FORM APPROVED COUNTY COUNSEL
BY: MARSHA L. VICTOR DATE 5/24/10

SUBMITTAL TO THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA 110

FROM: TLMA - Transportation Department

SUBMITTAL DATE:
June 10, 2010

SUBJECT: Engineering and Environmental Services Agreement with TRC Engineering Inc. for the Butterfield Stage Road Extension Project.

RECOMMENDED MOTION: That the Board of Supervisors:

1. Approve the attached engineering and environmental services agreement between The County of Riverside and TRC Engineering Inc., and;

2. Authorize the Chairman of the Board to execute the same.

BACKGROUND: Butterfield Stage Road extension will provide the missing link between Auld Road and Murrieta Hot Springs Road. South of Murrieta Hot Springs Road, Butterfield Stage Road is being constructed as a four (4)-lane road through Roripaugh Ranch in the City of Temecula.

Juan C. Perez
Director of Transportation

(Continued On Attached Page)

FINANCIAL DATA				
	Current F.Y. Total Cost:	$ 1,079,834	In Current Year Budget:	Yes
	Current F.Y. Net County Cost:	$ 0	Budget Adjustment:	No
	Annual Net County Cost:	$ 0	For Fiscal Year:	2009/10

SOURCE OF FUNDS: TUMF (100%)
Project No. B5-0675

Positions To Be Deleted Per A-30 ☐

Requires 4/5 Vote ☐

C.E.O. RECOMMENDATION:

APPROVE
BY: Tina Grande

County Executive Office Signature

Departmental Concurrence

Dep't Recomm.: ☐ Consent ☒ Policy

Per Exec. Ofc.: ☐ Consent ☒ Policy

Prev. Agn. Ref. | **District:** 3 | **Agenda Number:** 3.34

ATTACHMENTS FILED
WITH THE CLERK OF THE BOARD

Form 11 (Rev 07/2007)

North of Auld Road, Butterfield Stage Road connects to Washington Street. Butterfield State Road is one of the key north-south regional corridors intended to serve existing residents and development in French Valley and Temecula, relieve some traffic from the SR-79 corridor, and also provide enhanced access to the Wine Country.

TRC Engineering Inc. will provide preliminary engineering and environmental services under the terms of the agreement. TRC Engineering Inc. is on the Transportation Department's pre-qualified list of design firms. The list was established through a request for proposals, which was advertised in the Press Enterprise. Ten firms submitted qualifications. Representatives from Caltrans and the Riverside County Transportation Department evaluated the written proposals and interviewed the seven top ranked firms.

TRC Engineering Inc. was selected as the firm to provide the needed services for this project. A not to exceed budget of $1,079,834 (including contingency) was negotiated between TRC Engineering Inc. and the Transportation Department. The services to be provided include preliminary engineering, environmental studies and preparation of the environmental document, and environmental permitting. Subsequent work would include final design, right-of-way acquisitions, and construction, none of which have sufficient funding indentified for them at this time.

Contract No. 09-12-004
Riverside Co. Transportation

ENGINEERING SERVICES AGREEMENT

for

Preliminary Engineering and Environmental Services for Butterfield Stage Road Extension Project

between

COUNTY OF RIVERSIDE • TRANSPORTATION DEPARTMENT

and

TRC Engineering Inc.

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ENGINEERING SERVICES AGREEMENT

COUNTY OF RIVERSIDE, hereinafter referred to as "COUNTY", and TRC Engineering Inc., hereinafter referred to as "ENGINEER", located at the following addressees:

County of Riverside • Transportation Department	TRC Engineering Inc.
4080 Lemon Street, 8th Floor	21 Technology Drive
Riverside, CA 92502	Irvine, CA 92618

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:

Ross Lew

The COUNTY PROJECT MANAGER for COUNTY shall be:

Cindi Wachi

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".

RCTC, WRCOG, City of Temecula

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 and AGENCIES.

ARTICLE IV • CONDITIONS

A. Notifications

All notices hereunder and communications regarding interpretation of the terms of this contract 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. Assignment

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

C. 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 agreement, 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.

D. 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. 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.

E. COUNTY Directives

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

F. Liability

1. ENGINEER has total responsibility for the accuracy and completeness of all data, plans, specifications and estimates prepared for this PROJECT and shall check all such material accordingly. The data and plans will be reviewed by COUNTY. The responsibility for accuracy and completeness of such items remains solely that of ENGINEER.
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.
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.
6. ENGINEER, and the agents and employees of ENGINEER, in the performance of this agreement, shall act in an independent capacity and not as officers, employees or agents of COUNTY.

G. Indemnification

1. The ENGINEER agrees to and shall indemnify 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 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 to the extent caused by any alleged or actual negligence, recklessness, willful misconduct, error or omission of ENGINEER, its directors, officers, partners, employees, agents or representatives or any person or organization for whom ENGINEER is responsible, arising out of or from the performance of services under this Agreement.

2. As respects each and every indemnification herein 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 and settlements or awards against the Indemnitiees.
3. With respect to any action or claim subject to indemnification herein by ENGINEER, ENGINEER shall, at their sole cost, have the right to use counsel of their own choice and shall have the right to adjust, settle, or compromise any such action or claim without the prior consent of COUNTY; provided, however, that any such adjustment, settlement or compromise in no manner whatsoever limits or circumscribes ENGINEER'S indemnification to Indemnitees as set forth herein.
4. ENGINEER'S obligation hereunder shall be satisfied when ENGINEER has provided to Indemnitees the appropriate form of dismissal relieving Indemnitees from any liability for the action or claim involved.
5. The specified insurance limits required in this Agreement shall in no way limit or circumscribe ENGINEER'S obligations to indemnify and hold harmless Indemnitees from third party claims.
6. In the event there is conflict between this clause and California Civil Code Section 2782, this clause shall be interpreted to comply with Civil Code 2782. Such interpretation shall not relieve the ENGINEER from indemnifying the COUNTY to the fullest extent allowed by law.

H. 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 the 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.

I. 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 the 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.

J. 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. A supplemental Agreement providing for such compensation for Extra Work shall be issued by COUNTY to ENGINEER. Such Supplemental Agreement shall be executed by ENGINEER and be approved by COUNTY.

K. 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.

L. 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 Agreement. All such documents and materials shall be property of COUNTY.
3. In the event that the 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.

M. Termination for Lack of Performance

COUNTY may terminate this agreement 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.

N. 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 coverages during the term of this Agreement, or for a term otherwise specified herein.

1. Workers' Compensation:

   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. Policy shall be endorsed to waive subrogation in favor of the County of Riverside; and to provide a Borrowed Servant/Alternate Employer Endorsement.

2. Commercial General Liability:

   Commercial General Liability insurance coverage, including but not limited to, premises liability, contractual liability, completed operations, personal and advertising injury covering claims which may arise from or out of ENGINEER's performance of its obligations hereunder. Policy shall name, by endorsement all Agencies, Special Districts and Departments of the County of Riverside, their respective Directors, Officers, Board of Supervisors, employees, agents, elected and appointed officials as Additional Insureds. 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:

   ENGINEER shall maintain Liability Insurance for all owned, non-owned or hired vehicles in an amount not less than $1,000,000 per occurrence combined single limit. If ENGINEER's vehicles or mobile equipment are not to be used in the performance of the obligations under this Agreement, ENGINEER shall maintain coverage for non-owned or hired vehicles in an amount not less than $1,000,000 per occurrence combined single limit. Such non-owned or hired vehicle coverage may be included as a part of the Commercial General Liability policy. 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 by

endorsement, all Agencies, Special Districts and Departments of the County of Riverside, their respective Directors, Officers, Board of Supervisors, employees, agents, elected and appointed officials as Additional Insureds.

4. Professional Liability:

ENGINEER shall maintain Professional Liability Insurance providing coverage for performance of work included within this Agreement, with a limit of liability of not less than $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. Upon termination of this Agreement or the expiration or cancellation of the claims made insurance policy ENGINEER shall purchase at his sole expense either 1) an Extended Reporting Endorsement (also known as Tail Coverage); or, 2) Prior Dates Coverage from a 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 for a period of five (5) years beyond the termination of this Agreement.

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 an 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's insurance carrier(s) must declare its self-insured retentions. If such self-insured retentions exceed $500,000 per occurrence such retentions shall have the prior written consent of the County Risk Manager before the commencement of operations under this Agreement. Upon notification of self insured retentions which are deemed unacceptable to the COUNTY, at the election of the County's Risk Manager, ENGINEER's carriers shall either; 1) reduce or eliminate such self-insured retentions as respect to this Agreement with the COUNTY, or 2) procure a bond which guarantees payment of losses and related investigations, claims administration, defense costs and expenses.

c. The ENGINEER shall cause their insurance carrier(s) to furnish the COUNTY with 1) a properly executed original Certificate(s) of Insurance and certified original copies of Endorsements effecting coverage as required herein; or, 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) shall provide no less than thirty (30) days written notice or ten (10) days in the event of cancellation for nonpayment of premium be given to the COUNTY prior to any cancellation of such insurance. In the event of a material modification or cancellation of coverage, this Agreement shall terminate forthwith, unless the COUNTY 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 coverages and the insurance required herein is in full force and effect. Individual(s) authorized by the insurance carrier to do so on its behalf shall sign the original endorsements for each policy and the Certificate of Insurance. *ENGINEER shall not commence operations until the COUNTY has been furnished original Certificate (s) of Insurance and certified original copies of endorsements or policies of insurance including all endorsements and any and all other attachments as required in this Section.*

d. It is understood and agreed by the parties hereto and the ENGINEER's insurance company(s), that the Certificate(s) of Insurance and policies shall so covenant and shall be construed as primary insurance, and the COUNTY'S insurance and/or deductibles and/or self-insured retentions 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 performance of work the Risk Manager of the County of Riverside reserves the right to adjust the types of insurance required under this Agreement and the monetary limits of liability for the insurance coverages required herein, 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 subcontractors working under this Agreement.

O. Conflict of Interest

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.

P. 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 Agreement, including, without limitation, workers' compensation laws and licensing and regulations.

Q. Nondiscrimination

1. During the performance of this agreement, ENGINEER and its Subcontractors shall not unlawfully discriminate 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.
2. 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.

3. 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.
4. ENGINEER shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under this contract.
5. 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.

R. 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 effect the method of prosecution of the work by ENGINEER and subject it under certain conditions to penalties and forfeitures. Execution of the Agreement 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.

S. 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.

T. 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 three years from the date of final payment under the contract.
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. (Government Code Section 105320)

U. 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.

V. 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, COUNTY or the AGENCIES actions on the same, except to COUNTY or AGENCIES staff, ENGINEER's own personnel involved in the performance of this contract, or at public hearings, or in response 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.

W. Funding Requirements

1. It is mutually understood between the parties that this contract may have been written before ascertaining the availability of congressional or legislative appropriation of funds, for the mutual benefit of both parties in order to avoid program and fiscal delays that would occur if the agreement were executed after that determination was made.
2. This agreement is valid and enforceable only if sufficient funds are made available to COUNTY for the purpose of this PROJECT. In addition, this agreement is subjected 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 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 direct revisions, prior to final submission.
5. When COUNTY determines that ENGINEER has satisfactorily completed the PROJECT services, COUNTY shall 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 agreement.

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 judgement, 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 agreement 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 $1,079,834.24 and reimbursement is to be made at actual cost plus fixed fee for the following contractors:

• TRC Engineering Inc.	$661,705.83
• Earth Mechanics, Inc.	$10,182.71
• Intueor	$83,571.90
• Wilson & company	$108,783.80
• Environmental Subconsultants	$65,590.00

- Contingency (approx 15%) $150,000.00

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 $500 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 $500, 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 $500 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 allowability of individual items of cost.
7. ENGINEER also agrees to comply with Federal procedures in accordance with Office of Management and Budget Circular A-102, Uniform Administrative Requirements for Grants-in-Aid to State and Local Governments.
8. 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. 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.

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 agreement.

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: 5/24/10

JUAN C. PEREZ

Director of Transportation

APPROVED AS TO FORM:

_____ Dated: 5/26/10
Marsha L. Victor

PAMELA J. WALLS

County Counsel

APPROVAL BY THE BOARD OF SUPERVISORS

_____ Dated: _____

PRINTED NAME

Chairman, Riverside County Board of Supervisors

ATTEST:

_____ Dated: _____

KECIA HARPER-IHEM

Clerk of the Board (SEAL)

ENGINEER Approvals

ENGINEER:

_____ Dated: 3/11/10

Ayman Salama
PRINTED NAME

Vice President
TITLE

ENGINEER:

_____ Dated: 3/12/10

MICHAEL C. SALMON
PRINTED NAME

PRESIDENT
TITLE

APPENDIX A

Scope of Work
For
Engineering and Environmental Services for the
Butterfield Stage Road Extension Project

A. PROJECT DESCRIPTION

Butterfield Stage Road extension will provide the missing link between Auld Road and Murrieta Hot Springs Road. North of Auld Road, Butterfield Stage Road connects to Washington Street. South of Murrieta Hot Springs Road, Butterfield Stage Road is being developed as a four (4)-lane road through Roripaugh Ranch in the City of Temecula.

Washington Street together with Anza Road serves as the Eastern Bypass. Ultimately Butterfield Stage Road will connect to the Eastern Bypass via Auld Road.

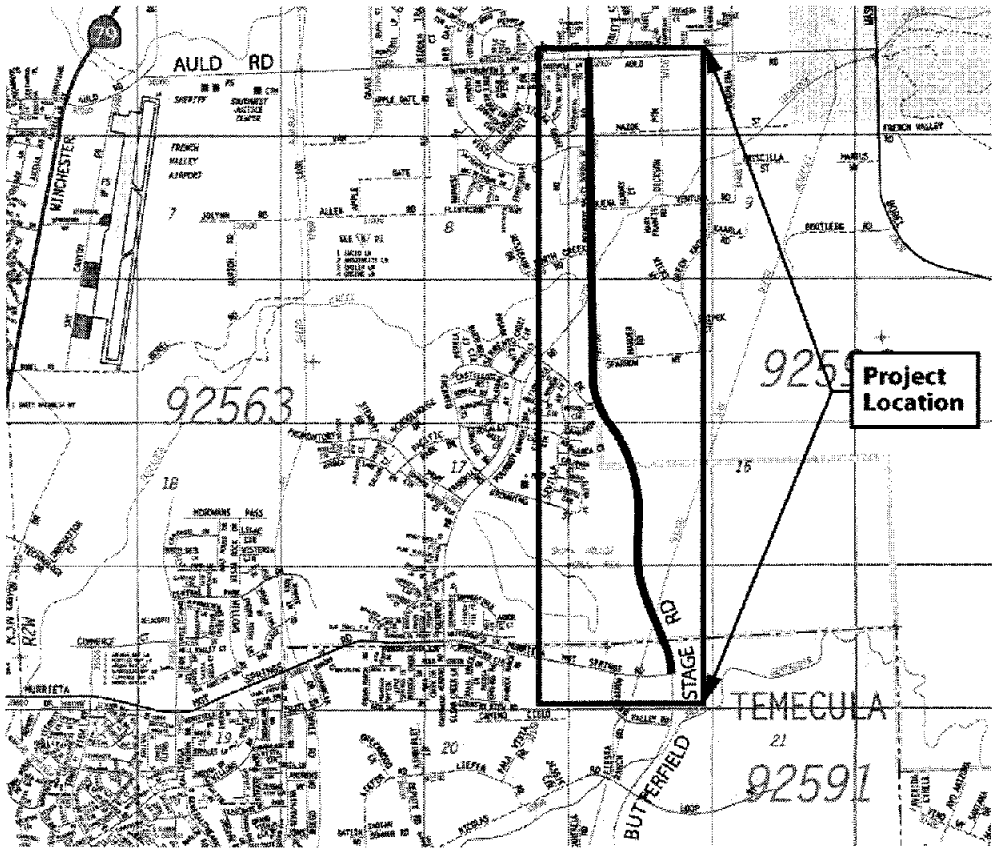
Key Project Issues

Key Issue	Challenge faced	Potential solutions
1. Proposed Alignment	Proposed alignment is in an undeveloped land and needs coordination with on-going and future planned development.	Proposed alignment will be fine-tuned in close coordination with the COUNTY and developers to meet existing and future development needs. ENGINEER will study and recommend a street realignment to meet arterial standards.
2. Right-of-Way	Additional right-of-way and slope easements may be needed for a four-lane arterial.	ENGINEER will identify right-of-way impacts based on the adapted alignment.
3. Utility Corridor	Proposed utilities have to be accommodated within the right-of-way.	All utility conflicts will be identified early in the project development process and coordinated with utility companies in order to avoid schedule and cost impacts.

