this submittal. Quantity calculation and construction cost estimates in Microsoft Excel format with a contingency directed by COUNTY shall be prepared. At the 95% completion level, the PS&E is considered substantially complete and ready for bid.

Deliverable(s): *95% Roadway Plans, Edited CALTRANS Standard Special Provisions, Quantities and Cost Estimates for each group of Railroad Avenue Bridges and Chuckwalla Valley Road Bridges*

5.7 BRIDGE TYPE SELECTION

Based on the approved roadway geometric design plans for the preferred alternative, ENGINEER shall prepare preliminary bridge design in 30% design level including performing preliminary structural design and seismic analyses in accordance with CALTRANS bridge design standards. The preliminary structure study shall be summarized in a Bridge Type Selection Report (BTSR). In addition to the structure-related discussion, the BTSR shall include a summary of engineering studies in various disciplines including falsework (if required), utility relocation, stage construction, constructability-related topics, calculated scour depth, and geotechnical evaluation. This step of bridge type selection shall be completed before extensive bridge design work for final structure PS&E is performed. The 30% bridge type selection design shall include a bridge general plan, a preliminary foundation plan, detailed cost estimates and other pertinent information needed to determine the proper structure type. ENGINEER shall submit the BTSR to the COUNTY for review and concurrence.

Deliverable(s): *Bridge Type Selection Report for Railroad Avenue Bridges (Draft and Final)*

Bridge Type Selection Report for Chuckwalla Valley Road Bridges (Draft and Final)

5.8 65% UNCHECKED STRUCTURE PLANS

Engineering conclusions for the preferred structure alternative identified in the final bridge type selection report shall be carried into the final design phase. The final bridge design shall be based on CALTRANS-amended AASHTO LRFD Bridge Design Specifications, various CALTRANS Bridge Design and Detail Manuals, and the Seismic Design Criteria (SDC).

Deliverable(s): *65% Unchecked Structure Plans (number of sheets in parenthesis) for Railroad Avenue Bridges*

General Plan (2)

Index To Plan (2)

Foundation Plan (2)

Abutment Layout (4)

Abutment Details (4)

Pier Layout (2)

Pier Details (2)

Typical Section (2)

Slab Reinforcement (2)

Miscellaneous Details (2)

65% Unchecked Structure Plans (number of sheets in parenthesis) for Chuckwalla Valley Road Bridges

General Plan (4)

Index To Plan (4)

Foundation Plan (4)

Abutment Layout (8)

Abutment Details (8)

Pier Layout and Details (8)

Typical Section (4)

Slab Reinforcement (4)

Miscellaneous Details (4)

5.9 BRIDGE DESIGN INDEPENDENT CHECK

The 65% unchecked bridge plans shall be independently checked by a separate licensed bridge engineer, who has not been involved in the project. A separate set of structural design check calculations including quantity calculations shall be prepared in accordance with CALTRANS bridge design practice. The independent checker shall review the plans for completeness, consistency, correctness of references. The bridge designer shall revise the design and plans to mitigate checker's review comments. The checker shall perform back check to concur that the comments have been adequately addressed. All comments and responses shall be documented in the project files.

Deliverable(s): *Bridge Design and Quantity Independent Check Calculations and Comment / Response Matrix for each group of Railroad Avenue Bridges and Chuckwalla Valley Road Bridges*

5.10 95% STRUCTURE PS&E

Response to all agencies' review comments for the 65% submittal shall be prepared and included in this submittal. ENGINEER shall use Microsoft Word to prepare and edit CALTRANS 2015 Standard Special Provisions (SSP) for structural work at this submittal. The design team shall prepare a list of CALTRANS standard bridge pay items for bridge construction. Design quantity calculations shall be performed using

standard CALTRANS and County forms and cost estimate summary sheets. Item unit prices shall be adjusted using Contract Cost Data Book published by CALTRANS. The plans shall be updated per independent checker's comments.

Deliverable(s): *95% Structure Plans, Edited CALTRANS Standard Special Provisions, Bridge Design Calculations, Quantities and Cost Estimates for each group of Railroad Avenue Bridges and Chuckwalla Valley Road Bridges*

5.11 FINAL 100% DESIGN PS&E AND CONTRACT BID DOCUMENTS

ENGINEER shall incorporate the COUNTY's review comments of the 95% Roadway and Structure PS&E, and compile and submit final bridge and roadway PS&E packages per COUNTY requirements. The final plans are to be plotted on "Arch D" size Mylar. ENGINEER shall prepare the notice inviting bids and technical specifications by utilizing the COUNTY's Boiler Plate documents. In the specifications, each item of work shall include a method of measurement and payment. Specification documents, including technical specifications, shall be provided on compact disc in Microsoft Word format as well as in PDF. The Engineer's estimate shall be provided in Microsoft Excel format as well as in PDF.

