ACCOUNTING _____
AUDITOR _____
FILE X

AGREEMENT FOR ENGINEERING SERVICES FOR REPLACEMENT OF ST. HELENA CREEK BRIDGE AT WARDLAW STREET (14C-0035) AND REHABILITATION OF COOPER CREEK BRIDGE AT WITTER SPRINGS ROAD (14C-0102) IN LAKE COUNTY, CALIFORNIA

This Agreement is made and entered into this 2nd day of June, 2015, by and between the COUNTY of Lake, hereinafter referred to as "COUNTY", and Quincy Engineering, Inc., hereinafter referred to as "CONSULTANT".

WHEREAS, COUNTY has identified a need to replace the St. Helena Creek Bridge at Wardlaw Street (14C-0035) and rehabilitate the Cooper Creek Bridge at Witter Springs Road (14C-0102); and

WHEREAS, preliminary and final design, environmental services, right of way, bidding and construction assistance services will be required for the above-mentioned bridges, hereinafter referred to as "PROJECT"; and

WHEREAS, CONSULTANT is a licensed professional Civil Engineer in the State of California and is qualified and willing to provide said services.

NOW, THEREFORE, it is mutually agreed by the parties as follows:

I. SCOPE OF SERVICES

A. CONSULTANT shall perform the services described in Exhibit "A", attached hereto and incorporated herein by this reference hereinafter called Scope of Work. In the event of a conflict between this Agreement and Exhibit "A", the provisions of this Agreement shall control.

B. Time of Beginning and Completion of Services: Work on the PROJECT shall begin no later than five (5) calendar days after CONSULTANT's receipt of a COUNTY issued Notice to Proceed. CONSULTANT shall perform services within the times or by the dates provided in Exhibit "A", which by reference is made a part hereof, except that, if applicable, the schedule may be adjusted to reflect any delay in issuance of the Notice to Proceed, or other delay factors not subject to CONSULTANT control.

II. COUNTY'S RESPONSIBILITIES

The COUNTY's responsibilities will include the payment for the CONSULTANT's services and the time period within which payment must be made. Additionally, the COUNTY may agree to provide certain information, documents, work space, and/or materials.

A. COUNTY Furnished Data: COUNTY will provide to CONSULTANT all data in COUNTY's possession relating to CONSULTANT's services on the PROJECT.

B. Access to Facilities and Property: COUNTY will make its facilities accessible to CONSULTANT as required for CONSULTANT's performance of its services. COUNTY will be responsible for all acts of COUNTY's personnel.

C. Advertisements, Permits, and Access: Unless otherwise agreed to in the Scope of Services, COUNTY will obtain, arrange and pay for all advertisements for bids; permits and licenses required by local, state, or federal authorities; and land, easements, rights-of-way, and access necessary for CONSULTANT's services.

D. Timely Review: COUNTY will examine CONSULTANT's studies, reports, sketches, drawings, specifications, proposals, and other documents; obtain advice of an attorney, insurance counselor, accountant, auditor, bond and financial advisors, and other consultants as COUNTY deems appropriate; and render in writing decisions required by COUNTY in a timely manner.

E. Prompt Notice: COUNTY will give prompt written notice to CONSULTANT whenever COUNTY observes or becomes aware of any development that affects the scope or timing of CONSULTANT's services, or of any defect in the work of CONSULTANT.

F. Environmental Clearances: COUNTY will be responsible for all environmental clearances.

G. Asbestos or Hazardous Substances and Indemnification: If asbestos or hazardous substances in any form are encountered or suspected, CONSULTANT will stop its own work in the affected portions of the PROJECT to permit testing and evaluation.

If asbestos is suspected, CONSULTANT will if requested, manage the asbestos remediation activities using a qualified subcontractor at an additional fee and contract terms to be negotiated.

To the maximum extent permitted by law, COUNTY will indemnify CONSULTANT and CONSULTANT's officers, employees, subcontractors, and affiliated corporations from all claims, damages, losses, and costs, including, but not limited to, attorney's fees and litigation or dispute resolution expenses arising out of or relating to the presence, discharge, release, or escape of hazardous substances, contaminants, or asbestos on, under, or from the PROJECT.

III.
CONSULTANT'S REPORT AND/OR MEETINGS

A. The CONSULTANT shall submit progress reports at least once a month. The report should be sufficiently detailed for the COUNTY's Project Manager to determine if the CONSULTANT is performing to expectations or is on schedule, to provide communication of interim findings and to afford occasions for airing difficulties or special problems encountered so remedies can be developed.

B. The CONSULTANT's Project Manager shall meet with the COUNTY's Project Manager as needed to discuss progress on the project(s).

IV.
SUBCONTRACTOR/DBE PARTICIPATION

A. Subcontractors

1. Nothing contained in this Agreement or otherwise, shall create any contractual relation between the Agency and any subcontractors, and no subcontract shall relieve the Contractor of his/her responsibilities and obligations hereunder. The Contractor agrees to be as fully responsible to the Agency for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by any of them as it is for the acts and omissions of persons directly employed by the Contractor. The Contractor's obligation to pay its subcontractors is an independent obligation from the Agency's obligation to make payments to the Contractor.

2. Any subcontract in excess of $25,000, entered into as a result of this Agreement, shall contain all the provisions stipulated in this Agreement to be applicable to subcontractors.

3. Contractor shall pay its subcontractors within ten (10) calendar days from receipt of each payment made to the Contractor by the Agency.

4. Any substitution of subcontractors must be approved in writing by the Agency's Contract Manager in advance of assigning work to a substitute subcontractor.

B. Disadvantaged Business Enterprise (DBE) Participation

1. This Agreement is subject to 49 CFR, Part 26 entitled "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs." Proposers who obtain DBE participation on this contract will assist Caltrans in meeting its federally mandated statewide overall DBE goal.

2. If the contract has a DBE goal, the Consultant must meet the DBE goal by committing DBE participation or document a good faith effort to meet the goal. If a DBE subconsultant is unable to perform, the Consultant must make a good faith effort to replace him/her with another DBE subconsultant, if the goal is not otherwise met.

3. DBEs and other small businesses, as defined in 49 CFR, Part 26 are encouraged to participate in the performance of agreements financed in whole or in part with federal funds. The Consultant or subconsultant shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Agreement. The Consultant shall carry out applicable requirements of 49 CFR, Part 26 in the award and administration of US DOT- assisted agreements. Failure by the Consultant to carry out these requirements is a material breach of this Agreement, which may result in the termination of this Agreement or such other remedy as the local agency deems appropriate.

4. Any subcontract entered into as a result of this Agreement shall contain all of the provisions of this section.

C. Performance of DBE Consultant and other DBE Subconsultants/Suppliers

1. A DBE performs a commercially useful function when it is responsible for execution of the work of the Agreement and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible with respect to materials and supplies used on the Agreement, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. To determine whether a DBE is performing a commercially useful function, evaluate the amount of work subcontracted, industry practices; whether the amount the firm is to be paid under the Agreement is commensurate with the work it is actually performing; and other relevant factors.

2. A DBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, Agreement, or project through which funds are passed in order to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, examine similar transactions, particularly those in which DBEs do not participate.

3. If a DBE does not perform or exercise responsibility for at least 30 percent of the total cost of its Agreement with its own work force, or the DBE subcontracts a greater portion of the work of the Agreement than would be expected on the basis of normal industry practice for the type of work involved, it will be presumed that it is not performing a commercially useful function.

D. Prompt Payment of Funds Withheld to Subcontractors

1. The Agency shall hold retainage from the prime consultant and shall make prompt and regular incremental acceptances of portions, as determined by the Agency, of the contract work, and pay retainage to the prime contractor based on these acceptances. The prime consultant, or subconsultant, shall return all monies withheld in retention from a subconsultant within 30 days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the agency. Federal law (49 CFR26.29) requires that any delay or postponement of payment over 30 days may take place only for good cause and with the agency's prior written approval. Any violation of this provision shall subject the violating

prime consultant or subconsultant to the penalties, sanctions and other remedies specified in Section 7108.5 of the Business and Professions Code. These requirements shall not be construed to limit or impair any contractual, administrative, or judicial remedies, otherwise available to the prime consultant or subconsultant in the event of a dispute involving late payment or nonpayment by the prime contractor, deficient subconsultant performance, or noncompliance by a subcontractor. This provision applies to both DBE and non-DBE prime consultant and subconsultants.

2. Any subcontract entered into as a result of this Agreement shall contain all of the provisions of this section.

E. DBE Records

1. The Consultant shall maintain records of materials purchased and/or supplied from all subcontracts entered into with certified DBEs. The records shall show the name and business address of each DBE or vendor and the total dollar amount actually paid each DBE or vendor, regardless of tier. The records shall show the date of payment and the total dollar figure paid to all firms. DBE prime consultants shall also show the date of work performed by their own forces along with the corresponding dollar value of the work.

2. Upon completion of the Agreement, a summary of these records shall be prepared and submitted on the form entitled, "Final Report-Utilization of Disadvantaged Business Enterprise (DBE), First-Tier Subcontractors," CEM-2402F (Exhibit 17-F, Chapter 17, of the LAPM), certified correct by the Consultant or the Consultant's authorized representative and shall be furnished to the Contract Manager with the final invoice. Failure to provide the summary of DBE payments with the final invoice will result in 25% of the dollar value of the invoice being withheld from payment until the form is submitted. The amount will be returned to the Consultant when a satisfactory "Final Report-Utilization of Disadvantaged Business Enterprises (DBE), First-Tier Subcontractors" is submitted to the Contract Manager.

F. DBE Certification and Decertification Status:

If a DBE sub-consultant is decertified during the life of the Agreement, the decertified sub-consultant shall notify the Consultant in writing with the date of decertification. If a sub-consultant becomes a certified DBE during the life of the Agreement, the sub-consultant shall notify the Consultant in writing with the date of certification. Any changes should be reported to the Agency's Contract Manager within 30 days.

V.
PREVAILING WAGE

A. The CONSULTANT shall comply with the State of California's General Prevailing Wage Rate requirements in accordance with California Labor Code, Section 1770, and all federal, state, and local laws and ordinances applicable to the work.

B. Any subcontract entered into as a result of this contract if for more than $25,000 for public works construction or more than $15,000 for the alteration, demolition, repair, or maintenance of public works, shall contain all of the provisions of this Article.

VI.
COMPENSATION AND TERMS OF PAYMENT

Payment to CONSULTANT will be made as follows:

A. **Invoices and Time of Payment:** Monthly invoices will be issued by CONSULTANT for all services performed under this AGREEMENT. Invoices shall reference the project title and include a detailed breakdown of work items and unit costs by task and project site with a summary of all work completed to date and the cost of work remaining. Invoices are due and payable upon receipt. Each invoice will include a 5% retention amount.