Key Issue	Challenge faced	Potential solutions
4. Environmental Impacts	Sensitive biological resources located within the project limits.	Complete early biological survey and identification of resources. Coordinate potential realignment.
	Land Use Compatibility issues, such as traffic, noise, air quality.	Schedule construction activities to minimize impacts to residents.
	Delays due to Regulatory Permitting	Assure notification/coordination with affected parties. Advise COUNTY promptly upon biological survey results. Propose additional services, if necessary, for focused species surveys and jurisdictional wetland delineation. Expedite regulatory permits within final design preparation.

B. LOCATION

The proposed project is located in unincorporated areas of western Riverside County. The Butterfield Stage Road extension will run north-south and parallel SR-79 approximately two miles to the east and will start at Murrieta Hot Springs Road at the City of Temecula limit and terminate at the Eastern Bypass via Auld Road to the north.



C. COORDINATION & MEETINGS

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:

- County of Riverside
- California Department of Fish and Game
- U.S. Army Corps of Engineers
- US Fish and Wildlife Service
- Regional Water Quality Control Board
- California Office of Historic Preservation
- Regional Conservation Authority
- Utility Companies
- City of Temecula
- Subconsultants

All meetings with other outside agencies will be scheduled by the ENGINEER Project Manager with approval by the COUNTY. The ENGINEER team will coordinate and attend meetings with the COUNTY's Project Manager and other required representatives from affected agencies at least once per month, or as necessary. The Project Manager, along with any necessary Task Leaders and subconsultants, will attend as appropriate. Meeting agendas will be prepared for each Project Development Team (PDT) meeting. Minutes will be prepared by the ENGINEER team at each meeting and then distributed to the COUNTY's Project Manager and other attendees within five (5) working days following the meeting. Outstanding issues will be recorded in the minutes of each meeting, together with action items. Lead persons for each action will be identified and such items will be tracked until resolution. A list of all attendees with their name, phone number and e-mail address will be recorded at each meeting and made part of the minutes.

D. PHASES

The services performed by ENGINEER will be accomplished in one Phase split into the following to functional areas:

Phase IA – Preliminary Engineering

Phase IB – Environmental Document

Phases IA and IB will proceed upon written notice to proceed.

E. STANDARDS

All Documents shall be prepared per the COUNTY's Standard Plans and Specifications (Caltrans Latest Standards where applicable) using English standards and dimensions. All CADD work will be performed in Microstation and in conformance with the latest version of the Caltrans CADD Users Manual. Other standards include, but are not limited to:

- Invoice Submittals and Progress Reports – Invoices and Progress Reports will be prepared monthly in the COUNTY's format.
- Project Filing System – ENGINEER will maintain files based on the Caltrans Uniform File System.
- Survey-Riverside COUNTY Survey Requirements

F. KEY PERSONNEL

ENGINEER has represented to the COUNTY that certain key personnel will perform the services and 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:

- Ross Lew, PE – Project Manager
- David Lew, PE – Roadway Lead
- Elisha Back – Environmental Lead

G. BUDGETING

The ENGINEER shall prepare budgets for each task and milestone for the PROJECT. Such budgets shall be entered in to the ENGINEER's Management Information System along with actual costs incurred, and used as a basis for cost monitoring and control.

H. COST ACCOUNTING

The ENGINEER shall prepare monthly reports of expenditures for the PROJECT by task and milestone. Expenditures shall include direct labor costs, other direct costs and subconsultant costs. These reports shall be included as supporting data for invoices presented to the COUNTY every month.

I. PROGRESS REPORTING

Progress reports shall be prepared in accordance with COUNTY guidelines. Reports will be required monthly and shall be accompanied by an invoice.

J. SCHEDULING

A detailed project schedule shall be prepared using Microsoft Project. Within one (1) month after receiving the Notice to Proceed (NTP), the schedule shall be submitted to the COUNTY for review and comments. The schedule shall include all tasks, subtasks, milestones, project activities, deliverables, and reflect review times necessary by all of the reviewing agencies involved. Phases shall include, but not be limited to, items for planning, design, advertising and construction. Project schedule adjustments will be noted on an as-needed basis throughout the duration of the project, and schedule updates shall be provided at each monthly PDT meeting.

K. QUALITY CONTROL PLAN

A Quality Control Plan shall be established for this PROJECT in accordance with the provisions of Article IV, Section H of the Engineering Services Agreement. The Quality Control Plan shall be provided to the COUNTY within four (4) weeks after NTP.

SERVICES TO BE PROVIDED

The scope of work for this project will performed in one Phase: Preliminary Engineering and Environmental Document for the project.

PHASE I: PRELIMINARY ENGINEERING AND ENVIRONMENTAL DOCUMENT

Task 1 Research and Data Gathering

1.1 Obtain and review existing plans, photos, bridge reports, study reports, assessor maps and any other pertinent data from any sources including but not limited to the agencies involved, for the entire project area. Data owned by COUNTY will be provided at no cost to the ENGINEER. COUNTY will establish center line control and stationing.

1.2 Assemble all existing property descriptions and ownerships involved along the proposed alignment of the roadway within the proposed Right-of-Way.

Note: A field review shall be conducted by the Consultant prior to initiating the design process, in order to confirm the accuracy of any existing drawings, streets and utility location data obtained.

Task 2 Right of Entries

ENGINEER will identify right of entries required to perform design surveys, environmental studies and other project needs. COUNTY will process the request and obtain required right of entries. ENGINEER will produce spreadsheet and map using COUNTY GIS data of all property owners right of entry is needed from.

Map shall show aerial, parcel lines, alignment corridors, assessor's parcel numbers and owner name. Spreadsheet and map will be used for right of entry process and will be updated as needed.

Task 3 GIS Data Acquisition

ENGINEER will acquire GIS data from COUNTY GIS. This data will include current assessor's database to identify property owner's names and addresses.

Task 4 Design Surveys

COUNTY will perform design survey and prepare Aerial Map. Layout control targets to be used as the basis for the aerial map which will be prepared at Scale 1" = 40' with 1-foot contour intervals. The map will be a strip ± 500' wide centered along the centerline and extending from Auld Road to Murrieta Hot Springs Road and extending to a minimum of 200' beyond the existing and future curb returns at all intersecting streets.

CONTROL

Control must be based on the California Coordinate System 83 (CCS 83). Use of Continuously Operated Reference Stations (CORS) is recommended provided the 2000.35 epoch is available for the station used. The COUNTY Surveyor shall approve any deviation.

For all projects, use a control point by static observations in the beginning, middle and end of each project. Each observation with no less than 45 minutes observations each. No less than 8 minutes of static observation for traverse points, found monuments or any control used for alignment purposes.

Traverse points will be placed at no more than 1,000 foot intervals. Traverse points will be placed where they can be used for future construction. The traverse points shall be placed in a position unlikely to be disturbed by future construction or any other activity in the area. Unless traverse points are set in concrete or asphalt, they shall be set down 0.5 feet in areas likely to be graded or driven over. The position will be one of the following: Standard "C" Monument (1/2" rebar w/ plastic cap), Standard "D" Monument (3/4" IDIP), or Standard "E" Monument (steel pin) per Riverside COUNTY Road Improvement Standards and Specifications, Ordinance 461. The description will also include: ground position, distance from existing road intersections, distance from road improvements and distance from a visible utility; such as a power pole or riser.

Vertical Control must be based on the National Geodetic Vertical Datum of 1929.

A differential level loop will be used to determine elevation of all GPS static control points.

Elevations must be derived using a Riverside COUNTY Bench Mark, any deviation will be authorized by the COUNTY Surveyor.

Bench Marks will be placed with no more than 1,000 feet spacing between each position. If possible, the position will be placed where it could be used for proposed construction. The position can be interchangeable with traverse point noted in Paragraph C above, and similar specification.

ALIGNMENT

Locate those positions necessary for establishing roadway and intersecting roadways alignment. Use the actual survey monument for alignment purposes, not the reference or surface position. If the monument is below the ground surface, references will be set on the surface. The ground position, record or non-record information, reference(s) and what the position is accepted as, will all be stated in the description.

Stationing will increase from a southerly to northerly or westerly to easterly direction. If the project is a continuation of a previously constructed or stationed project then continue with that stationing. Begin with 10+00 if no other is to be continued. Set nail and tin on centerline station, i.e. 10+00, 11+00, 12+00, etc. At the +50 location, a paint mark is acceptable. If a metric project, the stationing is based on 100 meters for one full station i.e., beginning of project is 10+00.000 then a distance of 1,202.250 meters to a BC, the station affixed to the BC would read 22+02.250.

NOTES

Original field notes must be submitted and show information including but not limited to; project name, township, range, and section, work order number, date of survey, pages numbered in sequence, survey crew, etc.

Field notes must be submitted for alignment and show information such as; monuments found and accepted, record references, record distances, stationing, etc.

Field notes must be submitted for Horizontal Control Network.

Field notes must be submitted for the Level Run.

The observation log sheets for all GPS sessions along with all accompanying files must be submitted; RAW files, DAT files, TXT files, etc. The Least Squares Adjustment summary and processing along with .SSF and SSK files must be submitted.

All other calculations and adjustments necessary for the use on the project will be submitted.

Task 5 Environmental Documentation

Preparation of Document and Map Templates

Prior to the initiation of the work effort, the CONSULTANT will submit to the COUNTY for review and

approval, the proposed base map layouts and outline for the EIR and the various technical studies.

Initial Study/Notice of Preparation/Scoping Meeting

ENGINEER will be responsible for the Environmental Documentation, preparing a Notice of Preparation (NOP) and Initial Study. It is the intent of ENGINEER to prepare the Initial Study to support a "focused Environmental Impact Report (EIR)".

Assuming an EIR would be necessary; issues will be eliminated, where feasible, from further analysis in the initial study. The Initial Study will be appended to the EIR to substantiate the rationale for not discussing those issues found not potentially significant. A Screencheck draft will be provided to the COUNTY for review. Revisions will be made and 50 copies of the Initial Study will be printed. Copies will be transmitted to the COUNTY for their distribution to the State Clearinghouse and to the appropriate stakeholders.

Once the NOP has been distributed, a scoping meeting will be conducted during the 30-day review period. The scoping meeting will be in a workshop format to allow a more interactive discussion with the community.

Review NOP Comments/Refine Scope of Environmental Document

Upon receipt of any comment letters and review of the issues identified during the Initial Study/ scoping meeting, ENGINEER will meet with the COUNTY to refine the scope of the EIR. This could include issues to be discussed, focus of the analysis, and alternatives. The scope of the CEQA document will be refined to address comments and concerns received.

Prepare Screencheck CEQA Document

The Screencheck EIR content and format will be consistent with CEQA statues and guidelines. The goal is to prepare a focused EIR.

The EIR will analyze alternatives that are identified in the planning phase. To contain cost, ENGINEER will first screen out alternatives that do not meet the purpose and need for the project objectives. If an alternative is not feasible or practicable, it does not need to be addressed. Typically, during the alternatives analysis phase, ENGINEER work to substantiate the rationale for eliminating alternatives from further consideration. This results in reducing the cost of the EIR preparation. At a minimum the No Project Alternative, Road at Grade Alternative (filling the canyon), and a Bridge over the Canyon Alternative will be discussed in the EIR. Based on the results of the scoping process additional alternatives may be discussed. ENGINEER suggests the preparation of an "alternatives evaluated and rejected" technical paper. As the project design, scoping process and engineering feasibility is conducted, ENGINEER will document the process as it progresses. The

first step will be the identification of the purpose and need/ project objectives. Preliminary plans, concept, and bubble diagrams will be maximally used to support the analysis. The goal of this task is to provide an adequate number of alternatives to meet the regulatory finding of "reasonable range of alternatives" while being cost conscious. This technical paper will be used for both the CEQA process and the Section 404 Permit process.

Land Use and Planning

It is assumed that this issue will be eliminated from further analysis in the Initial Study. If substantial changes to the land uses are proposed, resulting in land use inconsistencies, this issue would need to be addressed at the plan-to-plan and plan-to-ground perspectives. This could include agricultural land losses, etc.

Landform Alteration/Aesthetics

The Landform alteration will be excluded based upon the grading plan. The post project aesthetics will be addressed using a combination of text and computer generated simulations. Three simulations will be prepared. The location of the simulations will be discussed with staff to determine the most appropriate view shed.

Transportation, Circulation and Access

ENGINEER will receive available turning movement and segment counts that are less than one year old from available sources. If not available, ENGINEER will conduct counts at the required study area elements to prepare an analysis of existing traffic conditions (level of service) along Butterfield Stage Road between Auld Road and Washington Street and along Butterfield between south of Murrieta Hot Springs Road through Roripaugh Ranch. Based upon counts collected by ENGINEER during the data collection effort described above, ENGINEER will include an estimate of vehicles and percentages for all intersections and segments.

ENGINEER will also conduct a field reconnaissance survey of the segments along Butterfield Stage Road and all connecting roads and at each major intersection to obtain current geometrics and other related information such as speeds.

Intersection turning movement traffic counts, by vehicle classification, will be conducted on weekdays at the following intersections:

- Auld Road/Washington Street
- Auld Road/Magdalena Road
- Auld Road/Pourroy Road(E)

- Auld Road/Pourroy Road(W)
- Auld Road/Red Vista Street
- High Vista Drive/Pourroy Road,
- Beeler Road/Pourroy Road
- Murrieta Hot Springs Road/ Pourroy Road
- Murrieta Hot Springs Road/Butterfield Stage Road
- Nicolas Road/Butterfield Stage Road
- Pourroy Road/Butterfield Stage Road (future)

Street segment 24 hour ADT counts will be collected at the following street segment locations:

- Pourroy Road north of Murrieta Hot Springs Road
- Pourroy Road west of Beeler Road
- High Vista Drive west of Pourroy Road
- Pourroy Road south of High Vista Drive
- Pourroy Road south of Auld Road
- Auld Road west of Pourroy Road South
- Auld Road east of Pourroy Road North
- Auld Road west of Washington Street
- Auld Road west of Magdalena Road
- Pourroy Road north of Auld Road
- Butterfield Stage Road south of Murrieta Hot Springs Road
- Butterfield Stage Road south of Nicolas Road

Signal warrants for each unsignalized intersection studied will be conducted using the State Traffic Manual, Figure 9-4 methodology. The signal warrant analysis will utilize the peak hour signal warrants, 4-hour warrants and ADT warrants.