The Final PS&E shall include organized Resident Engineer (RE) Pending File, which contains construction related documents and information through the various project development phases for structure and roadway work. The RE Pending File shall include bridge 4-scale deck contour plots, as-built plans, geotechnical reports, and special instructions for the field Resident Engineer, Structure Representatives, and COUNTY Inspectors.

Deliverable(s): *Final Signed Plans, Specifications and Estimates, and RE Pending Files for each group of Railroad Avenue Bridges and Chuckwalla Valley Road Bridges*

5.12 RIGHT-OF-WAY LEGAL DESCRIPTIONS AND PLATS (BY COUNTY)

5.13 RIGHT-OF-WAY APPRAISAL AND ACQUISITION (BY COUNTY)

6.0 PERMITTING

This Scope of Services includes preparation and submittal of permit applications with attachments and consultation with regulatory agencies needed to obtain the required permits for the project. It is proposed that two permit packages will be grouped. Cuckwalla Valley Road Bridges will be in one package and Railroad Avenue Bridges will be in a separate package for each of the 3 Resource Agency Permits

(ACOE, RWQCB, & CDFW). Permits included in this Scope of Services include Section 404 Nationwide Permit, Section 401 Water Quality Certification, and Section 1602 Streambed Alteration Agreement. If additional permits are required (that are not currently anticipated), then an additional scope of work for those permit(s) will be needed. This scope of work does not include the acquisition of local permits. ENGINEER assumes that any required local permits will be obtained by COUNTY.

Conceptual mitigation identified in the NESMI, BA (if required but not expected for the projects) and CEQA Environmental Document will be used to support the permit applications. The environmental permit applications shall be prepared after CEQA and NEPA are approved. ENGINEER shall coordinate as necessary with the agencies to obtain the permits on the COUNTY's behalf. The COUNTY will pay application fees. After the permit applications are submitted, ENGINEER shall continue to maintain communication and coordination with COUNTY and resource agency personnel until the permits/agreements are obtained.

The assumptions for this task include the following:

- The permit applications will be supported by the documentation and technical studies prepared for the NEPA / CEQA documents.
- Permanent impacts to Waters of the United States, including wetlands, will not exceed 0.5 acres at each project location, and the project will qualify for a nationwide permit from the USACE.
- COUNTY will be the Project Applicant for permit applications.
- ENGINEER, under the direction and approval of COUNTY, and acting as COUNTY's regulatory agent will coordinate with the appropriate regulatory agencies during preparation and submittal of regulatory permits.
- Permit fees will be paid directly to the RWQCB and CDFW by COUNTY.
- Permit applications will be presented for review to COUNTY and CALTRANS (if requested) prior to submittal to the appropriate regulatory agency.

ENGINEER shall submit the completed permit packages to the appropriate regulatory agencies, coordinate and facilitate discussions with the regulatory agencies, and track permitting progress.

6.1 ACOE SECTION 404 NATIONWIDE PERMIT

The Project will require a Section 404 Permit for the dredged or fill material into jurisdictional Waters of the United States. The amount of work associated with preparing a notification to the USACE pursuant to Section 404 depends on the magnitude of project impacts on jurisdictional waters and other resources. The projects are anticipated to qualify for a Section 404 Nationwide Permit (NWP). The proposed work is anticipated to comply with the terms and conditions of this NWP and would not be subject to (restricted by) any of the Regional Conditions issued by the District Office of the USACE. The qualification for a NWP requires case-by-case verification from the USACE.

If the USACE determines that an individual permit is needed, an additional scope of work must be prepared. ENGINEER shall prepare one draft version of the permit package for review by COUNTY and incorporate one round of comments.

6.2 RWQCB SECTION 401 WATER QUALITY CERTIFICATION

A water quality certification is required from the RWQCB for any activities that require a federal license or permit (such as a Section 404 Permit) and may result in a discharge to jurisdictional waters. ENGINEER shall prepare and submit the necessary documentation to the RWQCB for its review of the project pursuant to Section 401. Site-specific Best Management Practices (BMPs) approved by COUNTY shall be identified by ENGINEER to address discharges during construction and operation. ENGINEER shall complete the Request for Section 401 Water Quality Certification package. COUNTY will pay the application fees. ENGINEER shall prepare one draft version of the permit package for review by COUNTY and incorporate one round of comments.