Invoices shall be mailed to the Contract Manager, Fred Pezeshk, at the following address:

County of Lake
Public Works Department
255 N. Forbes Street, Room 309
Lakeport, California 95453
Attn: Fred Pezeshk

Upon satisfactory completion of services enumerated in ARTICLE I herein, the final payment of any balance will be due upon receipt of the final invoice. The final invoice should be submitted within 60-calendar days after completion of the CONSULTANT's work.

B. **Interest:** Interest at the rate of 1-1/2% per month, or that permitted by law if lesser, will be charged on all past-due amounts starting thirty (30) days after receipt of invoice and required documentation. Payments will first be credited to interest and then to principal.

In the event of a disputed or contested billing, only that portion so contested will be withheld from payment, and the undisputed portion will be paid. COUNTY will exercise reasonableness in contesting any bill or portion thereof. No interest will accrue on any contested portion of the billing until mutually resolved.

If COUNTY fails to make payment in full to CONSULTANT for services within sixty (60) days of the date due for any uncontested billing, CONSULTANT may, after giving seven (7) days written notice to COUNTY, suspend services under this AGREEMENT until paid in full, including interest. In the event of suspension of services, CONSULTANT will have no liability to COUNTY for delays or damages caused COUNTY because of such suspension of services.

Compensation: The method of payment for this contract will be based on Actual Rates of Compensation set forth in Exhibit "B" which include labor costs, overhead rates, fee and Direct Costs. Direct Costs for Sub Consultants will be billed as actual costs. No payment will be made prior to approval of any work, nor for any work performed prior to approval of this AGREEMENT. For all services and CONSULTANT shall be paid in accordance with the budget set forth in Exhibit "B" provided however, total payments to CONSULTANT shall not exceed $ 507,110 for St. Helena Creek Bridge at Wardlaw Street (14C-0035), $377,220 for Cooper Creek Bridge at Witter Springs Road (14C-0102), and a total of $884,330 without prior written authorization by COUNTY and formal Amendment to this Agreement.

St. Helena Creek Bridge at Wardlaw Street (14C-0035); Phase 1 Only $366,970.00
St. Helena Creek Bridge at Wardlaw Street (14C-0035); Total $507,110.00

Cooper Creek Bridge at Witter Springs Road (14C-0102); Phase 1 Only $108,070.00
Cooper Creek Bridge at Witter Springs Road (14C-0102); Total $377,220.00

VII.
TERM

This Agreement shall commence on the date hereinabove entered into and shall terminate on December 31, 2018, unless earlier terminated as hereinafter provided. This term may be extended an appropriate period of time in case of unavoidable delays and for consideration of corresponding warranted adjustments in payment by modification of this agreement as hereafter provided.

VIII.
DUE PERFORMANCE - DEFAULT

Each party to this Agreement undertakes the obligation that the other's expectation of receiving the performance due under the terms of this Agreement will not be impaired. Upon the occurrence of any default of the provisions of this Agreement, a party shall give written notice of said default to the party in

default. If the party in default does not cure the default within ten (10) days of the date of that notice (i.e. the time to cure) then such party shall be in default. The time to cure may be extended at the discretion of the party giving notice. Any extension of time to cure shall be in writing executed by both parties and must specify the reason(s) for the extension and the date the extension of time to cure expires.

Notice given under this provision shall specify the alleged default and the applicable Agreement provision and shall demand that the party in default perform the provisions of this Agreement within the applicable time period. No such notice shall be deemed a termination of this Agreement, unless the party giving notice so elects in that notice, or so elects in a subsequent written notice after the time to cure has expired.

IX.
TERMINATION

This Agreement may be terminated as follows:

A. By mutual written consent of the parties; or

B. By COUNTY or Director of Public Works upon thirty (30) days written notice to CONSULTANT.

Upon termination prior to the full and satisfactory completion of CONSULTANT's performance under this Agreement, COUNTY shall not be liable to pay CONSULTANT the total compensation set forth in Article VI of this Agreement, but CONSULTANT shall be paid an amount which bears the same ratio to the total compensation as the services actually performed bear to the total services of the CONSULTANT covered by this Agreement. Upon termination of this contract, ownership and title to all reports, documents, plans, specifications, and estimates produced as part of this contract will automatically be vested in the COUNTY, and no further agreement will be necessary to transfer ownership to the COUNTY.

X.
INSURANCE

CONSULTANT shall not commence work under this Agreement until he has obtained all the insurance required herein, certificates of insurance have been submitted to COUNTY, and said insurance has been approved by COUNTY. The certificates of insurance shall contain a provision that coverage afforded under the policies will not be cancelled until at least thirty (30) days prior written notice has been given to COUNTY, ten (10) days' notice if cancellation is due to nonpayment of premium.

CONSULTANT shall not allow any subcontractor to commence work on his subcontract until the insurance required of the subcontractor has been obtained.

Any failure of CONSULTANT to maintain the insurance required by this provision, or to comply with any of the requirements of this provision, shall constitute a material breach of the entire Agreement. COUNTY shall not be responsible for any premiums or assessments on the policy.

Certificates evidencing the issuance of the following insurance shall be filed with COUNTY within ten (10) days after the date of execution of this Agreement by CONSULTANT and prior to commencement of work hereunder.

A. **Compensation Insurance**. CONSULTANT shall procure and maintain, at CONSULTANT's own expense during the term hereof, Workers' Compensation Insurance and Employer's Liability Insurance as required by the State of California, for all employees to be engaged in work. In any case of such work sublet, CONSULTANT shall require subcontractor similarly to provide Employer's Liability Insurance and Workers' Compensation Insurance for all of the latter's employees to be engaged in such work, unless such employees are covered by the protection afforded by CONSULTANT's Workers' Compensation Insurance and Employer's Liability Insurance. Employer's Liability Insurance shall be in an amount not less than One Million Dollars ($1,000,000.00) per occurrence.

B. **Commercial General Liability**. CONSULTANT shall procure and maintain, at CONSULTANT's own

expense during the term hereof, upon himself and his employees at all times during the course of this Agreement, Commercial General Liability Insurance (Occurrence Form CG 0001) for bodily injury, personal injury, and broad form property damage, in an amount of not than One Million dollars ($1,000,000.00) combined single limit coverage per occurrence, including but not limited to endorsements for the following coverages: Personal and advertising injury, Premises-operations, Products and completed operations, Blanket contractual, and Independent CONSULTANT's liability. If such policy includes an aggregate limit, such aggregate limit shall be at least double the per occurrence limit required herein.

C. **Automobile Liability Insurance**. CONSULTANT shall procure and maintain, at CONSULTANT's own expense during the term hereof, Comprehensive Automobile Liability Insurance, both bodily injury and property damage, on owned, hired, leased, and non-owned vehicles used in connection with CONSULTANT's business in an amount not less than One Million Dollars ($1,000.000.00) combined single limit coverage per occurrence.

D. **Professional Liability Insurance**. CONSULTANT shall procure and maintain, at CONSULTANT's own expense during the term hereof, Professional Liability Insurance for protection against claims arising out of the performance of services under this Agreement caused by errors, omissions, or other acts for which CONSULTANT, its employees, subcontractors, and agents, are liable. Said insurance shall be written with limits of not less than One Million Dollars ($1,000,000.00). If said insurance is written on a "claims made" form, insurance shall be maintained and evidence of insurance must be provided for at least one (1) year after completion of the work under this Agreement.

E. **Subcontractors**. CONSULTANT shall include all subcontractors as insured under the aforesaid policies or shall furnish separate certificates and endorsements to the COUNTY for each subcontractor which shall be subject to review and approval by COUNTY. All insurance coverages for subcontractors shall be subject to each of the requirements hereinabove and contain the additional insured endorsements required of CONSULTANT described with particularity hereinbelow.

F. **Additional Insured Endorsement**. The Commercial General Liability and Automobile Liability Insurance must each contain, or be endorsed to contain, the following provision:

The COUNTY, its officers, officials, employees, and designated agents are to be covered as additional insureds and shall be added in the form of an endorsement to CONSULTANT's insurance on Form CG 20 10 11 85. CONSULTANT shall not commence work under this Agreement until he has had delivered to COUNTY the Additional Insured Endorsements required herein. This provision is not intended to extend to construction contractors contracted by the COUNTY to perform the work of improvement.

Coverage shall not extend to any indemnity coverage for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under subdivision (b) of California Civil Code Section 2782.

G. **Other Insurance Provisions**. For any claims related to the work performed under this Agreement by CONSULTANT, the CONSULTANT's insurance coverage shall be primary insurance as to the COUNTY, its officers, officials, employees, designated agents and appointed volunteers. Any insurance or self-insurance maintained by COUNTY, its officers, officials, employees, designated agents or appointed volunteers shall be in excess of the CONSULTANT's insurance and shall not contribute with it.

Any deductibles or self-insured retentions must be declared to and approved by COUNTY. At the option of COUNTY, either CONSULTANT shall reduce or eliminate such deductibles or self-insurance retentions as they apply to COUNTY or CONSULTANT shall provide a financial guarantee satisfactory to COUNTY guaranteeing payment of losses and related investigations, claim administration, and defense and defense-related expenses.

Insurance coverage required of CONSULTANT under this Agreement shall be placed with insurers with a current A.M. Best rating of no less than A: VII.

Insurance coverage in the minimum amounts set forth herein shall not be construed to relieve the CONSULTANT for liability in excess of such coverage, nor shall it preclude COUNTY from taking other action as is available to it under any other provision of this Agreement or applicable law. Failure of COUNTY to enforce in a timely manner any of the provisions of this section shall not act as a waiver to enforcement of any of these provisions at a later date.

If any insurance coverage required by this Agreement is provided on a "Claims Made", rather than "occurrence" form, CONSULTANT agrees to maintain required coverage for a period of three years after the expiration of this Agreement (hereinafter, "Post Agreement Coverage") and any extensions thereof. CONSULTANT may maintain the required Post Agreement Coverage by renewal or purchase of prior acts or tail coverage. This subprovision is contingent upon Post Agreement Coverage being both available and reasonably affordable in relation to the coverage provided during the term of this Agreement. For purposes of interpreting this requirement, a cost not exceeding 100% of the last annual policy premium during the term of this Agreement in order to purchase prior acts or tail coverage for Post Agreement Coverage shall be deemed to be reasonable.

COUNTY shall include a provision in its contract with the general contractor hired to perform the work of improvement a provision requiring that the general contractor and all of its subcontractors maintain general liability insurance of not less than $1,000,000 and that such insurance include the COUNTY, its officers, officials, employees, designated agents, appointed volunteers and the CONSULTANT, as additional insureds.

XI.
INDEMNIFICATION - HOLD HARMLESS

Each Party shall indemnify and hold the other harmless against all actions, claims, demands, and liabilities and against all losses, damage, cost, expenses, and attorney's fees, that arise out of, pertain to, or relate to its own negligent acts and/or omissions, recklessness, or willful misconduct which caused said claim, demand, liability, loss, damage, cost expense, and/or attorney's fees. This provision shall not extend to any claim, demand, liability, loss, damage, cost, expenses, and/or attorney's fees covered by the insurance of either party. CONSULTANT's liability hereunder shall be limited by the COUNTY to the amount of the available coverage under CONSULTANT's insurance coverage as described in Section X. herein.