ENGINEER will calculate AM and PM peak hour level-of-service (LOS) for up to twelve (12) intersections and LOS of all connecting segments (approximately 12 roadway segments using the ADT counts) based upon the Highway Capacity Software, which follows the U.S. Department of Transportation (FHWA) Highway Capacity Manual (HCM) methodologies. Segment LOS analysis will be conducted using the Modified HCM LOS Tables (originally developed by the Florida Department of Transportation and applied to estimate segment

LOS conditions for the Riverside COUNTY Congestion Management Program (CMP). The Tables have been revised to reflect Riverside COUNTY conditions) that are HCM-based.

The Modified HCM LOS Tables (excel spreadsheet) will to be applied for segment LOS along the segments to determine segment LOS.

The results of each of these technical analyses will include daily and peak hour segment and intersection LOS estimates, signal (if appropriate) along each segment and at each study intersection, as appropriate. Existing intersection geometrics will be included in the analysis.

For the roadway segments, the COUNTY will provide ENGINEER all available accident data and statewide averages for similar roadways for comparison and analysis purpose.

ENGINEER will prepare five (5) copies of a working paper summarizing the results of the existing conditions (Year 2009) LOS analysis and safety comparison, as detailed below. In addition, ENGINEER will provide one (1) electronic copy using MSWORD software as well as one (1) original camera-ready document. A single camera-ready original of all maps, charts, figures, and graphs will be included.

ENGINEER will prepare an opening day (Year 2012) and future year (Year 2035) LOS analysis of each major intersection and street segment referenced. Traffic volumes will be obtained from COUNTY RCIP model. The following describes the methodology to develop future traffic forecasts:

- Build-out traffic volumes (ADT, AM peak hour & PM peak hour) for roadway segments by direction will be obtained from the COUNTY
- COUNTY will provide the "year" for Build-out model volumes
- Socio-economic date from the Build-out year and for Year 2035 for the project area will be obtained from the COUNTY
- Yearly growth between the Build-out year and Year 2035 will be calculated using the socio-economic data
- Using the above calculated yearly growth rate, the Build-out year traffic volumes will be adjusted downward to determine Year 2035 traffic volumes (ADT, AM peak hour, and PM peak hour) for roadway segments by direction
- Determine the Year 2035 intersection turning movements using the 2035 directional peak hour volumes on roadway segments, existing traffic counts and B-turns model
- Obtain a growth rate from the COUNTY for growth between existing and year 2035

- Use the growth rate and adjust the year 2035 traffic volumes (intersection and roadway segments) downward to determine the opening year (2012) traffic volumes
- The forecasts for the opening year (2012) will be compared to the existing traffic counts for reasonableness and adjusted accordingly.

The above methodology assumes that the traffic forecasts coming out of the model are accurate and good to use without any post processing. Hence this scope does consider any post processing effort nor any traffic modeling effort by the ENGINEER.

ENGINEER will prepare forecasts of AM and PM peak hour intersection volumes based on the above described methodology. An estimate of truck percentages for all intersections and segments will be included, if RCIP model provides one. If not, COUNTY will provide an estimate of truck percentage for the study area for the future year conditions. LOS will be calculated using HCS Methodology, either using HCS software or Synchro software.

The various project scenarios evaluated will include:

- Existing conditions (Year 2009)
- No-Build conditions (Opening Year 2012)
- Build conditions (Opening Year 2012)
- No-Build condition (Horizon Year 2035)
- Build condition (Horizon Year 2035)

It is assumed that the evaluation of the study intersections and roadway segments will include only one Build Condition.

ENGINEER will identify appropriate mitigation measures to reduce traffic impacts associated with the Project and No Project Alternatives to acceptable levels, to the fullest extent possible.

The resultant traffic (vehicle speed, vehicle volume, truck volume) for each intersection and street segment considering implementation of effective mitigation measures will be developed to determine the degree to which such mitigation measures will be effective.

ENGINEER will prepare five (5) copies of the working paper summarizing the results of the opening day and future conditions LOS analysis. In addition, ENGINEER will provide one (1) electronic copy using MSWORD software as well as one (1) original camera-ready document. A single camera-ready original of all maps, charts, figures, and graphs will be included.

Air Quality

Baseline Air Quality Conditions

Baseline and project setting meteorological and air quality data in the South Coast Air Basin area, developed through the California Air Resources Board (ARB) and climatological and air quality profile data gathered by the South Coast Air Quality Management District (AQMD), will be utilized for the description of existing ambient air quality. Air quality data from the Riverside and Lake Elsinore air quality monitoring stations published for the past three years will be included to help highlight existing air quality local to the proposed project site. Other sources such as regulatory documents, professional publications, and the CONSULTANT"s experience in the project area will supplement background information. A summary of current air quality management efforts that may be related to the proposed project will be provided.

Short-Term Construction Emissions and Construction-Related GHG Emissions

Construction would occur during implementation of the proposed project. Air quality impacts from demolition, grading, and construction sources will be analyzed based on the equipment used, length of time for a specific construction task, equipment power type (gasoline or diesel engine), equipment emission factors approved by the EPA (AP-42 Handbooks), horsepower, load factor, and percentage of time in use. Exhaust and dust emissions from worker commutes and equipment travel will be calculated based on available information regarding these activities. Fugitive dust ($PM_{2.5}$ and PM_{10}) emissions would result from wind erosion of exposed soil and soil storage piles, grading operations, and vehicles traveling on paved and unpaved roads. The project will comply with the existing SCAQMD Rule 403 for reduction of fugitive dust emissions. Emissions associated with asphalt paving will be calculated when specific data are available. Emission factors included in the AQMD's CEQA Air Quality Handbook will be used for construction dust emission estimates. In addition, short-term project construction CO2 emissions and Carbon Dioxide Equivalent (CO2 (e)) impacts will be estimated using the URBEMIS 2007 Version 9.2.4 computer model. GHG emission results will be compared with the regional and localized SCAQMD significance thresholds. These emissions will be calculated based on construction information available and provided to the CONSULTANT

Odor Impacts

The impact of odors generated by short-term construction and long-term operation impacts on surrounding sensitive land uses will be evaluated.

Long-Term Mobile and Stationary Source Emissions

The proposed project is not expected to generate new vehicular traffic trips. However, there is a possibility that some traffic currently utilizing other routes would be attracted to use the improved road. It is anticipated that project-related traffic trips included in the traffic study will be provided for this air quality analysis. Emissions will be calculated with the ARB's EMFAC2007 air quality model and the AQMD CEQA Air Quality Handbook. . ENGINEER will evaluate the proposed project's impacts to long-term particulate matter concentrations ($PM_{2.5}$ and PM_{10}). It is not expected that there will be stationary source emissions as a result of the proposed project.

Long-Term CO Hot Spot Impact Analysis

Vehicular traffic on Washington Street would be affected by the proposed improvements. Traffic in the project area is expected to increase due to area growth with population expansion. There is also a possibility that some traffic currently utilizing other routes would be attracted to the improved road. A detailed carbon monoxide (CO) hot spot analysis will be conducted based on the peak traffic hour along this road and turn volumes projected at key affected intersections in the project vicinity that would be affected by the project. The CALINE4 model will be used for the CO hot spot analysis.

Localized Significance Impact Analysis

Consistent with the SCAQMD's environmental justice program and policies, localized air quality impacts on nearby sensitive receptors (e.g., residences, schools, day-care centers, and hospitals) will be evaluated. Either the Localized Significance Threshold (LST) methodology developed by the SCAQMD, if appropriate, or an analysis using an air dispersion model such as SCREEN3 or ISCST3 will be used.

Climate Change and GHG Emissions

An analysis of the proposed project's generation of greenhouse gases and its contribution to global warming and climate change will be provided, based on the requirements identified in the Governor's Executive Order S-3-05 and AB32, The Global Warming Solution Act to Reduce Green House Gases. Per SB 97 and the Resource Agency's adoption of the Office of Planning and Research (OPR) revised CEQA Guideline, the revised Guidelines require CEQA projects to issue GHG emissions, mitigation measures, threshold and cumulative impact analysis

The CONSULTANT will quantify greenhouse gas (GHG) emissions (i.e., CO2 and CH4) resulting from construction and operation of the proposed project to assess potential project-related climate change impacts.

Methodology for Construction-related Impacts

The Urban Emission Model (URBEMIS) 2007 Version 9.2.4 will be used to quantify construction-related CO2 and Carbon Dioxide Equivalent (CO2 (e))emissions resulting from short-term project construction impacts. Emission results will be compared with the regional and localized SCAQMD significance thresholds.

Operational-related Impacts

Project operation impacts will be determined by quantifying GHG emissions at each intersection for the AM and PM Peak scenarios for the project's opening year, and under the Build and No-Build Scenarios. GHG emissions will be estimated using the California Air Resources Board's (CARB) On-Road Emission Factors Model (EMFAC). The EMFAC output will be based on vehicle idling using roadway level of service (LOS), intersection volumes, and delays as included in the subject project's Traffic Operations Analysis Report.

GHG Evaluation Thresholds and Cumulative Impact Analysis

In the current absence of formalized significance criteria thresholds, the CONSULTANT will use recommended methodologies within the CAPCOA White Paper (January 2008) and compliance with the CCAT and/or CARB Early Action Strategies to assess the potential significance of GHG emissions associated with the proposed project.

Construction Control Measures

To mitigate fugitive dust, particulate matter and pollutant emissions, the CONSULTANT will reference the 2004 Rule 403 Fugitive Dust Implementation Handbook (SCAQMD 2004) to identify control measures. Per impacts identified in sections 5.3.2, SCAQMD Rule 402 Table 2 and 3 control actions will be implemented and SCAQMD will be notified by submitting the Form 403N for "large operations". The CONSULTANT will work with the COUNTY to identify feasible mitigation measures. Mitigation measures will be developed as indicated in the impact analysis.

Noise

The intent of the Noise Impact Analysis (NIA) is to compile existing noise data and the associated current noise levels, and to develop an existing conditions analysis. Additional analysis will also identify opening-day impacts associated with the Project and future (Year 2030) impacts with the Project. If needed, a detailed program identifying appropriate mitigation measures required to maintain the COUNTY of Riverside noise criteria and standards will be developed. To accomplish these necessary objectives, the following subtasks would be undertaken:

Develop an analysis of existing noise by field-testing noise level measurements with sufficient sampling

periods and locations to adequately describe local conditions and the predominant noise sources. Note: The NIA will be conducted where appropriate traffic data (counts/model projections) are available considering results of the Traffic Impact Study (TIS). A maximum of ten (10) noise measurements near sensitive receptors will be conducted for purposes of this NIA.

Based upon data gathered, existing, opening day and future (Year 2030) noise impacts will be identified. Existing noise for each receptor will be based upon FHWA noise methodologies using an appropriate model (STAMINA, OPTIMA or Sound2000). Tabular and graphic results will identify AM, PM, or other peak hour noise impacts associated with the Project and the No Project Alternatives. Estimated existing plus project and future noise levels will be compared to those levels in the adopted polices of the Noise Element.

Where noise estimates exceed significance criteria, appropriate mitigation measures will be developed and implemented where feasible.

In addition, appropriate mitigation measures that would potentially lessen the impact of construction noise from the Project and the No Project Alternative on sensitive existing and future land use developments will be developed.

The resultant noise exposure after the prescribed mitigation measure has been implemented will be estimated and reported.

Biological Resources

ENGINEER will conduct a biological resources evaluation for the use in the Project EIR and regulatory permitting. Initial tasks for preparation of the biological resources evaluation will include; (1) conducting a CNDDB database search and literature search of all materials which document existing conditions and potential critical issues in the project area; (2) identifying surrounding areas that contain biological resources that may need to be evaluated as part of any Endangered Species Act consultation required for the project; (3) conducting site visits (survey corridor shall be 500 feet) to determine habitat suitability for sensitive species.

The proposed project is a Covered Activity under the MSHCP as part of the General Plan Circulation Element. The project is subject to plan-wide MSHCP requirements including Narrow Endemic Plant Species, Riparian/Riverine/Vernal Pools and Additional Surveys Needs and Procedures. The project alignment will pass through Public/Quasi-Public lands and MSHCP Criteria Cell 5982. The project must therefore comply with the MSHCP requirements for Urban/Wildlands Interface, Criteria Area Surveys, and Guidelines for

Facilities within the Criteria Area and Public/Quasi-Public lands (Sec. 7.5). The project is also subject to provisions of the AD 161 Sub-Area Plan specific to this segment of Butterfield Stage Road. The proposed scope of services will address potential biological resources issues required for the project review process under the MSHCP and the CEQA species which may occur within the Project Area.

Based upon an initial review of the COUNTY's habitat conservation plan, protocol surveys will need to be conducted for burrowing owls are plants and vernal pools/fairy shrimp. Additionally, a cursory review of the topographic features indicates that there is likely to be two jurisdictional features that could be affected by the project. A wetland delineation (both the US Army Corps of Engineers and California Department of Fish and Game) will be conducted. A biological technical report will be prepared and the findings incorporated into the EIR. These proposed services are detailed below.

This scope and cost estimate anticipates that complete right-of-entry for the required field surveys will be acquired prior to the commencement of the work effort.

Biological Resources Survey and Habitat Suitability Assessment

Prior to the field survey, a review of the California Natural Diversity Data Base (CNDDB) and the California Native Plant Society (CNPS) Electronic Inventory will be conducted to identify sensitive species known or reported to occur within the project site. Based on preliminary review of aerial photographs, topographic maps, and COUNTY GIS data, all or portions of the road improvement project is located in or adjacent to Burrowing Owl Survey Area, Narrow Endemic Plant Species Survey Area (NEPSSA), Criteria Area Species Survey Area (CASSA), and potential jurisdictional waters of the U.S. A biological resources survey and habitat suitability assessment (HSA) will be conducted by the CONSULTANT's biologists familiar with the habitats and sensitive resources of the region. The field survey will include:

Delineating and mapping habitat types;

Evaluating suitability of habitat for sensitive resources identified in the MSHCP;

A general plant and wildlife inventory;

A survey for vernal pools;

A preliminary identification of any areas that may be considered wetlands or waters of the U.S. as defined by the U.S. Army Corps of Engineers (ACOE), or streambeds as defined by the California Department of Fish and Game (CDFG); and

Noting other pertinent features or conditions of the site and adjacent lands.