6.3 CDFW SECTION 1602 STREAMBED ALTERATION AGREEMENT

The project will require a 1602 Streambed Alteration Agreement from the CDFW for impacts on jurisdictional waters of the State. ENGINEER shall complete the Streambed Alteration Notification in accordance with CDFW standards and shall submit the agreement package to the CDFW for review. COUNTY will pay the application fees. ENGINEER shall prepare one draft version of the permit package for review by COUNTY and incorporate one round of comments.

6.4 CALTRANS ENCROACHMENT PERMIT (STEP-2)

Railroad Avenue Bridges

It is understood that CALTRANS Right-of-Way along the south side of the I-10 Freeway borders the north Right-of-Way of Railroad Avenue. It is anticipated that the proposed improvements will be entirely within the COUNTY Right-of-Way. However limited access onto CALTRANS Right-of-Way may be required during construction. ENGINEER will pursue obtaining an Encroachment Permit to allow limited construction access onto CALTRANS Right-of-Way.

Upon the completion of Right-of-Way mapping and acceptance of the 35% Concept Review, Caltrans Encroachment Permit Division will be contacted and informed of the project. The encroachment permit application will be submitted to CALTRANS after the 95% PS&E Submittal in accordance with Caltrans submittal requirements. The permit application will include drawings and exhibits. At this time it is understood that no special studies will be required to obtain the encroachment permit. Preparing and submitting additional studies required by CALTRANS in pursuit of an encroachment permit is outside of this scope of services. The encroachment permit will be included in the project specifications in order for the contractor to easily obtain the rider permit prior to construction.

PHASE III – CONSTRUCTION BIDDING AND AWARD SUPPORTS

7.1 ATTEND A PRE-BID MEETING

ENGINEER shall remain available to attend a pre-bid meeting to be scheduled in advance of the bid opening date.

7.2 BIDDING INTERPRETATIONS, BID REVIEW AND ANALYSIS

ENGINEER shall answer bidders' questions regarding the contract bid documents, and prepare bid addenda if required. ENGINEER shall perform bid review and analysis, if required.

PHASE IV – DESIGN CONSTRUCTION SUPPORTS

7.3 ATTEND A PRE-CONSTRUCTION MEETING AND SITE MEETINGS

ENGINEER shall attend a pre-construction meeting as directed by COUNTY.ENGINEER shall perform up to six (6) site visits (three for the Railroad Avenue Bridges and three for the Chuckwalla Valley Road Bridges) during the construction as requested by COUNTY.

7.4 ADMINISTRATION, RESPOND CONTRACTOR'S RFI'S AND REVIEW SHOP DRAWINGS / SUBMITTALS

ENGINEER shall review shop drawings and submittals for conformance with the contract plans and

specifications, and make recommendations for acceptance, denial or re-submittal within reasonable time of receipt.

ENGINEER shall provide response to contractor's requests for information (RFI's) about the contract plans and specifications forwarded to the design team by COUNTY within reasonable time of receipt.

7.5 PREPARE CONSTRUCTION CHANGE ORDERS

Upon written authorization from COUNTY, ENGINEER shall provide engineering design services for revisions to construction documents resulting from changed field or unforeseen conditions or other change order work required due to actions of COUNTY. Subsequent change order documentation and processing shall be prepared by COUNTY's Resident Engineer.

7.6 PREPARE AS-BUILT PLANS

Following the completion and acceptance of the project, ENGINEER shall furnish COUNTY with a complete set of revised contract drawings showing as-built conditions. Revisions shall be solely based on as-built redlined information provided by COUNTY. The as-built plans shall be delivered to COUNTY within one month of receipt of redlined plans.

APPENDIX B • ARTICLE BI • INTRODUCTION

The Engineer shall perform the covenants set forth in Appendix A, Scope of Services in accordance with the performance requirements of Article V of this agreement and with the following Schedule of Services. All Covenants set forth in this agreement shall be completed by June 30, 2024, unless extended by supplemental agreement.

A. PHASES

This agreement covers only Phase 1 through Phase IV services and fee:

Phase -I: Preliminary Engineering and Environmental Clearance with an estimated duration of one and a half year (1.5) years.

Phase -II: Plans, Specifications and Estimate (PS&E) with an estimated duration of one (1) year and three (3) months.

Phase -III: Caltrans Authorization for Construction, and Construction Bidding and Award Supports with an estimated duration of ten (10) months.

Phase -IV: Design Construction Supports with an estimated duration of one and a half year (1.5) years.