CONSULTANT's obligations under this Section shall survive the termination of the Agreement.

XII.
CONSULTANT'S WARRANTIES

CONSULTANT hereby makes the following representations and warranties:

A. **Standard of Care.** CONSULTANT represents that it is specially trained, licensed, experienced, and competent to perform all the services, responsibilities, and duties specified herein and that such services, responsibilities, and duties shall be performed, whether by CONSULTANT or designated subcontractors, in a manner according to generally accepted practices of the engineering profession.

If COUNTY determines that any of CONSULTANT's work is not in accordance with such level of competency and standard of care, COUNTY, in its sole discretion, shall have the right to do any or all of the following: (a) require CONSULTANT to meet with COUNTY to review the quality of the work and resolve matters of concern; (b) require CONSULTANT to correct the work at no additional charge to generally accepted standards and practices of the engineering profession; (c) terminate this Agreement pursuant to the provisions of Article IX; or (d) pursue any and all other remedies at law or in equity.

Assigned Personnel:

1. CONSULTANT shall assign only competent personnel to perform work hereunder. In the event that at any time COUNTY, in its sole discretion, desires the removal of any person or persons assigned by CONSULTANT to perform work hereunder, CONSULTANT shall remove such person or persons immediately upon receiving written notice from COUNTY.

2. Any and all persons identified in this Agreement or any exhibit hereto as the project manager, project team, or other professional performing work hereunder are deemed by COUNTY to be key personnel whose services were a material inducement to COUNTY to enter into this Agreement. CONSULTANT shall not remove, replace, substitute, or otherwise change any key personnel without the prior written consent of COUNTY. With respect to performance under this Agreement, CONSULTANT shall employ the key personnel identified in Exhibit "A".

3. In the event that any of CONSULTANT's personnel assigned to perform services under this Agreement become unavailable due to resignation, sickness or other factors outside of CONSULTANT's control, CONSULTANT shall be responsible for timely provision of adequately qualified replacements.

B. **Non-Discrimination in Employment**. CONSULTANT shall, in all solicitations or advertisements for employees placed by or on behalf of the CONSULTANT, state that all qualified applicants will receive consideration for employment without regard to race, color, creed religion, sex, sexual orientation, national origin, ancestry, physical disability, mental disability, medical condition, marital status, or age. During the performance of this Contract, Consultant and its sub-consultant shall not unlawfully discriminate, harass, or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, physical disability (including HIV and AIDS), mental disability, medical condition (e.g., cancer), age (over 40), marital status, and denial of family care leave. Consultant and sub-consultants shall insure that the evaluation and treatment of their employees and applicants for employment are free from such discrimination and harassment. Consultant and sub-consultants shall comply with the provisions of the Fair Employment and Housing Act (Gov. Code §12990 (a-f) et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 7285 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code Section 12990 (a-f), set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations, are incorporated into this Contract by reference and made a part hereof as if set forth in full. Consultant and its sub-consultants shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other Agreement.

   Consultant shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the Contract.

C. **Adherence to Applicable Disability Law**. CONSULTANT shall be responsible for knowing and adhering to the requirements of Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act, (42 U.S.C. Sections 12101, et seq.). California Government Code Sections 12920 et seq., and all related state and local laws.

D. **HIPAA Compliance**. CONSULTANT will adhere to Titles 9 and 22 and all other applicable Federal and State statutes and regulations, including the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and will make his best efforts to preserve data integrity and the confidentiality of protected health information.

E. **Safety Responsibilities**. CONSULTANT will adhere to all applicable CalOSHA requirements in performing work pursuant to this Agreement. CONSULTANT agrees that in the performance of work under this Agreement, CONSULTANT will provide for the safety needs of its employees and will be responsible for maintaining the standards necessary to minimize health and safety hazards.

F. **Interest of CONSULTANT.** CONSULTANT hereby covenants that he has, at the time of the execution of this Agreement, no interest, direct or indirect, and that he shall not acquire any interest in the future, direct or indirect, which would conflict in any manner or degree with the performance of services required to be performed under this Agreement. CONSULTANT further covenants that in

the performance of this work, no person having such interest shall be employed.

G. **Covenant Against Contingent Fees.** The CONSULTANT warrants that he/she has not employed or retained any company or person, other than a bona fide employee working for the CONSULTANT, to solicit or secure this Agreement, and that he/she has not paid or agreed to pay any company or person, other than a bona fide employee, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award or formation of this Agreement. For breach or violation of this warranty, the COUNTY shall have the right to annul this Agreement without liability, or at its discretion to deduct from the Agreement price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

H. **Laws to be observed.** CONSULTANT will comply with all laws, regulations, orders, and decrees applicable to the PROJECT. Indemnify and defend the COUNTY against any claim or liability arising from the violation of a law, regulation, order, or decree by CONSULTANT or your employees. Immediately report to the Contract Manager a discrepancy or inconsistency between the Contract and a law, regulation, order, or decree.

If the COUNTY incurs any fines or penalties because of CONSULTANT's failure to comply with a law, regulation, order, or decree, the COUNTY will deduct the amount of the fine or penalty.

Immediately notify the Contract Manager, if a regulatory agency requests access to the job site or to records. Submit a list of documents provided to the agency and issued enforcement actions.

XIII.
ASSIGNMENT

CONSULTANT shall not assign any interest in this Agreement and shall not transfer any interest in the same without the prior written consent of COUNTY, except that claims for money due or to become due the CONSULTANT from COUNTY under this Agreement may be assigned by the CONSULTANT to a bank, a trust company, or other financial institution without such approval. Written notice of any such transfer shall be furnished promptly to the COUNTY. Any attempt at assignment of rights under this Agreement except for those specifically consented to by both parties or as stated above shall be void.

XIV.
INDEPENDENT CONSULTANT

It is specifically understood and agreed that, in the making and performance of this Agreement, CONSULTANT is an independent CONSULTANT and is not an employee, agent or servant of COUNTY. CONSULTANT is not entitled to any employee benefits. COUNTY agrees that CONSULTANT shall have the right to control the manner and means of accomplishing the result contracted for herein.

CONSULTANT is solely responsible for the payment of all federal, state, and local taxes, charges, fees, or contributions required with respect to CONSULTANT and CONSULTANT's officers, employees, and agents who are engaged in the performance of this Agreement (including without limitation, unemployment insurance, social security, and payroll tax withholding).

XV.
MODIFICATION

A. This Agreement may only be modified by a written amendment thereto, executed by both parties. However, matters concerning scope of services which do not affect the agreed price may be modified by mutual written consent of CONSULTANT and COUNTY executed by Director of Public Works.

B. CONSULTANT shall only commence work covered by an amendment after the amendment is executed and notification to proceed has been provided by the COUNTY's Project Manager.

C. There shall be no change in the CONSULTANT's Project Manager or members of the project team, as listed in the Cost Proposal which is a part of this contract, without prior written approval by the

COUNTY's Project Manager.

XVI.
ATTORNEYS FEES AND COSTS

If any action at law or in equity is necessary to enforce or interpret the terms of this Agreement, the prevailing party shall be entitled to reasonable attorney's fees, costs, and necessary disbursements in addition to any other relief to which such party may be entitled.

XVII.
OWNERSHIP OF DATA

A. Upon completion of all work under this contract, ownership and title to all reports, documents, plans, specifications, and estimates produced as part of this contract will automatically be vested in the COUNTY, and no further agreement will be necessary to transfer ownership to the COUNTY. The CONSULTANT shall furnish the COUNTY all necessary copies of data needed to complete the review and approval process.

B. It is understood and agreed that all calculations, drawings and specifications, whether in hard copy or machine-readable form, are intended for one-time use in the construction of the project for which this contract has been entered into.

C. The CONSULTANT is not liable for claims, liabilities, or losses arising out of, or connected with the modification, or misuse by the COUNTY of the machine-readable information and data provided by the CONSULTANT under this agreement; further, the CONSULTANT is not liable for claims, liabilities, or losses arising out of, or connected with, any use by the COUNTY of the project documentation on other projects, for additions to this project, or for the completion of this project by others, except only such use as many be authorized in writing by the CONSULTANT.

D. Applicable patent rights provisions described in 41 CFR 1-91, regarding rights to inventions shall be included in the Agreements as appropriate.

E. CONSULTANT may copyright reports or other agreement products. FHWA shall have the royalty-free nonexclusive and irrevocable right to reproduce, publish, or otherwise use; and to authorize others to use, the work for government purposes.

F. Any subcontract in excess of $25,000 entered into as a result of this contract, shall contain all of the provisions of this Article.

XVIII.
RETENTION OF RECORDS / AUDIT

For the purpose of determining compliance with Public Contract Code 10115, et seq. and Title 21, California Code of Regulations, Chapter 21, Section 2500 et. Seq., when applicable, and other matters connected with the performance of the contract pursuant to Government Code 10532, the CONSULTANT, subcontractors and the COUNTY shall maintain all books, documents, papers, accounting records, and other evidence pertaining to the performance of the contract, including but not limited to, the costs of administering the contract. All parties shall make such materials available at their respective offices at all reasonable times during the contract period and for three (3) years from the date of final payment under the contract. The state, the State Auditor, the COUNTY, FHWA or any duly authorized representative of the federal government shall have access to any books, records, and documents of the CONSULTANT that are pertinent to the contract for audits, examinations, excerpts, and transactions, and copies thereof shall be furnished if requested.

Subcontracts in excess of $25,000 shall contain this provision.

XIX.
JURISDICTION AND VENUE

This Agreement shall be construed in accordance with the laws of the State of California and the parties hereto agree that venue of any action or proceeding regarding this Agreement or performance thereof

shall be in Lake County, California. CONSULTANT waives any right of removal it might have under California Code of Civil Procedure Section 394.

XX.
NO THIRD-PARTY BENEFICIARIES

Nothing contained in this Agreement shall be construed to create, and the parties do not intend to create, any rights in or for the benefit of third parties.

XXI.
SEVERABILITY

If any provision of this Agreement is held to be unenforceable, the remainder of this Agreement shall be severable and not affected thereby.

XXII.
NON-APPROPRIATION

In the event COUNTY is unable to obtain funding at the end of each fiscal year for professional engineering services required during the next fiscal year, COUNTY shall have the right to terminate this Agreement, without incurring any damages or penalties, and shall not be obligated to continue performance under this Agreement. To the extent any remedy in this Agreement may conflict with Article XVI of the California Constitution or any other debt limitation provision of California law applicable to COUNTY, CONSULTANT hereby expressly and irrevocably waives its right to such remedy.