The field survey will be conducted over the entire project footprint consisting of right-of-way and an additional buffer area to be agreed on after consultation with COUNTY to determine if the project site has habitat potentially suitable for NEPSSA or CASSA plants or *other* sensitive resources identified in the MSHCP. A survey area map must be approved by the COUNTY prior to the start of any field survey work and will not be less than 100' on either side of all alternatives alignments to account for any necessary adjustments. If suitable habitat is found on-site, then focused surveys are required.

Focused Plant Surveys

The MSHCP requires that focused surveys be conducted for the NEPSSA and CASSA species if potentially suitable habitat exists on the project site. For some species, survey results may not be considered valid if surveys are conducted during years of below average rainfall. Surveys for most species must be conducted during the flowering seasons of those species. A focused plant species survey will be conducted as needed in accordance with MSHCP requirements. Survey methods and results will be integrated into the Biological Resources Report or attached as an appendix. A DBESP may be required if results of focused plant surveys are positive. The proposed scope of services does not include a DBESP for impacts to sensitive plant species.

Burrowing Owl Focused Survey

If it is determined during the general biological survey and burrow survey that burrowing owl may inhabit the site, then a complete focused burrowing owl survey will be conducted according to survey guidelines adopted by Regional Conservation Agency (RCA). All burrowing owl sightings, occupied burrows, burrows with owl sign, and foraging areas (if known) will be counted and mapped. Survey methods and results will be integrated into the Biological Resources Report or attached as an appendix. If owls are found within the project impact footprint, relocation efforts may be required. This scope and cost estimate does not include the relocation of burrowing owls.

Vernal Pool/Fairy Shrimp Survey

If focused surveys are determined to be required, a focused wet-season fairy shrimp survey will be conducted of all seasonal pools believed to provide suitable habitat for the fairy shrimp. This scope assumes up to six locations in the study area. The survey will be conducted according to USFWS guidelines (*Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a) (1) (A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods*, April 19, 1996), as appropriate. For vernal pool fairy shrimp

(Branchinecta lynchi), the MSHCP states that a single-season dry or wet season survey for this species shall be conducted by a qualified biologist in accordance with accepted protocol. A wet season survey is generally considered to provide more comprehensive data. A wet season survey consists of several site visits for seasonal pool sampling. The first site visit must occur no later than two weeks after pools are initially inundated to a depth of at least 3 centimeters (cm) for 24 hours after a storm event. Additional site visits will occur every two weeks for 120 days or until the pools are no longer inundated. If the pools dry and then refill within the wet season, sampling must be reinitiated within eight days of refilling. If seasonal pools do not have standing water at the time of the conduct of the HSA, and suitable habitat is determined to exist, biologists will briefly visit the site after each storm event to determine when initial sampling must begin. It is estimated that no more than six site visits will be required to check for each pool filling/refilling after storm events and that no more than eight additional site visits will be required for pool sampling.

U.S. Army Corps of Engineers (Waters of the U.S.) and California Department of Fish and Game (Waters of the State) Jurisdictional Delineation and Report

Under Section 404 of the Federal Clean Water Act (CWA), the ACOE regulates discharges of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include essentially any drainage course with defined banks or other evidence of flow of water. The CDFG, through provisions of the California Fish and Game Code, is empowered to issue agreements for any alteration of a river, stream or lake. Streams (and rivers) are defined by the presence of a channel bed and banks, and at least an intermittent flow of surface or sub-surface water. We will complete focused wetland delineation according to the 1987 *Corps of Engineers Wetland Delineation Manual* and the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region.* We anticipate that a routine delineation, tailored to the site characteristics, will be adequate. We will also complete a jurisdictional "waters of the U.S." determination according to the current ACOE standards. The determination will involve a discussion of whether any waters on the site have a "significant nexus" and will consider the *ACOE Joint Guidance with the EPA on Compliance with the US Supreme Court Ruling in Rapanos and Carabell Cases.* Finally, we will determine the extent of any streambed and associated riparian areas subject to review by CDFG under Section 1600 et. seq. of the California Fish and Game Code. The results of the delineation will be presented in a detailed report that will include mapping of any wetland and jurisdictional areas. Please note the results of the determination are subject to verification by the ACOE and CDFG. This report will define the project

constraints associated with non-wetland waters, wetlands, and riparian habitat. Our approach is to provide appropriate technical documentation for use in any required regulatory compliance procedure. The respective agencies require that wetland delineation be submitted along with the permit applications required to obtain authorization for work in waters of the U.S. This scope of work includes preparation of permit applications and coordination with regulatory agencies regarding Fish and Game Code Section 1600, CWA Section 401, and CWA Section 404 project authorizations. The jurisdictional delineation report will be attached to the Biological Resources Report as an appendix.

DBESP for Riparian/Riverine Areas and Vernal Pools

The MSHCP Section 6.1.2 describes procedures that ensure the riparian/riverine habitat functions and values in the Plan Area are maintained. Compliance with MSHCP Section 6.1.2 is required for vegetated streams, rivers, wetlands, and also unvegetated ephemeral drainages, if alterations that affect the functions and values of the drainage have the potential to impact Covered Species within the Conservation Area. This MSHCP requirement will entail some additional planning and documentation for the riparian and wetland habitat on the project site. Alternatives to the proposed site plan will be evaluated by the project team to demonstrate efforts to avoid and then minimize direct and indirect effects to jurisdictional waters and riparian habitat. If avoidance is not feasible, then a practicable alternative, which minimizes effect to riparian/riverine areas and associated functions and values is proposed through a Determination of Biologically Equivalent or Superior Preservation (DBESP) report.

The DBESP shall include the following information to be reviewed by the COUNTY of Riverside, Regional Conservation Authority (RCA), CDFG, and USFWS:

Definition of the project site;

Project description, demonstrating why an avoidance alternative is not possible;

Biological information including biological resources map;

Map of riparian/riverine/vernal pool areas;

Analysis of project alternatives (100% avoidance, and other alternatives), minimization of direct and indirect effects, hydrologic regime, flood storage, flood flow retention, nutrient retention and transformation, sediment trapping and transport, toxic trapping, public use, wildlife habitat, and aquatic habitat;

Quantification of unavoidable impacts to riparian/riverine areas including direct and indirect effects;

Functions and values assessment shall focus on how the project would affect downstream values related to

Conserved Species, particularly within the P/QP lands and Criteria Cells;

Habitat assessments for least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, Riverside fairy shrimp, and vernal pool fairy shrimp (if the site has suitable habitat, then focused surveys will be required);

Discussion of the edge treatments (project design features and mitigation measures that reduce indirect effects, such as landscaping, elevation differences, minimization and compensation through restoration or enhancement) and relation to functions and values to be conserved, similar to MSHCP Section 6.1.4 — Guidelines Pertaining to the Urban/Wildlands Interface;

Long-term conservation will be ensured through deed restriction, conservation easement, or other appropriate mechanism (mitigation may be on-site or off-site);

A finding demonstrating the project design and mitigation will be biologically equivalent or superior to an avoidance alternative without these measures based on effects to Conserved Habitats, Covered Species, riparian linkages, and the function of the MSHCP Conservation Area even though the project will not avoid impacts;

Topography and hydrology assessment; and

Soils description/analysis/map.

If vernal pools or similar habitats are found on the site, two years of fairy shrimp surveys may be required.

Biological Resources/MHSCP Consistency Report

The CONSULTANT will prepare a report including a summary of the results of the literature review, biological resources inventory, and habitat assessments. The report will include the following:

A summary of survey methodology and results;

Representative site photographs;

A list of species observed during the site visit;

A discussion of plant communities and mapped soils;

Results of focused species surveys;

Identification of areas wetlands or waters of the U.S. as defined by the ACOE, or streambeds as defined by the CDFG;

A discussion of project consistency with MSHCP Reserve assembly, including Urban/Wildlands Interface requirements, project relationship to Cores and Linkages,

A discussion and analysis of project consistency with and implementation of Covered Activity requirements (MSHCP Vol. I: Section 7.5).

DBESP for Riparian/Riverine Areas and Vernal Pools (and plants if needed)

A discussion of impacts of the proposed project to sensitive biological resources; and

Graphics as needed to show the project location and vicinity, project relationship to designated critical habitat areas, and locations of any biological resources or habitat areas on the site that may require additional study or review for MSHCP or CEQA compliance.

WR MSHCP JPR Public Works checklist (attached as an appendix) summarizing project consistency with the MSHCP;

Jurisdictional Delineation (attached as an appendix)

Focused Surveys (attached as appendices)

Consultation and Coordination

Consultation and coordination for the biological studies may be required with members of the project team. We have assumed this coordination will take place by telephone, fax, and mail. The proposed schedule and cost estimate include attendance to two meetings by the CONSULTANT's biologists.

Output: The following reports will be produced as a result of this work effort:

Biological Resources/MSHCP Consistency Report: 5 copies

Including Appendices that will contain the following:

Focused Survey Reports

Jurisdictional Delineation

Client Responsibilities for Completion of Biological Studies

The following items will be required from the client before the proposed scope of services can be initiated:

A conceptual drawing of the proposed project showing site limits and maximum extent of ground disturbance; and legal right of entry and physical access to the survey area.

Response to Joint Project Review (JPR) Comments

The CONSULTANT will assist in response to agency comment resulting from Joint Process Review (JPR) of the project. The scope and budget include up to a maximum of 40 hours for this purpose.

Excluding Cultural studies, all technical studies produced, including relevant engineering studies (e.g. Traffic and Drainage studies) will be bound into a Volume II. A minimum of 20 copies will be provided to the

COUNTY, including a print-ready version on CD/DVD.

Clean Water Act and California Streambed Alteration Permit Applications

The team will conduct meetings with the regulatory agencies periodically during the program development. Two meetings with the regulatory agencies have been included as well as one field meeting. It will be important to identify fatal flaws or issues that have economic ramifications. ENGINEER will document important decision points throughout the process to reduce problems during the actual permitting phase. As noted above, there are a number of agencies which will need to be contacted and applications submitted for the preferred project alternative to be undertaken. ENGINEER recommends that the COUNTY attend an Interagency Meeting scheduled by the Army Corps of Engineers so that full comments can be received from the separate agencies. ENGINEER will prepare the application packages, as well as coordinate the permits through the applicable agencies. Specifically, ENGINEER will prepare the required application to the Army Corps of Engineers for a Section 404 Permit, to the California Department of Fish and Game for a Section 1602 Streambed Alteration Agreement and the Regional Water Quality Control Board for a Section 401 Water Quality Certification once the preferred alteration is selected. Based on the current design it is assumed that an Individual Permit will be required from the Corps of Engineers so we have included the development of a Section 404 (b)1 Alternatives Analysis that will be based on the alternatives developed as part of the CEQA process. We will also submit the "Rapanos" forms to the Corps in order to expedite processing of the wetland delineation. Mitigation planning for these impacts may also be necessary. ENGINEER will prepare a conceptual mitigation plan but a final plan cannot be prepared until exact impact acreages are determined and the location of the mitigation is determined.

Based on the outcome of the initial coordination with the involved agencies, the CONSULTANT will prepare and submit the necessary permit application materials. We anticipate that:

The Corps will provide Section 404 authorization under an individual permit; a Section 401 water quality certification will be issued by the RWQCB; and the CDFG will provide a Streambed Alteration Agreement under Section 1600 et seq. of the Fish and Game Code.

The CONSULTANT will prepare permit applications accordingly. Each application packet will be reviewed with the project team and any required changes will be made prior to submittal to the respective agencies. The CONSULTANT will schedule, arrange, and prepare any necessary materials for a "pre-application consultation" with the Corps and other involved agencies. Objectives of the meeting would be to verify the

jurisdictional delineation and to describe the proposed project, discuss permitting approach, and identify potential mitigation options. Additionally, the CONSULTANT may arrange to meet with the RWQCB, if necessary, to determine its requirements for a water quality certification which will include impacts to beneficial uses that may be caused by discharges of fill material into jurisdictional waters of the U.S. These meetings will be in conjunction with the Corps meeting if schedules allow; otherwise, a separate meeting time will be set. The CONSULTANT will summarize and document the results of agency coordination in a letter format. The letter will be submitted to the respective agencies with copies to project team members.

Section 404 Permit Application

The jurisdictional determination report prepared by the CONSULTANT will be the basis of the existing documentation of site conditions. Either NWP 14 – Linear Transportation Projects, or an individual permit will be required if impact triggers acreage thresholds. The CONSULTANT will submit the Request for Authorization, which includes a cover letter to the Corps, an explanation of the project, description of impacts, site plan, and graphics. The applications for the Streambed Alternation Notification and the Section 401 water quality certification will be similar to the NWP 14. The CONSUTLANT will coordinate with the project team and prepare a written statement explaining how avoidance and minimization of losses of waters of the U.S. can be achieved on the project site per General Condition 13. The CONSULTANT will prepare a preliminary mitigation and monitoring plan based on Corps guidelines. The plan will include information on how on-site impacts will be mitigated to replace jurisdictional areas that will be lost. A final mitigation plan will be prepared and submitted following Corps review of the application packet. The final mitigation plan will incorporate appropriate conditions based on the Federal and State agency review and comment. Complete copies of the Sections 401 and 1600 applications will be included.

The CONSULTANT will prepare all necessary graphics and other supporting materials. Wherever feasible, existing materials will be used to minimize costs. Project site photographs showing typical conditions of the site will be provided per Regional Condition 2. A copy of the final environmental (CEQA) document and Biological Resources/MSHCP Consistency Report for the project must be included, including the certification of the final document. Many of the same materials used for the Section 404 application can be submitted as part of the application materials for the Section 401 Certification and CDFG Streambed Alteration Agreement.

Section 401 Water Quality Certification Application

The CONSULTANT will prepare written correspondence requesting certification or waiver and including the

following materials:

The CONSULTANT will use information prepared for the Section 404 application to provide a complete project description. This will include the purpose, location, total site acreage, types of water bodies within the site, total acres of waters of the U.S., wetland acres, and types of riparian habitats present.

The CONSULTANT will prepare an assessment of water quality impacts addressing types of fill material to be discharged, impacts to beneficial uses of the water body, and expected water diversions.

Standard Regional Water Quality Control Board Application form with SWPPP, WQMP (where applicable according to Santa Ana and San Diego Regional Board Permanent BMP requirements) and the proposed Monitoring and Reporting Program.

A complete copy of the Section 404 application will be included.

A complete copy of the CDFG Streambed Alteration application will be included.

A copy of the final environmental (CEQA) document and Biological Resources/MSHCP Consistency Report for the project must be included, including the certification of the final document.

A copy of the proposed mitigation plan for impacts to waters of the U.S. (on-site and/or off-site mitigation measures).

Other appropriate material as may be required by the RWQCB.

The RWQCB bases its fees on a per linear foot calculation, or on acreage of fill material to be deposited in jurisdictional waters.

Coordination with the project's hydraulic engineer may be required to ensure that the proposed project does not result in an increase in the rate at which the volume of runoff (the "Q") to be discharged from the site and to ensure that all runoff from developed surfaces is treated for water quality purposes before it is discharged into waters of the U.S.

Section 1600 et seq. Streambed Alteration Agreement

The CONSULTANT will submit the following materials to the CDFG:

A standard CDFG Notification of Lake or Streambed Alteration form.

A CDFG Lake and Streambed Alteration Program – Project Questionnaire.