B. GANTT CHART

PA&ED AND PS&E SCHEDULE

REPLACEMENT OF 6 CHUCKWALLA VALLEY ROAD AND RAILROAD AVENUE BRIDGES

TASK	START	FINISH
Project Start	10/1/2018	
Preliminary Design	10/8/2018	4/30/2019
Environmental Clearance	10/1/2018	3/31/2020
Final Design & Permitting	4/1/2020	6/30/2021
Utility Relocation Coordination	4/1/2020	6/30/2021
Caltrans Authorization for Construction	7/1/2021	10/31/2021
Advertise & Award	11/1/2021	4/30/2022
Start Construction	5/1/2022	

Satisfactory performance and completion of the Services under this Agreement shall be compensated based upon actual costs plus a fixed fee. COUNTY will reimburse ENGINEER for actual costs (including labor costs, overhead, and other direct costs) incurred by ENGINEER in performance of the work, exclusive of any fixed fee. A prorate portion of ENGINEER's fixed fee shall be included in the progress payments. Actual costs shall not exceed the estimated costs without prior written agreement between COUNTY and ENGINEER.

APPENDIX C • ARTICLE CI • ELEMENTS OF COMPENSATION

Compensation for the Services will be comprised of the following elements: DIRECT LABOR COSTS, FEES, OTHER DIRECT COSTS and OUTSIDE SERVICES.

A. DIRECT LABOR COSTS

Direct Labor costs shall be paid in an amount equal to the Direct Salary Costs plus the product of the Direct Salary Costs and the Multiplier which are defined as follows:

1. Direct Salary Costs

   Direct Salary Costs are the base salaries and wages actually paid to the ENGINEER's personnel directly engaged in performance of the Services under the Agreement. Salary rates for specific employees shall be provided on the Fee Proposal Worksheets included in ARTICLE CV • COST PROPOSAL. All Salary rates shall be in effect for three years following the effective date of the Agreement. Thereafter, ENGINEER may request adjustments to individual rates on an annual basis. ENGINEER shall notify COUNTY in writing requesting a change in the rates included herein. All adjustments to rates shall be subject to approval by the County Director of Transportation, or his designee.

2. Multiplier

   The Multiplier to be applied to the Direct Salary Costs to determine the Direct Labor Costs is the sum of the following components:

   PAYROLL ADDITIVES

   The decimal ratio of Payroll Additives to Direct Salary Costs. Payroll Additives include all employee benefits, allowances for vacation, sick leave, and holidays, and company portion of employee insurance and social and retirement benefits, all federal and state payroll taxes, premiums for insurance which are measured by payroll costs, and other contributions and benefits imposed by applicable laws and regulations.

OVERHEAD COSTS

The decimal ratio of allowable Overhead Costs to ENGINEER firm's total direct salary costs. Allowable Overhead Costs include general, administrative and overhead costs of maintaining and operating established offices, and consistent with established firm policies, and as defined in the Federal Acquisitions Regulations, Part 31.2.

TOTAL MULTIPLIER 164.25%

(Sum of Payroll Additives and Overhead Costs)

B. FIXED FEE

1. The Total Fixed Fee payable to the ENGINEER is $127,451.23 (PRIME CONSULTANT Profit)
2. A pro-rata share of the Fixed Fee shall be applied to the total Direct Labor Costs expended for services each month, and shall be included on each monthly invoice.

C. OTHER DIRECT EXPENSES

Additional Direct Costs, directly identifiable to the performance of the services of this Agreement, shall be reimbursed at the rates below, or at actual invoiced cost.

Rates for identified Additional Direct Costs are as follows:

Item	Rate	Unit
Travel-Mileage	$0.535	6,600
Parking	$180.00	(Actual Cost)
Production	$7,632.00	(Actual Cost of Outside Services)
Shipping	$699.30	(Actual Cost of Outside Services)
Conference Calls/ Design Survey	$21,008.00	(Actual Cost of Outside Services)

Travel by air and travel in excess of 100 miles from ENGINEER's office nearest to COUNTY's office must have COUNTY's prior written approval to be reimbursed under this Agreement. Reimbursement for transportation and subsistence costs shall not exceed the rates specified in the approved Cost Proposal.

D. OUTSIDE SERVICES

Outside services shall be paid in accordance with the cost proposals submitted by each Subconsultant. Billings for Outside Services shall be submitted along with the Prime Consultant's monthly Progress Report/Billing submittals and shall be in conformance with the COUNTY Engineering Services Invoicing

Procedures.

ARTICLE CII • DIRECT SALARY RATES

Direct Salary Rates, which are the range of hourly rates to be used in determining Direct Salary Costs, are given below and are subject to the following:

A. PREMIUM OVERTIME

Direct Salary Rates shall be applicable to both straight time and overtime work, unless payment of a premium for overtime work is required by law, regulation or craft agreement, or is otherwise specified in this Agreement. In such event, the premium portion of Direct Salary Costs will not be subject to the Multiplier.