XXIII.
CLAIMS FILED BY COUNTY'S CONSTRUCTION CONTRACTOR

A. If claims are filed by the COUNTY's construction contractor relating to work performed by CONSULTANT's personnel and additional information or assistance from the CONSULTANT's personnel is required in order to evaluate or defend against such claims, CONSULTANT agrees to make its personnel available for consultation with the COUNTY's construction contract administration and legal staff and for testimony, if necessary, at depositions and at trial or arbitration proceedings.

B. CONSULTANT's personnel that the COUNTY considers essential to assist in defending against construction contractor claims will be made available on reasonable notice from the COUNTY. Consultation or testimony will be reimbursed at the same rates, including travel costs, that are being paid for the CONSULTANT's personnel services under this Agreement.

C. Services of the CONSULTANT's personnel in connection with the COUNTY's construction contractor claims will be performed pursuant to a written supplement, if necessary, extending the termination date of this Agreement in order to finally resolve the claims.

D. Any subcontract in excess of $25,000, entered into as a result of this contract, shall contain all of the provisions of this Article.

XXIV.
CONFIDENTIALITY OF DATA

A. All financial, statistical, personal, technical, or other data and information relative to the COUNTY's operations, which is designated confidential by the COUNTY and made available to the CONSULTANT in order to carry out this contract, shall be protected by the CONSULTANT from unauthorized use and disclosure.

B. Permission to disclose information on one occasion or public hearing held by the COUNTY relating to the contract, shall not authorize the CONSULTANT to further disclose such information or disseminate the same on any other occasion.

C. The CONSULTANT shall not comment publicly to the press or any other media regarding the contract or the COUNTY's actions on the same, except to the COUNTY's staff, CONSULTANT's own personnel involved in the performance of this contract, at public hearings, or in response to questions from a Legislative committee.

D. The CONSULTANT 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 the COUNTY and receipt of the COUNTY's written permission.

E. Any subcontract, entered into as a result of this contract, shall contain all of the provisions of this Article.

F. All information related to the construction estimate is confidential and shall not be disclosed by the CONSULTANT to any entity, other than the COUNTY.

XXV.
NATIONAL LABOR RELATIONS BOARD CERTIFICATION

In accordance with Public Contract Code, Section 10296, the CONSULTANT hereby states under penalty of perjury that no more than one final unappealable finding of contempt of court by a Federal court has been issued against the CONSULTANT within the immediately preceding two-year period because of the CONSULTANT's failure to comply with an order of a Federal court that orders the CONSULTANT to comply with an order of the National Labor Relations Board.

XXVI.
INSPECTION OF WORK

The CONSULTANT and any subCONSULTANTs shall permit the COUNTY, State and the FHWA to review and inspect the project activities at all reasonable times during the performance period of this contract including review and inspection on a daily basis.

XXVII.
NON-DISCRIMINATION

A. During the performance of this Agreement, CONSULTANT and its subcontractors shall not unlawfully discriminate, harass or allow harassment, against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, nation origin, physical disability (including HIV and AIDS), mental disability, mental condition (cancer), age (over 40), marital status, and denial of family care leave. CONSULTANTs and subcontractors shall insure that the evaluation and treatment of their employees and applicants for employment are free of such discrimination and harassment. CONSULTANTs and subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Government Code, Section 12900.0 et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12990, set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations are incorporated into this contract by reference and made a party hereof as if set forth in full. CONSULTANT and it subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

B. The CONSULTANT shall include the non-discrimination and compliance provisions of this clause in all subcontracts to perform work under this contract.

C. CONSULTANT shall comply with Title VI of the Civil Rights Act of 1964, as amended. Accordingly, 49 CFR 21 through Appendix C and 23 CFR 710.405(b) are applicable to this contract by reference.

XXVIII.
DISPUTES

A. Any dispute, other than audit, concerning a question of fact arising under this contract that is not disposed of by agreement shall be decided by a committee consisting of the COUNTY's Contract Manager and Department Head, who may consider written or verbal information submitted by the CONSULTANT.

B. Not later than 30 days after completion of all deliverables necessary to complete the plans, specifications and estimate, the CONSULTANT may request review by the COUNTY GOVERNING BOARD of unresolved claims or disputes, other than audit. The request for review will be submitted in writing.

C. Neither the pendency of a dispute, nor its consideration by the committee will excuse the CONSULTANT from full and timely performance in accordance with the terms of this contract.

XXIX.
SAFETY

A. The CONSULTANT shall comply with OSHA regulations applicable to CONSULTANT regarding necessary safety equipment or procedures. The CONSULTANT shall comply with safety instructions issued by the COUNTY Safety Officer and other COUNTY representatives. CONSULTANT personnel shall wear hard hats and safety vests at all times while working on the construction project site.

B. Pursuant to the authority contained in Section 591 of the Vehicle Code, the COUNTY has determined that such areas are within the limits of the project and are open to public traffic. The CONSULTANT shall comply with all of the requirements set forth in Divisions 11, 12, 13, 14, and 15 of the Vehicle Code. The CONSULTANT shall take all reasonably necessary precautions for safe operation of its vehicles and the protection of the traveling public from injury and damage from such vehicles.

C. Any subcontract entered into as a result of this contract, shall contain all of the provisions of this Article.

D. CONSULTANT must have a Division of Occupational Safety and Health (CAL-OSHA) permit(s), as outlined in California Labor Code Sections 6500 and 6705, prior to theinitiation of any practices, work, method, operation, or process related to the construction or excavation of trenches which are five feet or deeper.

XXX.
SUBCONTRACTING

A. The CONSULTANT shall perform the work contemplated with resources available within its own organization; and no portion of the work pertinent to this contract shall be subcontracted without written authorization by the COUNTY's Contract Manager, except that, which is expressly identified in the approved Cost Proposal.

B. Any subcontract in excess of $25,000 entered into as a result of this contract, shall contain all the provisions stipulated in this contract to be applicable to subcontractors.

C. Any substitution of subconcontractors must be approved in writing by the COUNTY's Contract Manager.

XXXI.
STATEMENT OF COMPLIANCE

The CONSULTANT's signature affixed herein, and dated, shall constitute a certification under penalty of perjury under the laws of the State of California that the CONSULTANT has, unless exempt, complied with, the nondiscrimination program requirements of Government Code Section 12990 and Title 2, California Administrative Code, Section 8103.

XXXII.
DEBARMENT AND SUSPENSION CERTIFICATION

A. The CONSULTANT's signature affixed herein, shall constitute a certification under penalty of perjury under the laws of the State of California, that the CONSULTANT has complied with Title 49, Code of Federal Regulations, Part 29, Debarment and Suspension Certificate, which certifies that he/she or any person associated therewith in the capacity of owner, partner, director, officer, or manager, is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency; has not been suspended, debarred, voluntarily excluded, or determined ineligible by any federal agency within the past three (3) years; does not have a proposed debarment pending; and has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three (3) years. Any exceptions to this certification must be disclosed to the COUNTY.

B. Exceptions will not necessarily result in denial of recommendation for award, but will be considered in determining CONSULTANT responsibility. Disclosures must indicate to whom exceptions apply, initiating agency, and dates of action.

XXXIII.
CONFLICT OF INTEREST

A. The CONSULTANT shall disclose any financial, business, or other relationship with COUNTY that may have an impact upon the outcome of this contract, or any ensuing COUNTY construction project. The CONSULTANT shall also list current clients who may have a financial interest in the outcome of this contract, or any ensuing COUNTY construction project, which will follow.

B. The CONSULTANT hereby certifies that it does not now have, nor shall it acquire any financial or business interest that would conflict with the performance of services under this agreement.

C. Any subcontract in excess of $25,000 entered into as a result of this contract, shall contain all of the provisions of this Article.

D. The CONSULTANT hereby certifies that neither CONSULTANT, nor any firm affiliated with the CONSULTANT will bid on any construction contract, or on any contract to provide construction inspection for any construction project resulting from this contract. An affiliated firm is one, which is subject to the control of the same persons through joint-ownership, or otherwise.

E. Except for subcontractors whose services are limited to providing surveying or materials testing information, no subcontractor who has provided design services in connection with this contract shall be eligible to bid on any construction contract, or on any contract to provide construction inspection for any construction project resulting from this contract.

XXXIV.
REBATES, KICKBACKS OR OTHER UNLAWFUL CONSIDERATION

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

XXXV.
PROHIBITION OF EXPENDING COUNTY STATE OR FEDERAL FUNDS FOR LOBBYING

A. The CONSULTANT certifies to the best of his or her knowledge and belief that:

1. No state, federal or local agency appropriated funds have been paid, or will be paid by-or-on behalf of the CONSULTANT to any person for influencing or attempting to influence an officer or employee of any state or federal agency; a Member of the State Legislature or United States Congress; an officer or employee of the Legislature or Congress; or any employee of a Member

of the Legislature or Congress, in connection with the awarding of any state or federal contract; the making of any state or federal grant; the making of any state or federal loan; the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any state or federal contract, grant, loan, or cooperative agreement.

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

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

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

XXXVI.
COST PRINCIPLES

A. The CONSULTANT agrees that the Contract Cost Principles and Procedures, 48 CFR, Federal Acquisition Regulations System, Chapter 1, Part 31.000 et seq., shall be used to determine the allowability of cost individual items.

B. The CONSULTANT also agrees to comply with federal procedures in accordance with 49 CFR, Part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments.

C. Any costs for which payment has been made to CONSULTANT that are determined by subsequent audit to be unallowable under 48 CFR, Federal Acquisition Regulations System, Chapter 1, Part 31.000 et seq. are subject to repayment by CONSULTANT to the COUNTY.

XXXVII
CONTINGENT FEE

The CONSULTANT 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 the CONSULTANT for the purpose of securing business. For breach or violation of this warranty, the 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.

XXXVIII.
AUDIT REVIEW PROCEDURES

A. Any dispute concerning a question of fact arising under an interim or post audit of this contract that is not disposed of by agreement, shall be reviewed by the COUNTY's CHIEF FINANCIAL OFFICER.

B. Not later than 30 days after issuance of the final audit report, the CONSULTANT may request a review by the COUNTY's CHIEF FINANCIAL OFFICER of unresolved audit issues. The request for review will be submitted in writing.

C. Neither the pendency of a dispute nor its consideration by the COUNTY will excuse the CONSULTANT from full and timely performance, in accordance with the terms of this contract.

D. CONSULTANT and subconsultants' contracts, including cost proposals and indirect cost rates (ICR), are subject to audits or reviews such as, but not limited to, a Contract Audit, an Incurred Cost Audit, an ICR Audit, or a certified public accountant (CPA) ICR Audit Workpaper Review. If selected for audit or review, the contract, cost proposal and ICR and related workpapers, if applicable, will be reviewed to verify compliance with 48 CFR, Part 31 and other related laws and regulations. In the instances of a CPA ICR Audit Workpaper Review it is CONSULTANT's responsibility to ensure federal, state, or local government officials are allowed full access to the CPA's workpapers. The contract, cost proposal, and ICR shall be adjusted by CONSULTANT and approved by LOCAL AGENCY contract manager to conform to the audit or review recommendations. CONSULTANT agrees that individual terms of costs identified in the audit report shall be incorporated into the contract by this reference if directed by LOCAL AGENCY at its sole discretion. Refusal by CONSULTANT to incorporate audit or review recommendations, or to ensure that the Federal, State, or local governments have access to CPA workpapers, will be considered a breach of contract terms and cause for termination of the contract and disallowance of prior reimbursed costs.