A copy of the report on the delineation of wetlands and jurisdictional waters prepared for the Section 404 application.

A copy of the Section 404 application packet to the Corps.

A copy of the preliminary mitigation and monitoring plan prepared for the Section 404 application with a provision to submit the final plan upon its completion.

A copy of the Section 401 application to the RWQCB.

A copy of the final environmental (CEQA) document and Biological Resources/MSHCP Consistency Report for the project must be included, including certification of the final determination.

Appropriate plans, exhibits, and maps.

Two complete copies of all permit packages will be provided to the COUNTY.

Cultural Resources

Records Search

An archaeological record search/literature review will be conducted at the Eastern Information Center (EIC) housed at University of California, Riverside. The purpose of this search and review is to examine any existing cultural resources survey reports, archaeological site records, and historic maps to determine whether documented archaeological sites whether prehistoric or historic are listed on or determined eligible for listing on the National Register of Historic Places or the California Register of Historic Places within the proposed project area.

Engineer will conduct the records search at EIC for the project area and a one-mile radius. Sources to be consulted during the records searches will include:

- 7.5' topographic maps depicting recorded site locations;
- early period historic plat maps;
- California Historic Landmarks listings;
- California Register of Historic Properties;
- National Register of Historic Places

Native American Consultation

An initial letter of inquiry will be sent to the Native American Heritage Commission (NAHC) regarding the potential presence of Sacred Land on or near the subject property. Upon receipt of response from the NAHC, independent letters of inquiry will be sent to specific Native American groups familiar with the project area. Any responses or concerns received from these groups will be included as an appendix to the report.

Pedestrian Survey

An archaeological pedestrian survey will be conducted on the proposed Area of Potential Effects (APE) (500

foot corridor). The project area will be closely examined for the presence of archaeological (both prehistoric and historic-period) sites or features. The survey will consist of a systematic alignment sample in 10 meters increments.

For the purposes of costing, it is assumed that no cultural resources (e.g., archaeological site, historic structure or feature) will be encountered within the project area (new or updating previously recorded archaeological sites). If any cultural resources are found, additional funds may be required for the field documentation of the resource(s) and preparation of appropriate DPR records. Furthermore, if any resources are encountered in the project area that would require test excavation, a separate scope of work and cost estimate can be submitted for that level of work.

Report Preparation

A draft report will be prepared based on the Archaeological Resource Management Report guidelines documenting the methods and results of the archaeological record search and field survey. The report will contain a summary of the environmental setting and cultural background of the project area, including prehistory and history. The report will also include a discussion of potential impacts to cultural resources from the proposed project and will provide recommendations for additional work, as appropriate. A draft report will be prepared for review and one round of comments will be incorporated into a final report.

Hydrology and Drainage/Water Quality

It is anticipated that hydrology/water quality will be eliminated from further study in the Initial Study. It is anticipated that the hydrology/hydraulic analysis necessary for site engineering will adequately address this issue. It is also assumed that a Water Quality Management Plan will be prepared for the project that will adequately address the water quality (during and post-construction impacts) including BMP and use of bio-swales.

Geology and Soils

It is anticipated that geology and soils will not be a substantial issue other than that associated with erosion. Depending upon the findings, this issue may be eliminated in the Initial Study process.

Public Heath/Safety

It is not anticipated at this time that health and safety issues will be significant. ENGINEER will review this aspect, as necessary for analysis in the Initial Study.

Phase I Environmental Site Assessment (ESA)

The scope of services proposed for this Phase I ESA has been developed to assist in identifying environmental concerns associated with hazardous materials or petroleum products that may have impacted properties adjacent to, or within the road right-of-way. It should be noted that this Phase I does not include any investigation, or determination, for the presence of lead-based paint, asbestos containing materials, or the potential extent of thermoplastic tape in the area. Any work related to aerially deposited lead, lead-based paint, asbestos containing materials, or thermoplastic tape would have to be addressed in a separate scope of work. This proposed Phase I ESA will be completed in general accordance with American Society for Testing and Materials (ASTM) E1527-00 Standard Practice for ESAs.

The following is a description of ENGINEER's tasks:

Historic Site Uses: An evaluation of the historic land uses will be conducted concerning the parcels either within, or adjacent to the road right-of-way. The radius of this investigation generally extends to ASTM specifications, which may extend from one-half mile to up to one-mile from the subject property (or more or less as deemed necessary by ENGINEER based on other available information). These historic land uses will be evaluated in the context of the potential for hazardous materials, or hazardous waste, use or disposal on or adjacent to the subject parcels.

Historic aerial photographs will be the main tool used to determine the historic land use for the area. ENGINEER will obtain these historic photographs from a commercial vendor (Environmental Data Resources, Inc.). These photographs will include one per decade as specified by ASTM, and will cover all the subject parcels.

Regulatory Records Search: A review of reasonable available regulatory and governmental records will be performed. These records will be for the subject parcels and any identified within the specified radius. The records requested will be according to ASTM requirements for Federal, State and local agencies. The results of this record search will be supplied as an appendix to the Phase I report.

Site Reconnaissance: A site inspection (one site visit) and documentation of the properties within the right-of-way will be performed, including a review of perimeter sites and legally accessible adjacent and area properties which, in ENGINEER's opinion, constitute potential sources of contamination to the subject properties. The site inspection will focus on accessible areas of the parcels, where the likelihood is highest of finding something left by "midnight dumpers", or from previous use of the site.

Draft and Final Report: ENGINEER will prepare a Draft and Final Report presenting all of the pertinent data

discovered during the Phase I ESA process. This report documents all activities undertaken in the preparation of the report and all findings resulting from the- Phase 1 ESA performed at the subject site. The report consists of the following elements:

Cover letter;

Executive Summary;

Conclusions/Findings;

Recommendations;

Chronological Land Use for the Right-of-way and Adjacent Areas with references aerial photographs, and other sources;

Apparent site Geology and Hydrogeology;

Site investigation and Area Review with references to site reconnaissance, findings for each area, record searches, and site photographs (dates of site visits and interviews conducted, if any, will be included as references); and

Copies of Supportive Information as Attachments or Appendices.

If there are areas of concern identified during the preparation of the report, you will be initially notified by telephone, and then within the report. The report will also contain any recommendations for further study based on these areas of concern.

It should also be noted that a 50-year Chain-of-Title is not included in this scope of work. If a 50-year Chain-of-Title is required, it will be conducted under a separate scope of work.

Mandatory Findings of Significance

In accordance with Section 15065 of CEQA Guidelines, significant unavoidable adverse impacts, if any, will be addressed and Mandatory Findings of Significance will be made for each. ENGINEER will work with COUNTY staff and legal counsel as necessary.

Mitigation Monitoring and Reporting Program (MMRP)

ENGINEER will prepare a Mitigation Monitoring and Reporting Program (MMRP) for the EIR in accordance with CEQA. The MMRP will be included in the Technical Appendices of the EIR or as specified by the COUNTY. The monitoring program will specify the impacts to be mitigated, performance standards, responsibility, qualifications, timing, and other specifications as necessary.

Open House Information Meeting

ENGINEER will participate in one Open House for this project. This will include preparation, travel and attendance. ENGINEER shall also provide up to four staff to attend/participate in a Open House Information meeting. It is assumed that the COUNTY shall identify the site, prepare all advertisements and contact for all room changes (if any), ENGINEER will provide aerial photographs, display boards of preliminary project alignments/alternatives (2 sets), project description, copies of NOP, and an information paper. Sign-in-sheets and comment forms will also be provided to record participants and comments received.

Screencheck Preparation

ENGINEER will revise the Screencheck Draft EIR (two screenchecks and a "final" check print) based on COUNTY staff comments to produce a Draft EIR for public review. Revisions do not include substantial changes to the project that require new analysis. This task assumes one meeting with staff to review comments.

Distribute Draft CEQA Document

ENGINEER will reproduce and distribute the Draft EIR for public review and provide copies of the environmental document on CDs in addition to the printed form.

Prepare Final CEQA Document

Upon receipt of the comment letters, the letters will be organized by the entity that submits the letter (all federal, state and local agencies will be grouped, recognized interest associations or groups, local groups and individuals). The comment letters and issues within the letter will be numbered. A matrix will be developed identifying the issue, responsible party and status (response drafted or not). A copy of the letters and the matrix will be distributed prior to a strategy meeting. Attendees will include all persons responsible for preparation of the responses.

ENGINEER will prepare a set of responses to comments received on the Draft EIR and submit them to the COUNTY for review. ENGINEER will revise the responses, if necessary, based on staff comments. This task assumes one meeting with staff to review comments. ENGINEER will also revise the Draft EIR, if needed, to revise information as errata to the Draft EIR. Revisions, include clarifications to analyses already done, but do not include new analyses or revisions from project changes. It is not feasible to estimate the actual level of effort until ENGINEER has received the comments. Therefore, at this time, a contingency "placeholder" is proposed until after the public review period is completed. At that time, a refined cost estimate may be necessary.

The ENGINEER project team is fully available to assist the COUNTY with presentations, preparation and copying of documents and documentation submittal to finalize various actions.

ENGINEER will assemble a Final EIR, which will include a list of comments to the Draft EIR, the responses to comments, the errata, a MMRP, and the "revised" Draft EIR.

Certification

ENGINEER will attend the public hearings for certification, and make a presentation to the COUNTY (if requested). A total of 24 hours is allocated for preparation and attendance.

Findings and Statement of Overriding Considerations

Should the EIR conclude that significant, unavoidable, adverse impacts result from the proposed project, ENGINEER will prepare the Findings and Statements of Overriding Considerations (SOC) in consultation with COUNTY staff. ENGINEER will work closely with COUNTY staff and counsel to ensure that the Findings are legally defensible and are consistent with COUNTY protocol. ENGINEER will meet with the COUNTY to draft the Findings and produce 5 copies for staff review. A contingency estimate is provided.

Task 6 Preliminary Right-of-Way Requirements

COUNTY shall prepare the necessary surveys and identify existing Right-of-Way and easements.

ENGINEER shall provide preliminary identification of required ultimate Right-of-Way and easements for each of the alternatives.

For the preferred alternative, ENGINEER shall prepare right-of-way strip map at 1"=40' scale for the entire project showing existing and proposed right-of-way lines, slope easements and temporary construction easements (TCE).

Task 7 Utilities

ENGINEER shall coordinate with utility owners and COUNTY utility coordination staff with respect to utility related matters. ENGINEER shall provide copies of correspondence with utility companies and other utility related information to the COUNTY.

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 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.

If it is necessary to pothole existing utilities at critical locations, ENGINEER shall coordinate with COUNTY staff to arrange with the respective utility owner to pothole its facility (at utility owner or ENGINEER cost).

Eighty (80) potholing of both high and low risk utilities shall be anticipated by the ENGINEER. This will require potholing exhibits to be prepared, and for appropriate permits to be obtained from all appropriate jurisdictions prior to the start of work. For potholing work within COUNTY right of way, COUNTY will incur the permit fee.

The contract between the ENGINEER and the potholing contractor shall name the ENGINEER, COUNTY, 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 COUNTY'S standard insurance requirements, stated below.

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 location of the potholes. The Consultant 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.

COUNTY's standard insurance requirements are summarized as follows, which must be shown on the contractor's certificate of insurance and endorsements:

- All insurance must have a 30 days minimum cancellation notice, with no exceptions or limitations.
- Comprehensive General Liability Insurance in the amount of $2,000,000 combined single limit (or $2,000,000 per occurrence and $2,000,000 aggregate (minimum)). Higher limits may be required for projects with higher risk exposure, and higher limits, if required, will be included in the contract documents.
- Automobile Liability Insurance in the amount of $1,000,000 combined single limit (or $1,000,000 per occurrence and $1,000,000 aggregate (minimum)).

- Statutory Workers Compensation coverage including Employers Liability in the amount of not less than $1,000,000 per occurrence.
- Comprehensive General Liability Insurance shall be provided by insurance carrier(s) that have an A.M. Best rating of at least "A" and a financial size rating of "VIII" (8) or greater (both primary and excess policies). Comprehensive General Liability Insurance coverage, both primary and excess, shall be provided by carriers that are admitted (licensed) in the State of California.
- "Additional Insured" endorsements shall be issued for Comprehensive General Liability Insurance policy, any excess liability / umbrella policies listed to meet the contract requirements, and the automobile liability policy. These endorsements shall name the "County of Riverside, its Directors, Officers, Special Districts, Board of Supervisors, employees, agents and representatives" as additionally insured. The endorsements shall be signed and executed by the carrier or an authorized broker and shall include a reference to the policy by type and number that it is endorsing.
- An acceptable alternative to the Additional Insured endorsement for excess liability policies is a letter, signed by an authorized representative of the insurance carrier, confirming in writing that the policy follows form with respect to the primary Comprehensive General Liability policy.
- Endorsements to the Worker's Compensation policy that waives subrogation in favor of COUNTY. The endorsement shall be signed and executed by the carrier or by an authorized broker.

Review and approval by the County's representative shall be obtained prior to the start of potholing work. ENGINEER shall coordinate with COUNTY field survey crews to locate potholed utilities by coordinates and elevations based on the project's survey controls.

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 request for review and comments on the plans relevant to their respective facilities, and 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 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.

If new electrical service will be needed, ENGINEER shall provide support as directed by COUNTY. Such support includes, but is not limited to, the following responsibilities:

- Obtain approved electrical service point from the serving electric company for each service equipment enclosure to be installed, and identify requirements that the serving electric company has for the provision of service. Fulfill serving electric company requirements as appropriate, and advise COUNTY of requirements that are beyond the scope of the consultant (e.g.: applications for service).
- Serving electric company shall be notified that Electrical Safety Orders clearance requirements must be met (10' radial clearance between 12kv overhead electrical facilities and signal poles and mast arms, and greater clearance for higher voltage electrical facilities). Show such clearance conflicts on the plans with construction notes.

- Submit preliminary plans indicating proposed service connection locations to serving electric company for approval (service equipment enclosure, conduit runs, riser quadrant, pole number, and connections to vaults as appropriate).
- Provide detailed load calculations to serving electric company, with a copy to the COUNTY, which provides calculations of the normal and maximum expected loads.

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.

Task 8 Preliminary Hydrology and Hydraulics Report

The ENGINEER team will meet with the Riverside COUNTY Flood Control & Water Conservation District (RCFC/WCD) to discuss interface of Butterfield Stage Road drainage facilities with adjacent land area projects.

The RCFC/WCD has estimated the flow rate and water surface elevation at Tucaloca Creek to be Q100 = 5,930 cfs and WS100= 1325.18. These are the values that will be used.

The suitability of existing culverts and storm drains for ultimate flows based on future land uses/cover will also be evaluated.

A Water Quality Management Plan (WQMP) will be prepared including appropriate BMPs will be investigated to:

determine whether drainage outfalls are adequate outlets for increased runoff or whether detention will be required to reduce peak flows;

verify drainage design criteria, and

discuss options for meeting drainage design criteria.

ENGINEER will then summarize drainage deficiencies, proposed drainage design and justification in the Hydrology Report.