B. SALARY RATES

All salary rates for the ENGINEER and subconsultants shall be within the ranges set below and shall be in effect for the duration of this Agreement. Thereafter, ENGINEER may request adjustments to individual rates on an annual basis. ENGINEER shall notify COUNTY in writing requesting a change in the rates included herein. All adjustments to rates shall be subject to approval by the County Director of Transportation, or his designee.

POSITION OR CLASSIFICATION HOURLY RATE RANGES

Company: **CNS Engineer, Inc.**

Position Title/Classification	Hourly Rate Range
Senior Project Manager	$80.00 - $96.00
Project Manager/Principal Engineer	$70.00 - $85.00
Senior Bridge Engineer	$55.00 - $69.00
Senior Roadway Engineer	$55.00 - $69.00
Project Engineer	$44.00 - $58.00
Design Engineer III	$42.00 - $49.00
Design Engineer II	$38.00 - $42.00
Design Engineer I	$34.00 - $38.00
Assistant Design Engineer	$28.00 - $34.00
Engineering Interim	$16.00 - $23.00
Senior CADD Technician	$35.00 - $45.00

CADD Technician	$25.00 - $35.00
Project Controller	$49.00 - $65.00
Project Assistant	$23.00 - $35.00

Company: **WSP | Parsons Brinckerhoff**

Position Title/Classification	Hourly Rate Range
Project Manager/Environmental Lead	$80.93 - 91.56
Senior Planner	$55.31 - $93.31
Project Planner	$48.00 - $54.32
Lead Planner	$55.71 - $81.63
Senior Engineer	$66.58 - $75.34
Archaeologist	$38.18 - $64.15
Project Accountant	$44.03 - $49.82
Environmental Analyst / Planner	$36.06 - $45.79
Senior Technical Specialist	$44.36 - $50.19

Company: **Applied Earthworks**

Position Title/Classificatio	Hourly Rate Range
Principal-In-Charge	$67.31 - $90.00
Principal Archaeologist	$37.17 - $51.46
Senior Architectural Historian	$45.00 - $58.00
Field Supervisor	$27.54 - $38.95
Field Technician	$21.74 - $30.38
GIS Analyst	$35.00 - $45.00
GIS Technician	$22.67 - $35.52
Administrative Assistant	$17.00 - $34.25
Senior Technical Specialist	$48.08 - $58.90

Company: **ICF Jones & Stokes**

Position Title/Classification	Hourly Rate Range
Project Director	$ 54.55 - $ 110.00
Senior Technical Analyst	$ 51.59 - $ 70.32
Managing Consultant	$ 44.78 - $ 75.01
Senior Consultant I	$ 27.24 - $ 52.89
Senior Consultant II	$ 35.35 - $ 56.95
Senior Consultant III	$ 43.05 - $ 61.78
Associate Consultant I	$ 24.00 - $ 45.00
Associate Consultant II	$ 24.84 - $ 48.00
Associate Consultant III	$ 26.93 - $ 49.35
Assistant Consultant	$ 23.63 - $ 43.27
Administrative Technician	$ 17.13 - $ 36.05
Technician Trainee	$ 14.50 - $ 35.00

Company: **Aguilar Consulting, Inc.**

Position Title/Classification	Hourly Rate Range
Project Manager	$70.00 - $75.00
Project Engineer	$42.00 - $55.00
Design Engineer	$26.00 - $34.00
CADD Designer	$22.00 - $30.00
Project Coordinator	$14.00 - $20.00

Company: **Group Delta Consultants**

Position Title/Classification	Hourly Rate Range
Principal Geotechnical Engineer	$63.76 - $119.87
Principal Environmental Engineer	$63.76 - $119.87
Associate (Environmental)	$50.87 – $75.77
Associate	$50.87 – $75.77
Senior Project Manager	$44.50 – $65.00
Project Manager	$29.72 - $41.59
Staff Engineer	$20.00 - $40.86
Technician - Geotechnical Laboratory	$15.45 - $41.20
Technician – Hazardous Materials	$15.00 – $30.77
CADD	$29.71 – $36.05
Administrator	$23.00 – $31.93

Company: **CASC Engineering and Consulting**

Position Title/Classification	Hourly Rate Range
Engineering Director	$65.00 - $80.00
Project Engineer	$35.00 - $50.00
Senior Environmental Analyst	$35.00 - $50.00
SW Technical Support II	$20.00 - $35.00