XXXIX.
EQUIPMENT PURCHASE

A. Prior authorization in writing, by the COUNTY's Contract Manager shall be required before the CONSULTANT enters into any unbudgeted purchase order, or subcontract exceeding $5,000 for supplies, equipment, or CONSULTANT services. The CONSULTANT shall provide an evaluation of the necessity or desirability of incurring such costs.

B. For purchase of any item, service or consulting work not covered in the CONSULTANT's Cost Proposal and exceeding $5,000 prior authorization by the COUNTY's Contract Manager; three competitive quotations must be submitted with the request, or the absence of bidding must be adequately justified.

C. Any equipment purchased as a result of this contract is subject to the following: "The CONSULTANT 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 $5,000 or more. If the purchased equipment needs replacement and is sold or traded in, the COUNTY shall receive a proper refund or credit at the conclusion of the contract, or if the contract is terminated, the CONSULTANT may either keep the equipment and credit the 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 the COUNTY in an amount equal to the sales price. If the CONSULTANT elects to keep the equipment, fair market value shall be determined at the CONSULTANT's expense, on the basis of a competent independent appraisal of such equipment. Appraisals shall be obtained from an appraiser mutually agreeable to by the COUNTY and the CONSULTANT, if it is determined to sell the equipment, the terms and conditions of such sale must be approved in advance by the COUNTY.

D. All subcontracts in excess $25,000 shall contain the above provisions.

XL.
EVALUATION OF CONSULTANT

The CONSULTANT's performance will be evaluated by the COUNTY. A copy of the evaluation will be sent to the CONSULTANT for comments. The evaluation together with the comments shall be retained as part of the contract record.

XLI.
CONSULTANT'S ENDORSEMENT ON PS&E/OTHER DATA

The responsible consultant/engineer shall sign all plans, specifications, estimates (PS&E) and engineering data furnished by him/her, and where appropriate, indicate his/her California registration number.

XLII.
NOTICES

All notices that are required to be given by one party to the other under this Agreement shall be in writing and shall be deemed to have been given if delivered personally or enclosed in a properly addressed envelope and deposited with the United States Post Office for delivery by registered or certified mail addressed to the parties at the following addresses, unless such addresses are changed by notice, in writing, to the other party.

COUNTY OF LAKE
255 North Forbes Street
Lakeport, California 95453
Attn: Scott De Leon, Public Works Director

Quincy Engineering
11017 Cobblerock Drive, Suite 100
Rancho Cordova, CA 95670
Attn: Mark Reno

XLIII.
ADDITIONAL PROVISIONS

This Agreement shall be governed by the laws of the State of California. It constitutes the entire Agreement between the parties regarding its subject matter. This Agreement supersedes all proposals, oral and written, and all negotiations, conversations or discussions heretofore and between the parties related to the subject matter of this Agreement.

COUNTY and CONSULTANT have executed this Agreement on the day and year first written above.

COUNTY OF LAKE:

Rob Brown
Chair, Board of Supervisors

CONSULTANT:

John Quincy, President

ATTEST: MATT PERRY
Clerk of the Board
of Supervisors

By: _____

APPROVED AS TO FORM:
ANITA L. GRANT
County Counsel

By: _____

BOARD OF SUPERVISORS
LAKE COUNTY, CAL

K:\E & I PROJECTS\Bridges-2013 HBP\Design Consultant for Lake County Bridges 35, 102, 116\Agreement

EXHIBIT "A"

TO

AGREEMENT FOR ENGINEERING SERVICES

FOR

REPLACEMENT OF ST. HELENA CREEK BRIDGE AT WARDLAW STREET (14C-0035)

AND

REHABILITATION OF COOPER CREEK BRIDGE AT WITTER SPRINGS ROAD (14C-0102)

IN LAKE COUNTY, CALIFORNIA

Project Understanding and Approach

INTRODUCTION

The County of Lake Public Works Department (County) is requesting proposals to provide professional services necessary for the replacement or rehabilitation of the following bridges:

- St. Helena Creek at Wardlaw Street (14C-0035)
- Cooper Creek at Witter Springs Road (14C-0102)

These services will include topographic surveys, hydraulic studies, geotechnical studies, environmental technical studies, and the development of the Plans, Specifications, and Estimates (PS&E). The project development process will conform to Caltrans Local Assistance, Federal Highway Administration (FHWA) Highway Bridge Program (HBP) requirements, and also comply with the California Environmental Quality Act (CEQA), and the National Environmental Policy Act (NEPA).

Based on our understanding of the project and the information presented in the County's Request for Proposal, the County's goal is to complete the design and PS&E process for bidding and construction of the new bridges in the summer of 2017 and 2018.

Design of a bridge replacement/rehabilitation will require hydraulic design, environmental studies, geotechnical site investigations, and the development of plans and specifications. The first step is to develop the **Preliminary Engineering** studies and obtain the ***Project Approval & Environmental Document (PA&ED)***. Quincy Engineering, Inc. (Quincy) assisted the County with the preparation of the Highway Bridge Program (HBP) Application for Federal funds so Quincy is already very familiar with the projects. In fact, Quincy had already inspected the Wardlaw and Witter bridges when we were assisting the County with their Bridge Preventative Maintenance Program so we have been familiar with these structures for quite some time. Coordination with Caltrans will be essential to the success of the project. Quincy is aware of all the concerns raised by Caltrans and will coordinate closely with Caltrans Local Assistance to ensure a smooth project delivery.

PROJECT HISTORY

The Quincy Team provided a comprehensive HBP Application package that included a Project Study Report Equivalent (PSRE) and completed HBP forms (of each bridge) for signature by the County. The PSREs documented the current site conditions and provided justifications to support the HBP Application. The applications were submitted to Caltrans by the County for the Spring 2013 funding cycle and were accepted.

Due to our past involvement, the Quincy Team is very familiar with the intricacies and challenges of each project is ideally suited to ***successfully and efficiently deliver*** this project with the County.

PROJECT DELIVERY PROCESS

1. **Perform Preliminary Engineering** for this project site. Primary constraints include design speed, traffic, roadway alignment, and hydraulic freeboard capacity. These items will be summarized for discussion and approval by the County to become the ***Basis of Design*** for the project. This ensures that all design criteria are established and approved ahead of time so late criteria changes do not result in costly design changes or schedule delays.
2. **Define a Preferred Project Alternative** based on a number of important factors including site constraints, public and stakeholder input, and participating HBP and Toll Credit funds. Confirmation of the preferred alternative occurs at the end of the environmental process.
3. **Complete the Environmental Document (ED) and Provide Project Approval (PA)** to allow this project to move into the final design phase. Environmental impacts and mitigation requirements, right-of-way impacts, and permit requirements will all be approved prior to start of final design.
4. **Provide PS&E for construction.** This PS&E package is the foundation of the construction contract and requires comprehensive high quality documents that mitigates for project impacts, and reflects the approved alternative design identified in the Preliminary Engineering Studies. Bidability and buildability are keys to a successful outcome.
5. **Bid Support and Construction Management *(Optional)*.** Quincy has provided the County with construction management services on past projects. Having the design firm continue on in the later construction phase can offer the County increased efficiency and a reduction in design support costs during construction because the construction management firm is already familiar with the technical aspects of the project.

St. Helena Creek Bridge at Wardlaw Street (14C-0035)

St. Helena Creek Bridge at Wardlaw Street is located in the northeast corner of the unincorporated Lake County community of Middletown. Wardlaw Street is an Off-System Local Road that connects the center of Middletown with St Helena Creek Road. The concrete Luten arch bridge was constructed in 1908 and is eligible for the National Register of Historic Places, but is not listed. Quincy has recently navigated the PS&E process for numerous historical bridges which will be a key issue on this project as eligible historic bridges are treated the same as historical bridges at the beginning of the environmental process. The structure is Functionally Obsolete with a 2014 sufficiency rating of 44.3 which makes it eligible for replacement utilizing 88.53% Highway Bridge Program (HBP) funds and 11.47% Federal Toll Credit funds.

The purpose of the proposed project is to increase public safety by replacing a functionally obsolete bridge. The new structure will meet current design standards, accommodate local transportation needs, and provide hydraulic capacity to accommodate expected storm flows in Saint Helena Creek.

EXISTING SITE

Roadway

The St. Helena Creek Bridge is made up of a single 14.5' lane with a design speed of 25 mph. An intersection with St Helena Creek Road is located immediately adjacent to the easterly bridge approach. Quincy has delivered several recent projects that required the bridge to have special widened superstructure flare details to accommodate proper sight distance and truck turning radius due to the close proximity of adjacent intersections. These bridge details may be necessary for this project depending on what type of vehicles the County selects for the design turn criteria.

St Helena Creek Road becomes a private driveway immediately south of the intersection with Wardlaw. To the North, St Helena Creek Road meets with SR29 approximately 1400' north of the bridge intersection. Caltrans constructed an improvement project in 2011 that disallowed all turning from SR29 to southbound St Helena Creek Street. This effectively turned this local road into a one-way street from SR29 to the Wardlaw Street intersection immediately adjacent to the bridge. This is a key issue as it impacts the potential detour routes during bridge construction.

Lake County's 2011 Regional Transportation Bikeway Plan identifies both St Helena Creek Road and Wardlaw Street as part of their five year capital improvement program. Wardlaw Street is identified as a Class III facility (shared facilities, either with motor vehicles on the street, or with pedestrians on sidewalks, and in either case bicycle usage is secondary) with a low priority. St Helena Creek Road is identified as a Class I facility (exclusive right of way with cross flows by motorists minimized) and is also of low priority. The HBP program will participate in certain aspects of the plan as it applies to the new bridge.

The Wardlaw Street Bridge is in a unique location as it is in close proximity to a variety of parcels that have very differing land uses. The area northwest of the bridge consists of a relatively new single family dwelling subdivision that can be characterized as a suburban cul-de-sac with curb and gutter, sidewalk, utilities, and a pavement width that matched current County standards. The area to the southwest of the bridge is a larger single parcel comprised of nearly half a town block and has a single residence, a relatively large field, and several fruit trees. The parcel to the northeast is a large heavily forested parcel that flaked by St Helena Street to the west. An additional large forested parcel is located to the southwest of the bridge. A

PG&E substation with dedicated access easement is located within this parcel. An 'L' shaped parcel directly to the south of the bridge encompasses the area on both sides of the creek and has a single family residence further to the southwest. Lastly, PG&E obtained a dedicated easement for ingress and egress from the County road to their substation. This recorded document shows this same easement extending halfway onto the Wardlaw Street Bridge. This would be a unique configuration and close coordination with PG&E will be required. These five parcels will potentially be affected by the bridge replacement project.