ENGINEER will conduct research, obtain and review existing Master Drainage Plans, previous hydrologic and hydraulic reports (including drainage reports from adjacent properties), as-builts for existing storm drains and culverts and other drainage background information. ENGINEER will also conduct a field visit to confirm hydrologic and hydraulic conditions and parameters for the project area.

ENGINEER will prepare hydrology drainage area maps. Peak discharges for roadway drainage design will be determined for two, possibly three, culvert crossings, according to RCFC/WCD hydrologic standards and practices. The hydrology maps will utilize RCFC/WCD 4-foot contour interval flood control topographic maps, supplemented by USGS topographic maps, as necessary.

The ENGINEER team will design curb inlets on grade, curb inlets in sump conditions, and storm drain laterals for roadway drainage. ENGINEER will label the design discharge and maximum velocity for each storm drain reach on the design plans.

Appropriate energy dissipation will be designed, such as rock riprap, for all storm drain and culvert outlets.

ENGINEER can design post-construction storm water quality BMPs if needed to capture and treat first flush runoff from the pavement drainage.

A Hydrology/Hydraulics Report will be provided that includes a summary of all background investigation, field reconnaissance, design calculations and results.

Conduct a thorough field reconnaissance prior to developing the hydrology report and conduct research, obtain and review available documents pertinent to this hydrology report.

Perform any necessary hydrology studies to identify surface run off coming from adjacent areas to the project area. The computation of the off-site peak runoff will be for 10 and 100- year storm.

Prepare a preliminary hydraulic analysis in accordance with the Riverside COUNTY Flood Control & Water Conservation District (RCFC/WCD). This analysis will be coordinated and approved by RCFC/WCD.

Incorporate drainage design on construction drawings.

Task 9 Water Quality Management Plan

ENGINEER shall prepare a Water Quality Management Plan in complete compliance with the Riverside County Water Quality Management Plan for Urban Runoff, Santa Ana Region and Santa Margarita River Region, dated September 17, 2004. The plan will include a concept SWPPP outlining construction Best Management Practices (BMPs) as well as recommendations for operational BMPs. Given the surrounding area, it is anticipated that the BMP's will be limited to natural means such as bioswales, biostrips and possibly basins.

Obtain clearances and permits from the various district jurisdictions and regulatory agencies, including environmental. COUNTY will incur all permit fees. A RCFC/WCD permit will not be required.

Task 10 Preliminary Geotechnical Report

The purpose of our investigation will be to estimate subsurface conditions and provide geotechnical input to conceptual planning and preparation of a Preliminary Geotechnical Report. Limited field investigation will be performed during the Preliminary Engineering Phase to identify areas with critical geotechnical issues. Three days of field borings are proposed during this phase to obtain up to six borings with approximate depth of 75 feet or refusal, whichever occurs first. The preliminary boring locations will be shared with COUNTY prior to initiating the field investigation. COUNTY will incur all COUNTY permit fees related to the field investigation. In addition, a field reconnaissance will be performed to observe existing site. A preliminary geotechnical report will be prepared to provide preliminary recommendations for AC overlay, new AC pavement, PCC pavement, retaining wall foundations and slope stability. The scope of services specifically excludes any investigation needed to evaluate the presence or absence of hazardous or toxic materials at the site in the soil, surface water or groundwater. However, these services can be provided upon request.

Conduct a field reconnaissance and reviews of existing materials reports for the project area.

Perform borings at selected locations of the project to identify potential critical geotechnical issues that could impact the project cost.

Prepare a Preliminary Geotechnical Report to document the Geotechnical data required for the design of the roadway and retaining walls.

Design preliminary structural section required for the 20 year future ADT (2035).

Identify all removal areas and perform preliminary slope stability analysis.

Provide input to environmental investigations.

Minimum traffic index (TI) from the COUNTY standard 114 will be evaluated to determine if the available values are adequate for this project.

Task 11 Preliminary Alignment Plan

The ENGINEER team will prepare two (2) preliminary and conceptual roadway designs in addition to "No-Build" alternative as part of a Project Report for approval by the COUNTY.

The following selection criteria will be used to define possible alternatives for the geometric design of Butterfield Stage Road:

Environmental impacts

Right-of-Way Impacts

Difficult excavation in rock cut section and/or high embankment

Traffic Impacts

Need for Retaining Walls

Utility Impacts

Construction Costs

After the selection criteria is applied and the design approved by the COUNTY, then the ENGINEER team will move forward to develop the Conceptual Engineering Plans with a construction cost estimate.

Afterwards, the ENGINEER team shall complete the geotechnical, Hydrology/Hydraulics, and traffic reports. In addition, a preliminary set of plans, with that utility highlighted, shall be sent to each utility company showing the horizontal and vertical location of their utility and conflicts clouded.

All documents shall go through ENGINEER's rigorous Quality Control (QC) Plan before being submitted.

Prepare plan and profile sheets at a scale of 1" = 80' which reflects existing improvements, physical and legal constraints, median island locations, number of lanes and widths, required right-of-way and proposed centerline profile. Typical cross sections will also be included.

Task 12 Preliminary Cost Estimate

Prepare a conceptual cost estimate for each of the alternatives.

Prepare a preliminary cost estimate for the preferred alternative.

Task 13 Preliminary Engineering Report

A Preliminary Engineering Report will be prepared to include:

Executive Summary

Background

Objectives and Goals

Existing Facilities

Right-of-Way

Traffic Data

Deficiencies and Justifications

Proposal Description

Non-Standard Features

Project Costs and Funding

Scheduling

Engineering Considerations

Other Considerations

Future Considerations

Project Reviews

Environmental Clearance

Evaluation Matrix for the alternative alignments

Conclusions and Recommendations

A total of five (5) copies of draft and final preliminary engineering report will be submitted.

DELIVERABLES:

Listed deliverables below will be delivered in hard copy. One (1) set of final plan set will be delivered in mylar along with the computer generated drawings on a CD. A total of four (4) copies as part of intermediate submittals (including, 65%, 95% and 100% plan set) for review will be hard copy on bond.

Description	Number of Drawings/Documents
General:	
Schedules updated monthly	2 copies
Phase I: Preliminary Eng. & Env. Document	
Surveying Data (by COUNTY)	1 set
Aerial Mapping (by COUNTY)	1 copy
Potholing Exhibit	1 copy
Utility Base Mapping	1 copy
Right-of-Way Base Mapping (by COUNTY)	1 copy
Traffic Analysis Report	5 copies and pdf file
Geotechnical Report	5 copies and pdf file
Preliminary Hydrology/Hydraulics Report	5 copies and pdf file
Initial Study	50 copies and pdf file

Description	Number of Drawings/Documents
Biological Technical Reports	3 copies and pdf file
Air Quality Technical Reports	3 copies and pdf file
Noise Technical Reports	3 copies and pdf file
Cultural Resource Report	3 copies and pdf file
Screencheck 1 plus technical app. (250 pages)	10 copies and pdf file
Screencheck 2 plus technical app. (250 pages)	10 copies and pdf file
Check print plus technical appendices (250 pages)	2 copies and pdf file
Draft EIR plus technical appendices (250 pages)	50 copies and pdf file
Certification Screencheck 1 (50 pages)	10 copies and pdf file
Certification Screencheck 2 (50 pages)	10 copies and pdf file
Final EIR (200 pages)	50 copies and pdf file
Public Meetings Exhibits	1 set
Preliminary Engineering Report (including Prelim Eng. Plans & estimates)	5 copies and pdf file

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 December 30, 2020, unless extended by supplemental agreement.

A. PHASES

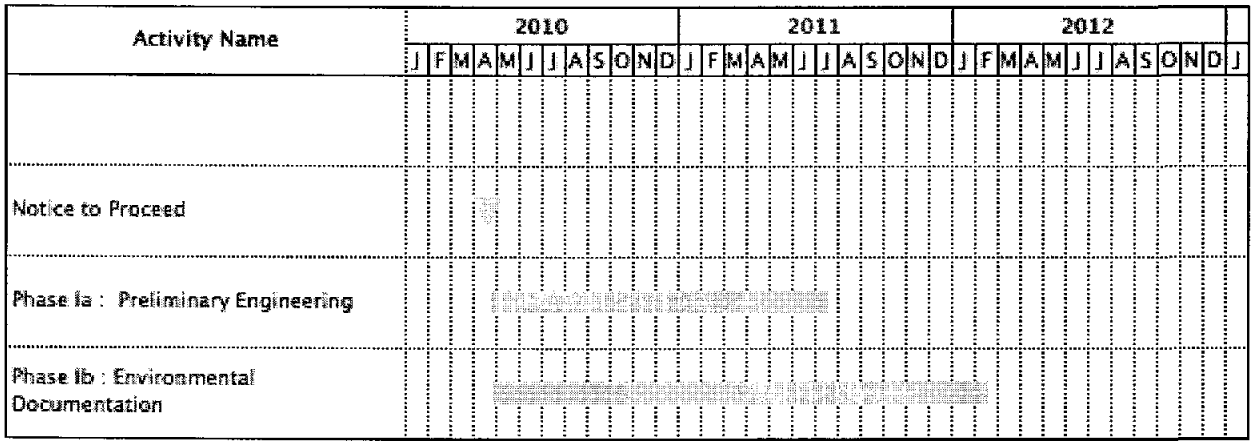
The Schedule is being performed in one Phase:

Phase Ia – Preliminary Engineering

Phase Ib – Preliminary Documentation / Clearance

B. GANTT CHART

A gantt chart is provided below that graphically illustrates the sequencing and completion time for the project phases.



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 prorata 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 ..... 0 %

   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 ..... 155.32 %

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..... 155.32 %

(sum of Payroll Additives and Overhead Costs)

B. FIXED FEE

1. The Total Fixed Fee payable to the ENGINEER is $54,595.94 (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
Mileage	.55	Mile
Reproduction	$28,758	Force Account / Actual Cost
Field Supplies, GPS, Etc	$2,000	Force Account / Actual Cost
Record Search	$2,000	Force Account / Actual Cost
401/CDFG CEQA/1602	$15,000	Force Account / Actual Cost

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.

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

Direct Salary Range of Rates shown herein are in effect for the duration of the Agreement. In the event ENGINEER desires to adjust the rates as shown; ENGINEER shall notify COUNTY in writing requesting a change. All adjustments to the Range of Rates shall be subject to approval by the County Director of Transportation, or his designee.

POSITION OR CLASSIFICATION HOURLY RATES

Project Manager	72.00	hour
QA/QC	60.00	hour
Sr. Project Engineer	58.00	hour
Project Engineer	44.00	hour
Engineer	33.00	hour
GIS/CADD Technician	31.00	hour
Project Admin/ Clerical	23.00	hour
Senior Environmental PM	62.00	hour
Environmental Manager	50.00	hour
Senior Planner/ Scientist	40.00	hour
Biologist/ Planner/ Archeologist	35.00	hour

The above rates are for ENGINEER only. All rates for subconsultants to ENGINEER will be in accordance with the cost proposal.

ARTICLE CIII • INVOICING

ENGINEER shall submit invoices in accordance with the Engineering Services Agreement ARTICLE VI • COMPENSATION and with the following requirements.

1. Charges shall be billed in accordance with the terms and rates included herein, unless otherwise agreed in writing by the County Contract Administrator.

2. Base Work and Extra Work shall be charged separately, and the charges for each Phase listed in Appendix B, Schedule of Services, shall be listed separately. The charges for each individual assigned under this Agreement shall be listed separately.
3. Charges of $500.00 or more for any one item of Additional Direct Costs shall be accompanied by substantiating documentation such as invoices, telephone logs, etc.
4. Each invoice shall indicate payments to DBE subconsultants or supplies by dollar amount and as a percentage of the total invoice and shall state the DBE goals as a percentage of Total Agreement Value.
5. Each invoice shall bear a certification signed by the Engineering Contract Manager or an officer of the firm which reads as follows:

   I hereby certify that the hours and salary rates charged in this invoice are the actual hours and rates worked and paid to the employees listed.

ARTICLE CIV • PAYMENT

Progress payments shall be made in accordance with the Engineering Services, Agreement ARTICLE VI • COMPENSATIONS.

ARTICLE CV • COST PROPOSAL

The following cost proposal reflects the negotiated targeted contract amount. The cost proposal will serve as a guideline and reference document during the execution of this contract. ENGINEER shall be compensated in accordance with the rates provided. The total amount of the contract is not to exceed **$929,834.24** (not including contingency), and reimbursement is to be made at actual cost plus fixed fee for the contractors shown in the attached ENGINEER's cost proposal. In addition to ENGINEER's cost proposal budget, a general contingency budget in the amount of **$150,000** will be held in reserve by COUNTY 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.

A potential need for a bride structure has been identified for this project. However, due to the limited potential for including a bridge and the high cost of design, it has been decided to not include the cost in this agreement. An amendment to this agreement will be required to incorporate the scope and budget to provide bridge design services in the event they are required.

BUTTERFIELD STAGE ROAD

FEE PROPOSAL SUMMARY

	PHASE IA	PHASE IB			TOTALS
TRC	$259,431.34	$402,274.49			$661,705.83
Earth Mechanics, Inc.	$10,182.71				$10,182.71
Intueor		$83,571.90			$83,571.90
Wilson & Company	$108,783.80				$108,783.80
Environmental Subconsultants		$65,590.00			$65,590.00
TOTALS	$378,397.85	$551,436.39			$929,834.24

Phase IA: Preliminary Engineering
Phase IB: Environmental Document

COMPANY:	SCOPE OF WORK	DATE:	REV:
TRC	Project Summary	3/24/10	7
PROJECT:		**MILESTONE/PHASE/PROJ SUMMARY:**	
Butterfield Stage Road Extension		All Phases	

DIRECT LABOR

PERSONNEL	FUNCTION	HOURS		RATE	AMOUNT
Ross Lew	Project Manager	352	@	$72.00	$25,344.00
	QA/QC	89	@	$60.00	$5,340.00
	Sr. Project Engineer	294	@	$58.00	$17,052.00
	Project Engineer	182	@	$44.00	$8,008.00
	Engineer	594	@	$33.00	$19,602.00
	GIS/CADD Technician	580	@	$31.00	$17,980.00
	Project Admin/ Clerical	380	@	$23.25	$8,835.00
Elisha Back	Senior Environmental PM	335	@	$62.10	$20,803.50
	Environmental Manager	401	@	$50.00	$20,050.00
	Senior Planner/ Scientist	802	@	$40.00	$32,080.00
	Biologist/ Planner/ Archeologist	1110	@	$35.00	$38,850.00
	TOTAL HOURS	5119		TOTAL DIRECT LABOR	$213,944.50

MULTIPLIERS

ESCALATION @	5.00% (Rate)		
OVERHEAD @	155.32% (of Total Direct Labor + Escalation)	$332,298.60	
PAYROLL ADDITIVES @	(of Total Direct Labor + Escalation)		
		TOTAL MULTIPLIERS	$332,298.60

OTHER DIRECT EXPENSES ••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Mileage	2,120	Mile	@	$0.550	$1,166.00
Reproduction	1	Lump Sum	@	$21,120.00	$21,120.00
Exhibits, Overnight Mail, Photos, Toll, etc..	1	Lump Sum	@	$6,146.00	$6,146.00
Field Supplies, GPS, etc.	1	Lump Sum	@	$2,000.00	$2,000.00
Record Search	1	Lump Sum	@	$2,000.00	$2,000.00
401/CDFG CEQA/1602 Fees	1	Lump Sum	@	$15,000.00	$15,000.00
				TOTAL OTHER DIRECT EXPENSES	$47,432.00

OUTSIDE SERVICES (w/o fee)

COMPANY	LABOR	MULTIPLIER	EXPENSES	TOTAL
Earth Mechanics, Inc.	$9,982.71		$200.00	$10,182.71
Intueor	$74,183.70		$9,388.20	$83,571.90
Wilson & Company	$57,166.30		$51,617.50	$108,783.80
Vandermost Consulting Services	$12,000.00		$250.00	$12,250.00
Wieland Acoustics	$23,870.00		$310.00	$24,180.00
Yorke Engineering	$28,810.00		$350.00	$29,160.00
				$268,128.41
			TOTAL OUTSIDE SERVICES	

FEES

OUTSIDE SERVICES ADMIN FEE @	5.00% (of Total Outside Services & Outside Services Fees)	$13,406.42	
TRC @	10.00% (of Total Direct Labor + Total Multipliers)	$54,624.31	
OUTSIDE SERVICES @	(of Total Labor + Total Multiplier for Outside Services)		
		TOTAL FEES	$68,030.73
		TOTAL COST	**$929,834.24**

COMPANY:	SCOPE OF WORK	DATE:	REV:
TRC	Preliminary Engineering	3/24/10	7
PROJECT:		**MILESTONE/PHASE/PROJ SUMMARY:**	
Butterfield Stage Road Extension		Phase IA	

DIRECT LABOR

PERSONNEL	FUNCTION	HOURS		RATE	AMOUNT
Ross Lew	Project Manager	314	@	$72.00	$22,608.00
	QA/QC	76	@	$60.00	$4,560.00
	Sr. Project Engineer	286	@	$58.00	$16,588.00
	Project Engineer	168	@	$44.00	$7,392.00
	Engineer	586	@	$33.00	$19,338.00
	GIS/CADD Technician	242	@	$31.00	$7,502.00
	Project Admin/ Clerical	124	@	$23.25	$2,883.00
Elisha Back	Senior Environmental PM	76	@	$62.10	$4,719.60
	Environmental Manager			$50.00	
	Senior Planner/ Scientist	30	@	$40.00	$1,200.00
	Biologist/ Planner/ Archeologist	70	@	$35.00	$2,450.00
	TOTAL HOURS	1972		TOTAL DIRECT LABOR	$89,240.60

MULTIPLIERS

ESCALATION @		(Rate)	
OVERHEAD @	155.32%	(of Total Direct Labor + Escalation)	$138,608.50
PAYROLL ADDITIVES @		(of Total Direct Labor + Escalation)	
		TOTAL MULTIPLIERS	$138,608.50

OTHER DIRECT EXPENSES --- Billed at Actual Cost ---

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Mileage	1060	Mile	@	$0.550	$583.00
Reproduction	1	Lump Sum	@	$1,120.00	$1,120.00
Exhibits, Overnight Mail, Photos, Toll, etc..	1	Lump Sum	@	$1,146.00	$1,146.00
Field Supplies, GPS, etc.		Lump Sum			
Record Search		Lump Sum			
401/CDFG CEQA/1602 Fees		Lump Sum			
		TOTAL OTHER DIRECT EXPENSES			$2,849.00

OUTSIDE SERVICES (w/o fee)

COMPANY	LABOR	MULTIPLIER	EXPENSES	TOTAL
Earth Mechanics, Inc.	$9,982.71		$200.00	$10,182.71
Intueor				
Wilson & Company	$57,166.30		$51,617.50	$108,783.80
Vandermost Consulting Services				
Wieland Acoustics				
Yorke Engineering				
			TOTAL OUTSIDE SERVICES	$118,966.51

FEES

OUTSIDE SERVICES ADMIN FEE @	5.00%	(of Total Outside Services & Outside Services Fees)	$5,948.33
TRC @	10.00%	(of Total Direct Labor + Total Multipliers)	$22,784.91
OUTSIDE SERVICES @		(of Total Labor + Total Multiplier for Outside Services)	
		TOTAL FEES	$28,733.24
		TOTAL COST	**$378,397.84**

COMPANY:	SCOPE OF WORK	DATE:	REV:
TRC	Environmental Document	3/24/10	7
PROJECT:		**MILESTONE/PHASE/PROJ SUMMARY:**	
Butterfield Stage Road Extension		Phase IB	

DIRECT LABOR

PERSONNEL	FUNCTION	HOURS		RATE	AMOUNT
Ross Lew	Project Manager	38	@	$72.00	$2,736.00
	QA/QC	13	@	$60.00	$780.00
	Sr. Project Engineer	8	@	$58.00	$464.00
	Project Engineer	14	@	$44.00	$616.00
	Engineer	8	@	$33.00	$264.00
	GIS/CADD Technician	338	@	$31.00	$10,478.00
	Project Admin/ Clerical	256	@	$23.25	$5,952.00
Elisha Back	Senior Environmental PM	259	@	$62.10	$16,083.90
	Environmental Manager	401	@	$50.00	$20,050.00
	Senior Planner/ Scientist	772	@	$40.00	$30,880.00
	Biologist/ Planner/ Archeologist	1040	@	$35.00	$36,400.00
	TOTAL HOURS	3147		TOTAL DIRECT LABOR	$124,703.90

MULTIPLIERS

ESCALATION @	(Rate)		
OVERHEAD @	155.32% (of Total Direct Labor + Escalation)	$193,690.10	
PAYROLL ADDITIVES @	(of Total Direct Labor + Escalation)		
		TOTAL MULTIPLIERS	$193,690.10

OTHER DIRECT EXPENSES --- Billed at Actual Cost ---

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Mileage	1060	Mile	@	$0.550	$583.00
Reproduction	1	Lump Sum	@	$20,000.00	$20,000.00
Exhibits, Overnight Mail, Photos, Toll, etc..	1	Lump Sum	@	$5,000.00	$5,000.00
Field Supplies, GPS, etc.	1	Lump Sum	@	$2,000.00	$2,000.00
Record Search	1	Lump Sum	@	$2,000.00	$2,000.00
401/CDFG CEQA/1602 Fees	1	Lump Sum	@	$15,000.00	$15,000.00
				TOTAL OTHER DIRECT EXPENSES	$44,583.00

OUTSIDE SERVICES (w/o fee)

COMPANY	LABOR	MULTIPLIER	EXPENSES	TOTAL
Earth Mechanics, Inc.				
Intueor	$74,183.70		$9,388.20	$83,571.90
Wilson & Company				
Vandermost Consulting Services	$12,000.00		$250.00	$12,250.00
Wieland Acoustics	$23,870.00		$310.00	$24,180.00
Yorke Engineering	$28,810.00		$350.00	$29,160.00
			TOTAL OUTSIDE SERVICES	$149,161.90

FEES

OUTSIDE SERVICES ADMIN FEE @	5.00% (of Total Outside Services & Outside Services Fees)	$7,458.10	
TRC @	10.00% (of Total Direct Labor + Total Multipliers)	$31,839.40	
OUTSIDE SERVICES @	(of Total Labor + Total Multiplier for Outside Services)		
		TOTAL FEES	$39,297.49
		TOTAL COST	**$551,436.39**

COMPANY:	SCOPE OF WORK	DATE:	REV:
Earth Mechanics, Inc.	Geotechnical	3/24/10	7
PROJECT:		**MILESTONE/PHASE/PROJ SUMMARY:**	
Butterfield Stage Road Extension		Phase IA	

DIRECT LABOR

PERSONNEL	FUNCTION		HOURS		RATE	AMOUNT	
Arul K. Arulmoli	PM	Geotech. Lead	10	@	$68.10	$681.00	
	Princ. Eng.	Pavement Design	9	@	$53.00	$477.00	
	Sr. Eng.	Geotech. Report			$45.50		
	Sr. Geol.	Geology	8	@	$43.00	$344.00	
	Proj. Eng.	Geotech. Support	34	@	$35.25	$1,198.50	
	Staff Eng.	Geotech. Support	12	@	$29.50	$354.00	
	Sr. Tech.	Field Work	8	@	$40.50	$324.00	
	Sr. Tech.	Lab Testing			$27.25		
	Admin	Admin. Support	2	@	$22.00	$44.00	
		TOTAL HOURS	83			TOTAL DIRECT LABOR	$3,422.50

MULTIPLIERS

ESCALATION @		(Rate)		
OVERHEAD @	185.00%	(of Total Direct Labor + Escalation)	$5,647.13	
PAYROLL ADDITIVES @		(of Total Direct Labor + Escalation)		
			TOTAL MULTIPLIERS	$5,647.13

OTHER DIRECT EXPENSES *** Billed at Actual Cost ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT	
Mileage, Copying, Express mail	1	@	$200.00	$200.00	
			TOTAL OTHER DIRECT EXPENSES		$200.00

OUTSIDE SERVICES (w/o fee)

COMPANY	LABOR	MULTIPLIER	EXPENSES	TOTAL
			TOTAL OUTSIDE SERVICES	

FEES

OUTSIDE SERVICES ADMIN FEE @	5.00%	(of Total Outside Services & Outside Services Fees)		
EARTH MECHANICS, INC. @	10.00%	(of Total Direct Labor + Total Multipliers)	$913.08	
OUTSIDE SERVICES @		(of Total Labor + Total Multiplier for Outside Services)		
			TOTAL FEES	$913.08
			TOTAL COST	$10,182.71

COMPANY:	SCOPE OF WORK	DATE:	REV:
Intueor	Traffic	3/24/10	7
PROJECT:		**MILESTONE/PHASE/PROJ SUMMARY:**	
Butterfield Stage Road Extension		Phase IB	

DIRECT LABOR

PERSONNEL	FUNCTION	HOURS		RATE	AMOUNT
Vijay Mididaddi	Lead Engineer	86	@	$72.00	$6,192.00
	Transportation Engineer	382	@	$48.00	$18,336.00
	Jr. Engineer	72	@	$34.00	$2,448.00
	TOTAL HOURS	540		TOTAL DIRECT LABOR	$26,976.00

MULTIPLIERS

ESCALATION @	(Rate)		
OVERHEAD @	150.00% (of Total Direct Labor + Escalation)	$40,464.00	
PAYROLL ADDITIVES @	(of Total Direct Labor + Escalation)		
		TOTAL MULTIPLIERS	$40,464.00

OTHER DIRECT EXPENSES *** Billed at Actual Cost ***

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Traffic Counts - Intersections	12		@	$450.00	$5,400.00
Reproduction	10	1	@	$50.00	$500.00
Mileage	524	1	@	$0.550	$288.20
Postage & FedEx	5	1	@	$20.00	$100.00
County Charges for Traffic Modeling	1	1	@	$1,000.00	$1,000.00
Traffic Counts - Roadway Segments	12	1	@	$175.00	$2,100.00
				TOTAL OTHER DIRECT EXPENSES	$9,388.20

OUTSIDE SERVICES (w/o fee)

COMPANY	LABOR	MULTIPLIER	EXPENSES	TOTAL
			TOTAL OUTSIDE SERVICES	

FEES

OUTSIDE SERVICES ADMIN FEE @	5.00% (of Total Outside Services & Outside Services Fees)		
INTUEOR @	10.00% (of Total Direct Labor + Total Multipliers)	$6,743.70	
OUTSIDE SERVICES @	(of Total Labor + Total Multiplier for Outside Services)		
		TOTAL FEES	$6,743.70
		TOTAL COST	**$83,571.90**

COMPANY:	SCOPE OF WORK	DATE:	REV:
Wilson & Company	Utility	3/24/10	7
PROJECT:		**MILESTONE/PHASE/PROJ SUMMARY:**	
Butterfield Stage Road Extension		Phase IA	

DIRECT LABOR

PERSONNEL	FUNCTION	HOURS		RATE	AMOUNT
	QAQC Oversite	2	@	$75.00	$150.00
	Project Manager	34	@	$54.38	$1,848.92
	Project Engineer	222	@	$51.00	$11,322.00
	Engineer	100	@	$33.80	$3,380.00
	CADD Tech.	96	@	$23.50	$2,256.00
	Sr. Admin.	16	@	$26.50	$424.00
		TOTAL HOURS	470	TOTAL DIRECT LABOR	$19,380.92

MULTIPLIERS

ESCALATION @	(Rate)		
OVERHEAD @	112.64% (of Total Direct Labor + Escalation)	$21,830.67	
PAYROLL ADDITIVES @	55.51% (of Total Direct Labor + Escalation)	$10,758.35	
		TOTAL MULTIPLIERS	$32,589.02

OTHER DIRECT EXPENSES ••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Travel	450	1	@	$0.550	$247.50
Reproduction	1	Lump Sum	@	$1,000.00	$1,000.00
Special Deliveries	1	Lump Sum	@	$125.00	$125.00
Potholing (w/permit fees)	1	Lump Sum	@	$50,245.00	$50,245.00
				TOTAL OTHER DIRECT EXPENSES	$51,617.50

OUTSIDE SERVICES (w/o fee)

COMPANY	LABOR	MULTIPLIER	EXPENSES	TOTAL
			TOTAL OUTSIDE SERVICES	

FEES

OUTSIDE SERVICES ADMIN FEE @	5.00% (of Total Outside Services & Outside Services Fees)		
WILSON & COMPANY @	10.00% (of Total Direct Labor + Total Multipliers)	$5,196.36	
OUTSIDE SERVICES @	(of Total Labor + Total Multiplier for Outside Services)		
		TOTAL FEES	$5,196.36
		TOTAL COST	**$108,783.80**

COMPANY:	SCOPE OF WORK	DATE:	REV:
Vandermost Consulting Services	MSHCP	3/24/10	7
PROJECT:		**MILESTONE/PHASE/PROJ SUMMARY:**	
Butterfield Stage Road Extension		Phase IB	

DIRECT LABOR

PERSONNEL	FUNCTION	HOURS		RATE	AMOUNT
	Environmental Manager	80	@	$150.00	$12,000.00
	TOTAL HOURS	80		TOTAL DIRECT LABOR	$12,000.00

MULTIPLIERS

ESCALATION @	(Rate)	$0.00
OVERHEAD @	(of Total Direct Labor + Escalation)	$0.00
PAYROLL ADDITIVES @	(of Total Direct Labor + Escalation)	$0.00
	TOTAL MULTIPLIERS	$0.00

OTHER DIRECT EXPENSES --- Billed at Actual Cost ---

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Reproduction	1	Lump Sum	@	$250.00	$250.00
		TOTAL OTHER DIRECT EXPENSES			$250.00

OUTSIDE SERVICES (w/o fee)

COMPANY	LABOR	MULTIPLIER	EXPENSES	TOTAL
			TOTAL OUTSIDE SERVICES	$0.00

FEES

OUTSIDE SERVICES ADMIN FEE @	(of Total Outside Services & Outside Services Fees)	$0.00
VANDERMOST CONSULTING SERVICES @	(of Total Direct Labor + Total Multipliers)	$0.00
OUTSIDE SERVICES @	(of Total Labor + Total Multiplier for Outside Services)	$0.00
	TOTAL FEES	$0.00
	TOTAL COST	**$12,250.00**