Bridge

The existing bridge at Saint Helena Creek is a narrow single-lane, two-span, 139 foot long, earth filled spandrel concrete arch bridge constructed in 1908. The existing earth filled concrete spandrel arch bridge is assumed to be supported on spread footings.

Review of Caltrans Bridge Inspection Reports (BIR) indicates that the bridge has been assigned a load rating based upon its date of construction, and history of being able to support live loads. The Caltrans BIR indicate the bridge cannot support permit loads due to its year of construction. The arch is in fair condition with pattern cracking, spalls and efflorescence visible on the underside of the superstructure.

There is also a long history of scour under the bridge which will be a key design feature for the replacement design. During a storm event in 1962 the concrete invert suffered significant scour damage. The scour has been noted in almost all subsequent inspections since 1980 and has been repaired multiple times. The original concrete railing was replaced with metal beam guard railing on steel posts in approximately 1980.

Currently the bridge is assigned a Sufficiency Rating of 44.3, indicating that the bridge is *deficient* for its intended purpose of providing a safe and reliable crossing of Saint Helena Creek. The bridge is also classified at ***Functionally Obsolete***, indicating that the bridge deck geometry is below minimum standards for today's traffic demands and current design standards. Replacement alternatives typically need to remove the Functionally Obsolete designation in order to receive federal funds, however exceptions are made for some historical bridges if it is deemed that removing the functionally obsolete status results in a significate impact to the historic resource.

Saint Helena Creek

Saint Helena Creek generally runs perpendicular to Wardlaw Street and flows towards the north on the east side of Middletown. The creek banks are heavily vegetated with trees, shrubs, and grasses and the creek bed is composed of sand, gravel, and cobbles. There is an existing concrete invert/apron under both bridge spans. Near surface bedrock is assumed based on the frequent rock outcroppings in the near vicinity. This project should also improve hydraulic capacity by increasing the hydraulic opening area within the stream channel at the new bridge crossing and reduce the amount of in-channel maintenance that has had to be done over the years.

Key Project Issues

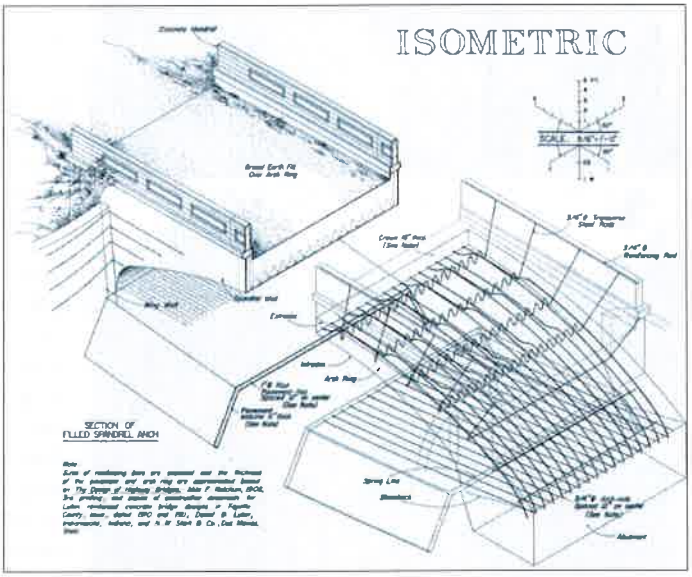
Our Team has developed some Key Project Issues based on past project experience and on our efforts to date with the funding assistance for this project. A summary of these issues are presented at right with detailed discussion of each issue following:

Key Issues	
1	Historical Nature of Structure
2	Roadway Alignment/Intersection Geometry
3	Bridge Replacement Options
4	Geotechnical Studies
5	Hydraulics
6	Utilities
7	Schedule

1. Historical Nature of Structure

The Caltrans Local Agency Bridges Historical Inventory (accessed November 13, 2014) shows Bridge 14C-0035 to be classified as historic (Category 2), and thus is eligible for listing on the National Register of Historic Places. Bridge 14C-0035 was built in 1908 and a granite plaque denoting its erection is inlaid within the bridge structure. Based on an initial site visit, a review of aerial photograph, and U.S.G.S. topographic maps, the study area does not appear to support additional potentially historic structures.

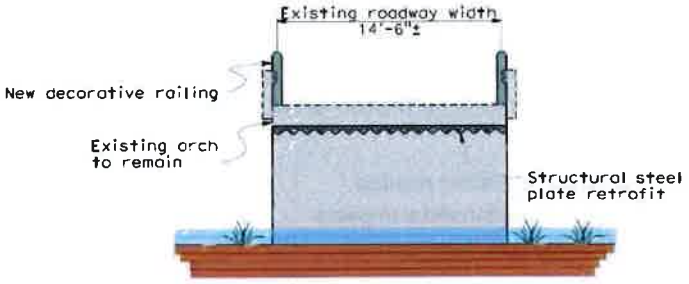
Unconfirmed reports indicate the existing bridge was designed by **Daniel B. Luten** a famous bridge designer/builder who is said to have designed over 17,000 arches throughout the country. Luten patented his arch designs which included the use of reinforcement in specific tension zones to resist tension demands. This resulted in a significantly lighter structure than other arches constructed at that time. This fact could increase the historical significance of the structure. Shown below is a similarly constructed Luten Arch in Iowa which could have similar construction to the existing Wardlaw arch. The existing concrete apron may be the primary tension element of the arch and as such its removal may not be possible. The apron removal will be a significant consideration due to the historic nature of the arch.



Due to the historic nature of the arch its removal may require significant levels of mitigation. Under Section 106 removing the bridge will be an adverse effect that requires mitigation. Besides HAER recordation, the mitigation required will partially depend on input from local interested parties. There are a variety of measures that could be done, mostly public history type measures such as a plaque or public history report. Local residents may want the new bridge designed to acknowledge the old bridge in some way. Of course, there is always the possibility of local groups opposing removal of the historic bridge, which would need to be addressed.

The 4(f) process requires assessment of whether there is a prudent and feasible alternative to demolishing the historic bridge. The prudency of the saving the bridge depends on its condition and the potential engineering / alterations that would be needed to sufficiently upgrade it for continued safe use. Knowing whether the bridge will need to be saved or whether it can be removed will depend on bridge conditions and input from all interested parties and the potential required mitigation measures.

Should the bridge need to be protected after the 4(f) process we would anticipate retrofitting it for safe use by pedestrians and bicycle traffic. The retrofit is expected to consist of new bicycle height railings on each side as well as an arch retrofit which could include retrofit of the arch elements as shown at right.



The Quincy Team is very familiar with historical bridges as we have worked on numerous recent projects involving the replacement of historical bridges which required stepping through this very same process. One of these projects, Philo Greenwood, is a historical concrete arch located in Mendocino County which is relevant because it is also located in Caltrans District 1 like this project. In addition our Project Manager for this project has recently worked on 3 other Historic HBP projects and will bring all of that experience to bear on this project. Last, our Team's project engineering is currently working on the rehabilitation of two historic Earth filled arches for the town of Woodside in San Mateo County. Quincy brings historical bridge experience at all levels of the Team.

2. Roadway Alignment/Intersection Geometry

The HBP program allows improvement of up to 400 feet of approach roadway on each side of the bridge. The project limits are anticipated to be within this constraint. Actual project conforms will depend on the intersection reconfiguration just east of the existing bridge to improve the existing limited sight distance and any truck turning criteria issues. The roadway conforms may also be impacted by vertical grade changes required to accommodate any hydraulic clearances and the bridge structure depth. Given the close proximity of the residents to the west, structure types that limit vertical grade changes will be necessary in order to avoid impacts to these parcels.

Roadway Section

Based on past projects with the County, Quincy looks at AASHTO and County roadway width standards and jointly select a criteria that conforms best to the project site. Typically AASHTO standards are selected which utilize the road classification, and average daily traffic (ADT) as the determining factors. Being a rural minor road with an ADT of around 400, Wardlaw Street falls right on the edge of two different widths. A developed width of 32' is required for an ADT beyond 400 while a width of 24' is the standard for an ADT of less than 400. With a future ADT of 420 vpd, the County's standard width utilizing curb and gutter would be 32'. The existing section, which has curb, gutter, and sidewalk on the north side is 24'. Adding an additional 8' of width for such a small stretch does not seem consistent with County practice and may create controversy with the residents in the general area. Caltrans has also stated that they do not feel a 32 foot width would be appropriate at this site. Consequently, a section for an ADT less than 400 vpd is 24' from flowline to flowline and appears to be more consistent with the existing road network. The County may want to consider performing a traffic count at the project site to more accurately assess the ADT. An existing sidewalk along the north side of Wardlaw should be extended across the new St Helena Creek crossing.

Alignment Alternatives

Two alignment alternatives have been developed for this bridge replacement project. These include replacing the new bridge downstream of the existing bridge and replacing the bridge on its existing alignment. Due to the close proximity of the newer houses to the northwest of the bridge, the downstream alignment options were discarded. Also discarded was relocating the bridge from Wardlaw Street to one block south at Young Street due to resident opposition and the additional right of way needed for the new crossing and the connection to St Helena Creek Street.

Alignment Alternative 1: Relocate Bridge Upstream of Existing Bridge

Alignment Alternative 1 relocates the bridge and Wardlaw Street to the south of the existing bridge. This will allow the Contractor to build the new bridge while leaving the existing bridge in service. This will also allow the flexibility of retaining the potentially historic existing bridge after construction or the removal of the existing bridge at the County's discretion. The existing structure may be converted to a Class I Bicycle/Pedestrian bridge at the discretion of the County and the HBP will participate in those costs up to a limit. If the existing structure is converted to a bicycle/pedestrian crossing, then a vehicle only bridge that is 24' wide can be built. If the existing bridge is removed, a 6' sidewalk would be added to the north side of the new crossing.

Pros:

- Potentially historic bridge can be retained

- Potentially narrower new bridge can be built
- No detour required for construction
- Potential Class I Bicycle crossing of St Helena Creek
- Large oak tree at northwest corner of bridge can remain

Cons:

- Utilities relocation needed
- Higher environmental impacts
- More Right of Way needed

Alignment Alternative 2: Construct Bridge on Existing Alignment

Alignment Alternative 2 places the new bridge on the existing alignment. Since the existing bridge will be removed with this alternative, the new bridge will line up with the gutter flowline from Wardlaw Street and will also include a sidewalk that will line up as well.

Since St Helena Creek Road can no longer be used for two-way traffic north of the bridge (Would require an encroachment permit with Caltrans for the reconfiguration of the SR 29 intersection with St. Helena Road which is not recommended), a local detour will be required. Utilizing an upstream temporary alignment, a series of culverts can be placed in the channel and then covered to develop the new crossing. Depending on the hydrology, it is likely possible the creek will be dry during the single season of bridge construction and the culverts would only be needed in case the creek begins to unexpectedly flow. This will require some vegetation removal but the area can be restored after construction is complete.

This alternative will require less permanent right of way, though a significant right of way effort will be required for the temporary crossing. A large oak tree is located in the northwest corner of the existing bridge and will likely need removal in order to line up Wardlaw Street with the existing bridge. It may be possible to route the new sidewalk around this tree or to shift the new bridge further south. Detailed survey information is needed in order the look at possible alternatives to preserve the tree.

Pros:

- Less environmental impacts
- Less permanent Right of way required
- Fewer utilities requiring relocation

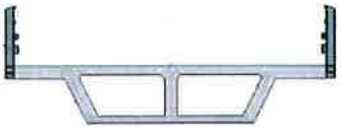
Cons:

- Potentially historic bridge must be removed
- Temporary crossing of creek is needed
- Lose option of dedicated Class I bicycle/pedestrian bridge
- Wider bridge (due to sidewalk) is likely needed
- Large oak tree at northwest corner of bridge will likely be removed

3. Bridge Replacement Options

Arriving at an appropriate bridge type and method of construction will involve consideration of the critical issues outlined above. Preliminary bridge configurations have been included in this section showing possible bridge types that are appropriate for this location. Quincy has developed three preliminary alternatives for discussion. These bridge types have been developed for all roadway alignment alternatives considered and are interchangeable. Also interchangeable are the bridge railings. Metal Tube bridge railings have been shown in order to more closely model he appearance of the existing structure and also to reduce the bridge width, however concrete barriers that require less maintenance and collect roadway drainage are also feasible.

<u>Alternative 1 – Two Span Cast-In-Place Reinforced Concrete Box Girder</u>



Cast-in-place reinforced concrete box girders are an efficient bridge type for spans between 50 and 120 feet. For this location, the new bridge would consist of a two span 160 foot long span cast-in-place reinforced concrete box girder with a bridge depth of approximately 4'-6". Depending on the water surface elevation, minor changes to the roadway profile and increased approach fills may be required. Based on the preliminary analysis by WRECO (discussed below), it appears that no adjustment to the road would be required or would only need to be raised by a nominal amount as the new bridge opening area would exceed that of the existing bridge. Since the average existing structure is relatively deep, a significant profile

increase relative to the existing road grade is not anticipated. The two span alternative would require an intermediate support within the channel supported on a deep foundation. On the Hilderbrand project the bridge had to be a single span in order to avoid an Elderberry bush. There are no known environmental constraints at this site that would require a single span, however if environmental constraints are discovered a single span could work but would likely result in the need to raise the vertical profile. Therefore, Quincy recommends a two span structure as long as no environmental issues are discovered during the preliminary engineering phase.

If there are no anticipated scheduling or environmental issues with installing falsework, a cast-in-place concrete bridge is a very cost effective alternative based on constructability, functionality and other economic considerations.

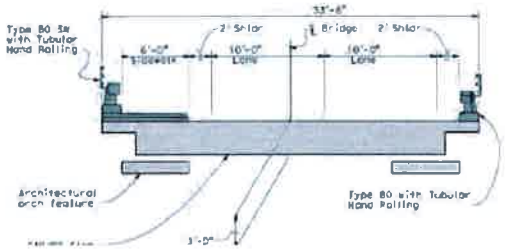
Alternative 2 – Two Span Precast Concrete Wide Flange Girders

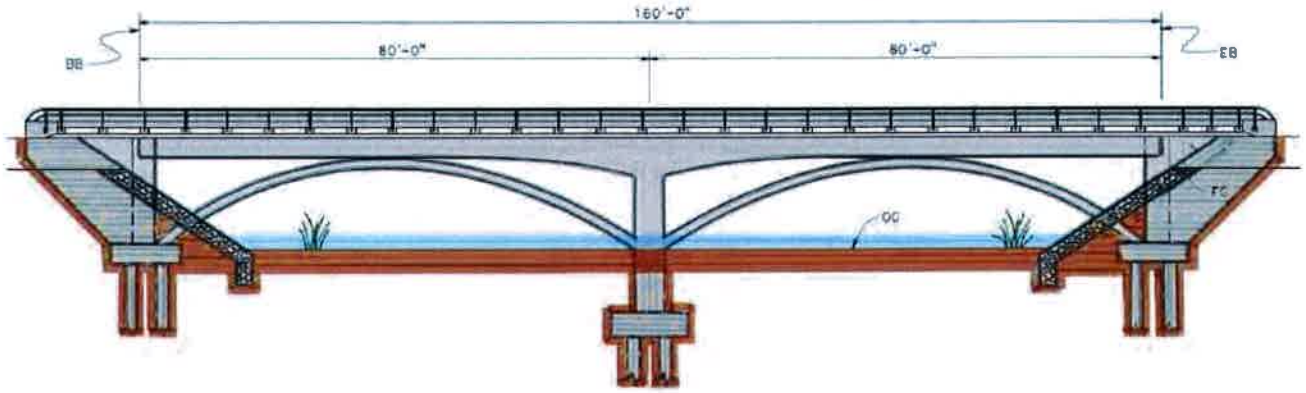
Precast alternatives are best suited for locations where the construction window is short or there are elements that need to be avoided (as was done on Hilderbrand). Superstructure elements can be manufactured offsite at the same time the footings are being constructed to reduce construction time or avoid environmental constraints that do not allow for falsework in the stream channel. For this location, the new bridge would consist of either a single span 130 foot long span precast concrete wide flange girder with a bridge depth of approximately 6'-6" or a two span 160 foot long bridge with a pier in the channel. The span configuration would be dependent upon the hydraulic analysis, however would provide a similar opening area to the existing structure. While a single span should be studied, it would likely result in the need to raise the roadway profile which is not desirable with the close proximity of adjacent parcels. Consequently, Quincy has focused on two span options which is also more similar to the existing bridge.

A single span precast alternative is desirable as it eliminates the expensive pier support in the channel. This span configuration would depend on hydraulic analysis, have significant profile impacts and may not be feasible. This is the bridge type and configuration used in the recently completed Hildebrand bridge project just south of Middletown over the same creek.

Alternative 3 – Two Span Cast-In-Place Prestressed Concrete Slab with Architectural Features

Cast-in-place prestressed concrete slabs are an efficient bridge type for spans between 40 and 80 feet. For this location, the new bridge would consist of a two span 160 foot long span cast-in-place prestressed concrete slab with a bridge depth of approximately 3'-0" with a flare at the pier. This structure type would include arch type architectural features to mitigate the removal of the historic structure. Arch like features would give the same arch appearance and structurally efficient structure type. The two span alternative would require an intermediate support within the channel supported on a deep foundation.





Based on the preliminary information presented here, the preferred alternative is the two span cast-in-place prestressed concrete slab with Architectural Features due to potential mitigation measure provided by the arch like architecture.

Other Bridge Replacement Topics

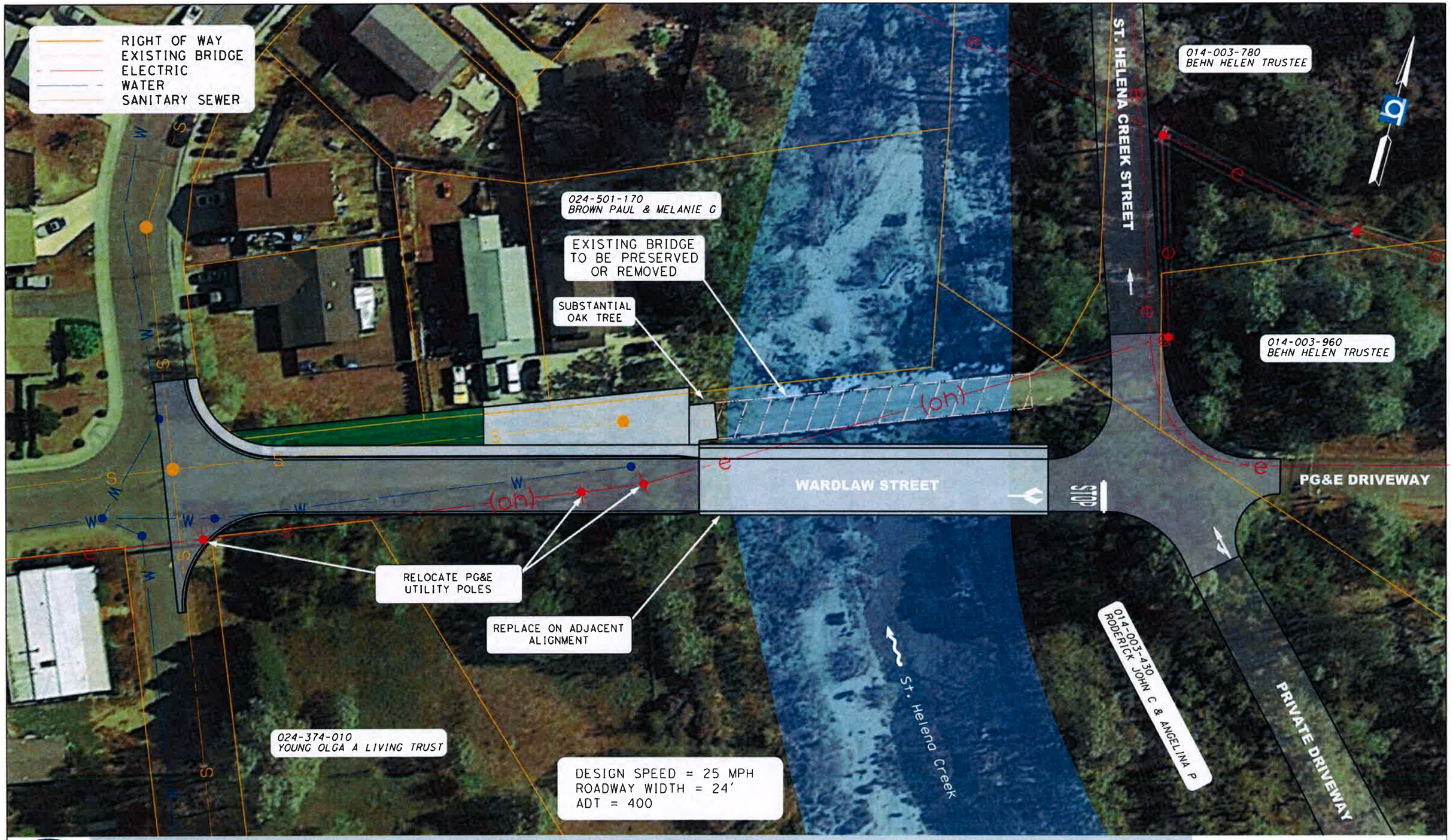
Construction Methods and Site Access

Bridge construction techniques will play an important role in protecting environmental assets and speed of construction. The approved APE map will identify Contractor staging and laydown areas at the bridge site. Environmental impacts that may

preclude use of certain areas will be identified during the environmental process. Similar to Hilderbrand it is anticipated that this site will be heavily constrained due to the close proximity of residents and the need to keep traffic moving through the site.