COMPANY:	SCOPE OF WORK	DATE:	REV:
Wieland Acoustics	Noise Analysis	3/24/10	7
PROJECT:		**MILESTONE/PHASE/PROJ SUMMARY:**	
Butterfield Stage Road Extension		Phase IB	

DIRECT LABOR

PERSONNEL	FUNCTION	HOURS		RATE	AMOUNT
	Principal Consultant	58	@	$120.00	$6,960.00
	Senior Consultant	178	@	$95.00	$16,910.00
	TOTAL HOURS	236		TOTAL DIRECT LABOR	$23,870.00

MULTIPLIERS

ESCALATION @	(Rate)
OVERHEAD @	(of Total Direct Labor + Escalation)
PAYROLL ADDITIVES @	(of Total Direct Labor + Escalation)
	TOTAL MULTIPLIERS

OTHER DIRECT EXPENSES ••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Reproduction	1	Lump Sum	@	$310.00	$310.00
				TOTAL OTHER DIRECT EXPENSES	$310.00

OUTSIDE SERVICES (w/o fee)

COMPANY	LABOR	MULTIPLIER	EXPENSES	TOTAL
			TOTAL OUTSIDE SERVICES	

FEES

OUTSIDE SERVICES ADMIN FEE @	(of Total Outside Services & Outside Services Fees)
WIELAND ACOUSTICS @	(of Total Direct Labor + Total Multipliers)
OUTSIDE SERVICES @	(of Total Labor + Total Multiplier for Outside Services)
	TOTAL FEES
	TOTAL COST $24,180.00

COMPANY:	SCOPE OF WORK	DATE:	REV:
Yorke Engineering	Air Quality	3/24/10	7
PROJECT:		**MILESTONE/PHASE/PROJ SUMMARY:**	
Butterfield Stage Road Extension		Phase IB	

DIRECT LABOR

PERSONNEL	FUNCTION	HOURS		RATE	AMOUNT
	Senior Engineer	160	@	$135.00	$21,600.00
	Engineer	40	@	$125.00	$5,000.00
	Principal Engineer II	10	@	$165.00	$1,650.00
	Admin	8	@	$70.00	$560.00
	TOTAL HOURS	218		TOTAL DIRECT LABOR	$28,810.00

MULTIPLIERS

ESCALATION @	(Rate)
OVERHEAD @	(of Total Direct Labor + Escalation)
PAYROLL ADDITIVES @	(of Total Direct Labor + Escalation)
	TOTAL MULTIPLIERS

OTHER DIRECT EXPENSES ••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Reproduction	1	Lump Sum	@	$350.00	$350.00
				TOTAL OTHER DIRECT EXPENSES	$350.00

OUTSIDE SERVICES (w/o fee)

COMPANY	LABOR	MULTIPLIER	EXPENSES	TOTAL
				TOTAL OUTSIDE SERVICES

FEES

OUTSIDE SERVICES ADMIN FEE @	(of Total Outside Services & Outside Services Fees)
YORKE ENGINEERING @	(of Total Direct Labor + Total Multipliers)
OUTSIDE SERVICES @	(of Total Labor + Total Multiplier for Outside Services)
	TOTAL FEES
	TOTAL COST $29,160.00

COMPANY:	SCOPE OF WORK	DATE:	REVISION:
TRC		3/24/10	7
PROJECT:		MILESTONE/PHASE/PROJECT SUMMARY:	
Butterfield Stage Road Extension		Project Summary	

TRC Summary

TASK	Project Manager	QA/QC	Sr. Project Engineer	Project Engineer	Engineer	GIS/CADD Technician	Project Admin/ Clerical	Sum or Environmental PM	Environmental Manager	Senior Planner/ Scientist	Biologist/ Planner/ Archeologist				TOTAL
	$72.00	$60.00	$58.00	$44.00	$33.00	$31.00	$23.25	$62.10	$50.00	$40.00	$35.00				
Phase IA Subtotal	314	76	286	168	586	242	124	76		30	70				1,972
Phase IB Subtotal	38	13	8	14	8	338	256	259	401	772	1,040				3,147
Totals	352	89	294	182	594	580	380	335	401	802	1,110				5,119

Earth Mechanics, Inc. Summary

	PM	Princ. Eng.	Sr. Eng.	Sr. Geol.	Proj. Eng.	Staff Eng.	Sr. Tech.	Sr. Tech.	Admin						TOTAL
	$68.10	$53.00	$45.50	$43.00	$35.25	$29.50	$40.50	$27.25	$22.00						
	10	9		8	34	12	8		2						83

Intueor Summary

	Lead Engineer	Transportation Engineer	Jr. Engineer												TOTAL
	$72.00	$48.00	$34.00												
	86	382	72												540

Wilson & Company Summary

	QA/QC Oversite	Project Manager	Project Engineer	Engineer	CADD Tech	Sr. Admin									TOTAL
	$75.00	$54.38	$51.00	$33.80	$23.50	$26.50									
	2	34	222	100	96	16									470

Vandermost Consulting Services

	Environmental Manager														TOTAL
	80														80

Wieland AcousticsSummary

	Principal Consultant	Senior Consultant													TOTAL
	$120.00	$95.00													
	58	178													236

Yorke

	Senior Engineer	Engineer	Principal Engineer II	Admin											TOTAL
	$135.00	$125.00	$165.00	$70.00											
	160	40	10	8											218

COMPANY:	SCOPE OF WORK	DATE:	REVISION:
TRC	Preliminary Engineering	3/24/10	7
PROJECT:		MILESTONE/PHASE/PROJECT SUMMARY:	
Butterfield Stage Road Extension		Phase 1A	

TASK	Project Manager	QA/QC	Sr. Project Engineer	Project Engineer	Engineer	GIS/CADD Technician	Project Admin/ Clerical	Senior Environmental Pln	Environmental Manager	Senior Planner/ Scientist	Principal Planner/ Archeologist				TOTAL
Total Manhours	314	76	288	168	586	242	124	76		30	70				1,972
PROJECT CONTROL															
SCHEDULES	8														8
PROJECT WORK PLAN AND SETUP	6		8				8								22
QUALITY CONTROL PLAN		4					4								8
DATA COLLECTION															
RECORD DRAWINGS/ INFORMATION															
Agencies As-Builts & Review					20	16									36
FIELD REVIEW	4			8	8										20
PRELIMINARY ENGINEERING															
RIGHT OF ENTRIES			8		80	24					40				152
PRELIMINARY HYDROLOGY & HYDRAULICS CALCULATIONS & REPORT			160		80	20									260
WATER QUALITY MANAGEMENT PLAN			40	90	146	40	20	4		30	30				400
PRELIMINARY DESIGN															
Roadway Design (2 Alignments)	6		8	16	120	120									270
Cost Estimate			4	12	24										40
Obtain & Review Right of Way Maps			12		28										40
Right of Way Determination			8	40		12									60
PRELIMINARY ENGINEERING REPORT	2		6	2	80	10	20								120
MILESTONE MANAGEMENT															
Milestone Management (12 months)	240	72					72	72							456
Coordination Meetings (12)	48		32												80

COMPANY:	SCOPE OF WORK	DATE:	REVISION:
TRC	Environmental Document	3/24/10	7
PROJECT:		MILESTONE/PHASE/PROJECT SUMMARY:	
Butterfield Stage Road Extension		Phase 1B	

TASK	Project Manager	GIS/DC	Sr. Project Engineer	Project Engineer	Engineer	GIS/CADD Technician	Project Admin/ Clerical	Senior Environmental PM	Environmental Manager	Senior Planner/ Scientist	Biologist/ Planner/ Archeologist				TOTAL
Total Manhours	38	13	8	14	8	338	256	259	401	772	1,040				**3,147**
INITIAL STUDY/NOP		2				24	8	8	16	40	80				**178**
SCOPING MEETING	8		8			10	4	6	12	12	24				**86**
RESPOND TO NOP COMMENTS/REFINE SCOPE						16	16	16	24	40	40				**152**
PREPARE SCREENCHECK EIR		4				80	80	40	80	160	300				**744**
BIOLOGICAL RESOURCES TECHNICAL REPORT		2				80	24	17	39	80	40				**282**
WETLAND DELINEATON REPORT		1				40	16	8	40	40	100				**245**
CULTURAL TECHNICAL REPORT		1				24	16	8		140	100				**289**
PHASE I ESA		1		6		24	4	2	2		80				**119**
OPEN HOUSE MEETING	10			8	8	16	8	8	8		16				**82**
RESPOND TO COMMENTS/PREPARE FINAL EIR		2					80	40	80	60	80				**342**
AGENCY COORDINATION/ MEETINGS	20							60	60	40	40				**220**
ENVIRONMENTAL PERMITTING								40	40	120	120				**320**
WETLAND MITIGATION PLAN						24		4		40	20				**88**

COMPANY:	SCOPE OF WORK	DATE:	REVISION:
Earth Mechanics, Inc.	Geotechnical	3/24/10	7
PROJECT:		**MILESTONE/PHASE/PROJECT SUMMARY:**	
Butterfield Stage Road Extension		Phase IA	

TASK	PM	Princ. Eng.	Sr. Eng.	Sr. Geol.	Proj. Eng.	Staff Eng.	Sr. Tech.	Sr. Tech.	Admin				TOTAL
Total Manhours	10	9		8	34	12	8		2				**83**
Phase IA - Preliminary Geotechnical Report	10	9		8	34	12	8		2				**83**

COMPANY:	SCOPE OF WORK	DATE:	REVISION:
Intueor	Traffic	3/24/10	7
PROJECT:		**MILESTONE/PHASE/PROJECT SUMMARY:**	
Butterfield Stage Road Extension		Phase IB	

TASK	Lead Engineer	Transportation Engineer	Jr. Engineer								TOTAL
Total Manhours	86	382	72								**540**
PHASE I											
Meetings (4)	8	8									16
Research & Coordination	2	8									10
Data Collection - Field Visit		4	4								8
Data Collection - Traffic Counts		8									8
Exist LOS - Intersections (12)	1	5	2								8
Exist LOS - Street Segments (12)	1	5	2								8
Exist - Signal Warrants (12)	1	5	2								8
Exist - Accident Analysis	1	12									13
Exist Conditions - Technical Memo (figures & tables)	4	40	12								56
Coordinate to Obtain Build-out Model Forecasts (ADT, AM, PM)	4	16									20
Socio Economic Data Analysis	4	10	2								16
Determine 2035 Roadway Segment Volumes (ADT, AM, PM)	2	6	2								10
Determine 2035 Intersection Volumes (AM, PM) using B-Turns for ALL scenarios	4	34	10								48
Obtain Growth Rate between 2035 & 2012 (opening Year)	2	2									4
Use Growth Rate and determine 2012 Roadway and Intersection Volumes	4	12	4								20
Adjusting forecasts for reasonableness	4	8									12
Forecasted Volumes - Technical Memo	4	34	18								56
Respond to Comments	4	8									12
Finalize Future Volumes	6	22									28

COMPANY:		SCOPE OF WORK	DATE:	REVISION:
Intueor		Traffic	3/24/10	7
PROJECT:			MILESTONE/PHASE/PROJECT SUMMARY:	
Butterfield Stage Road Extension			Phase IB	

TASK	Lead Engineer	Transportation Engineer	Jr. Engineer								TOTAL
Future - Signal Warrants (24)	2	9									11
Open Day Build Analysis - Intersections (12)	1	7									8
Open Day Build Analysis - Street Segments (12)	1	7									8
Open Day No-Build Analysis - Intersections (12)	1	7									8
Open Day No-Build Analysis - Street Segments (12)	1	7									8
Future Year Build Analysis - Intersections (12)	1	7									8
Future Year Build Analysis - Street Segments (12)	1	7									8
Future Year No-Build Analysis - Intersections (12)	1	7									8
Future Year No-Build Analysis - Street Segments (12)	1	7									8
Mitigation Measures	8	8									16
Draft Traffic Technical Memo	4	34	10								48
Review and Respond to Comments	4	8									12
Final Traffic Technical Memo	4	20	4								28

COMPANY:	SCOPE OF WORK	DATE:	REVISION:
Wilson & Company	Utility	3/24/10	7 9/7/09
PROJECT:		**MILESTONE/PHASE/PROJECT SUMMARY:**	
Butterfield Stage Road Extension		Phase IA	

TASK	QA/QC Oversite	Project Manager	Project Engineer	Engineer	CADD Tech.	Sr. Admin.					TOTAL
Total Manhours	2	34	222	100	96	16					**470**
PHASE 1A - UTILITY COORDINATION											
As-built, inventory maps, and utility base maps.			24	40	40						**104**
Utility field verification			8	8							**16**
Utility and County meetings and communication		20	100			16					**136**
Conflict and relocation resolution. Utility relocation reviews.	2	12	40	40	40						**134**
Potholing Coordination (Office and Field)		2	50	12	16						**80**

COMPANY:	SCOPE OF WORK	DATE:	REVISION:
Vandermost Consulting Services	MSHCP	3/24/10	7
PROJECT:		**MILESTONE/PHASE/PROJECT SUMMARY:**	
Butterfield Stage Road Extension		Phase IB	

TASK	Environmental Manager											TOTAL
Total Manhours	80	0	0	0	0	0	0	0	0	0	0	**80**
Biological Resources Support - MSHCP	80											80

COMPANY:	SCOPE OF WORK	DATE:	REVISION:
Wieland Acoustics	Noise Analysis	3/24/10	7
PROJECT:		**MILESTONE/PHASE/PROJECT SUMMARY:**	
Butterfield Stage Road Extension		Phase IB	

TASK	Principal Consultant	Senior Consultant								TOTAL
Total Manhours	58	178								236
Discuss acoustical issues and constraints	2									2
Establish significance criteria	2									2
Conduct survey of study area	8	8								16
Obtain ambient noise measurements	4	20								24
Analyze existing noise environment	4	40								44
Assess impact of existing noise environment	2									2
Analyze future-without-project noise environment	2	8								10
Assess impact of future-without-project noise environment	2									2
Develop operational scenario for construction activities	4									4
Analyze construction noise and vibration levels	4	16								20
Analyze future-with-project noise levels	4	40								44
Assess impact of construction noise and vibration	2									2
Assess impact of operational noise environment	2									2
Analyze and identify mitigation measures	4	16								20
Prepare draft report	8	24								32
Respond to comments	2	4								6
Prepare final report	2	2								4

COMPANY:	SCOPE OF WORK	DATE:	REVISION:
Yorke Engineering	Air Quality	3/24/10	7
PROJECT:		**MILESTONE/PHASE/PROJECT SUMMARY:**	
Butterfield Stage Road Extension		Phase IB	

TASK	Senior Engineer	Engineer	Principal Engineer II	Admin								TOTAL
Total Manhours	160	40	10	8								**218**
Construction Emissions	7	8		1								**16**
CO Hot Spot Analysis	50	8	3	2								**63**
PM Hot Spot Analysis	20	8	2	1								**31**
Air Quality Technical Study and CEQA Report	28	8	3	1								**40**
Report Questions and Comment Support	9			2								**11**
GHG Analysis	30	8	2	1								**41**
QA/QC	16											**16**