Other Bridge Types

The Quincy Team has vast experience with all applicable bridge types at this site. Bridges made of concrete are the most common type used in California. Given the relatively shallow channel at this site, a concrete bridge using CIP construction methods on temporary shoring or precast concrete girders without shoring will be the most desirable options. An added advantage of concrete bridges over steel bridges is that they resist corrosion and have lower long term maintenance costs.

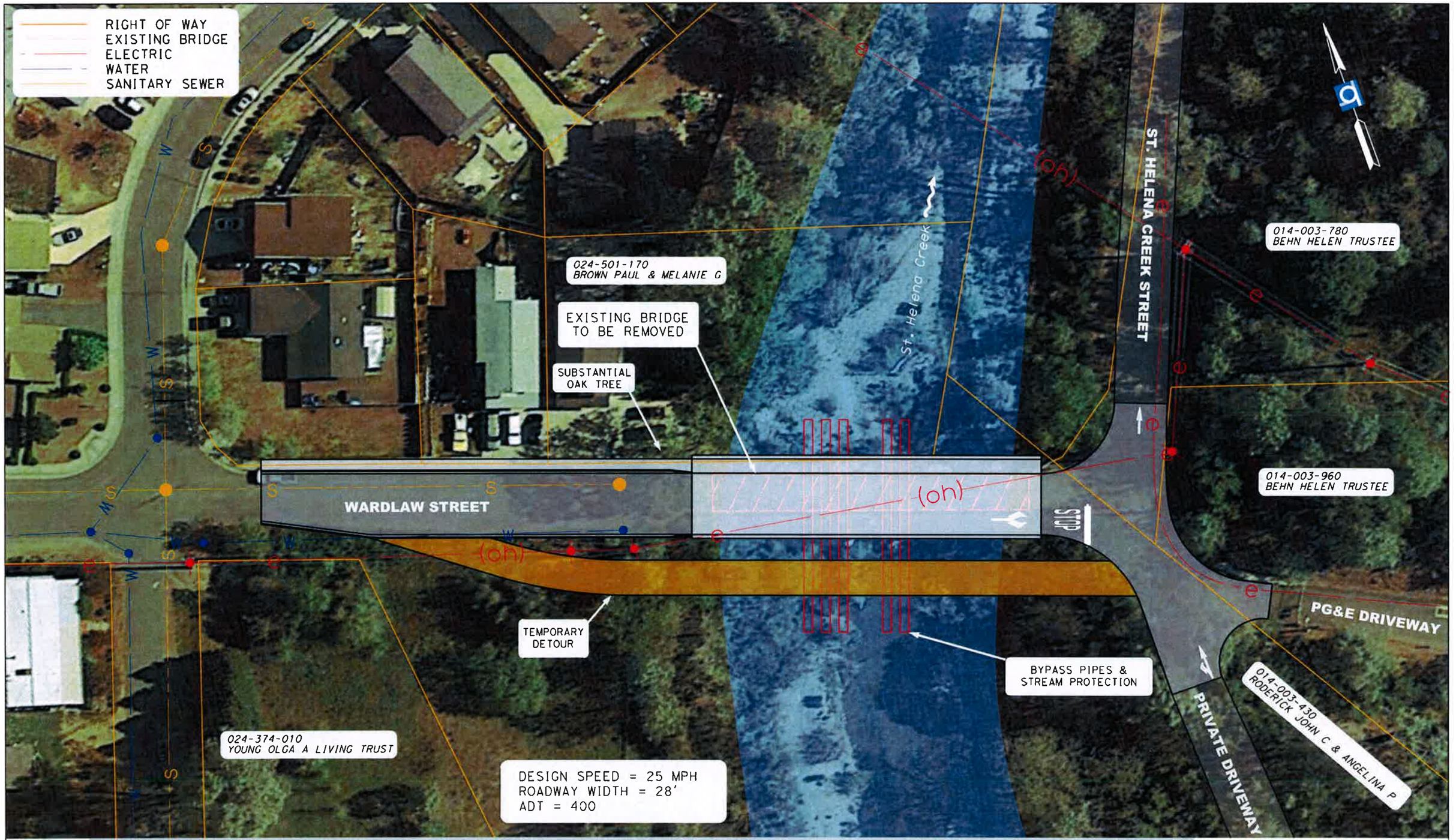


County of Lake

ALTERNATIVE 1- BRIDGE 14C-0035

ST HELENA CREEK BRIDGE AT WARDLAW STREET

QUINCY ENGINEERING



County of Lake

ALTERNATIVE 2- BRIDGE 14C-0035

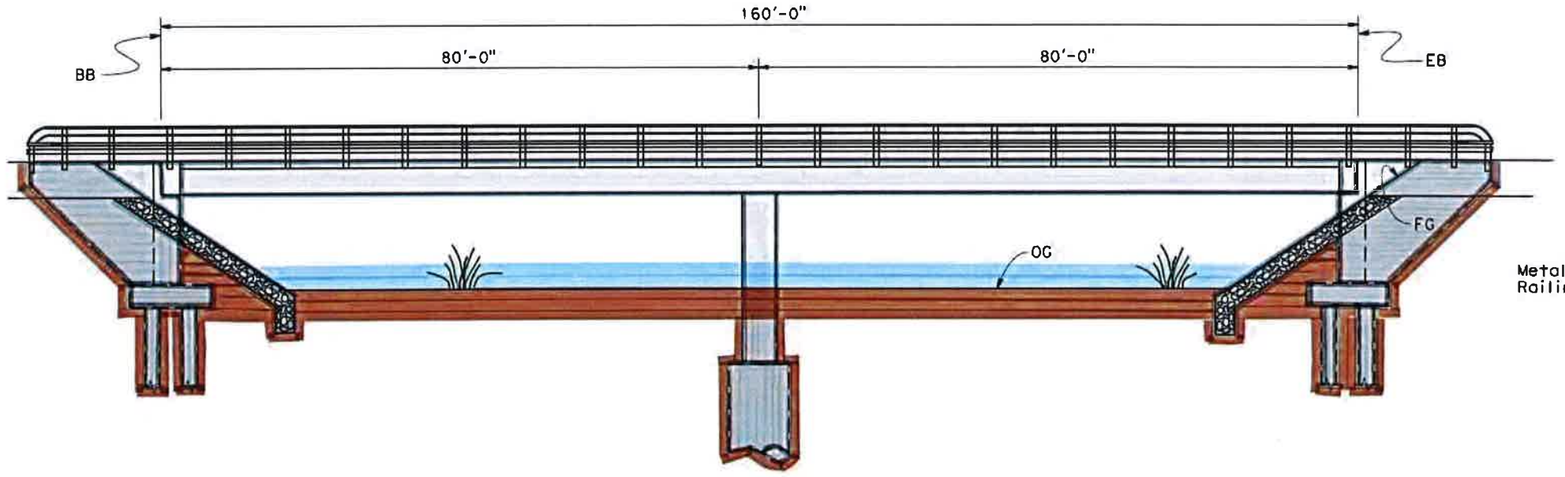
ST HELENA CREEK BRIDGE AT WARDLAW STREET

QUINCY ENGINEERING

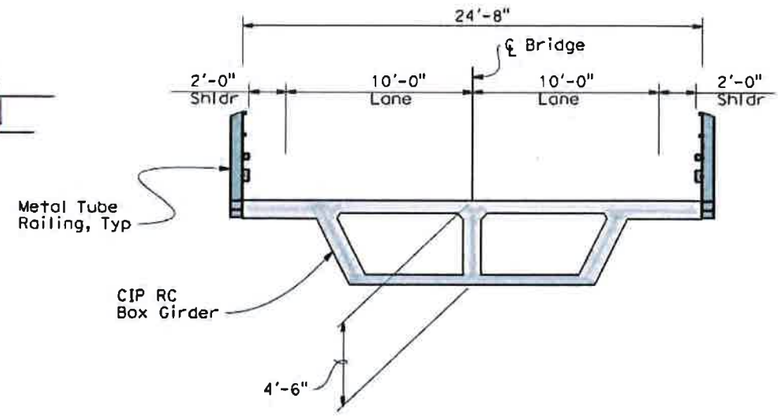
PREPARED FOR THE COUNTY OF LAKE - DEPARTMENT OF PUBLIC WORKS

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT
01	LAK	CR	XX

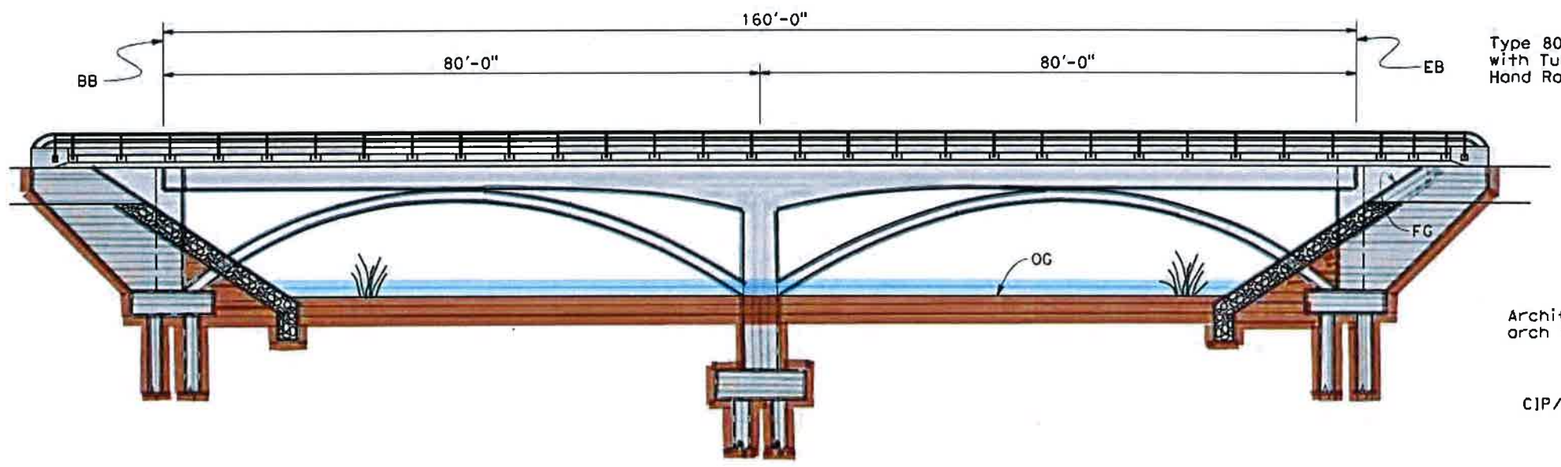
QUINCY ENGINEERING



ELEVATION
1"=10'



TYPICAL SECTION
No Scale



ELEVATION
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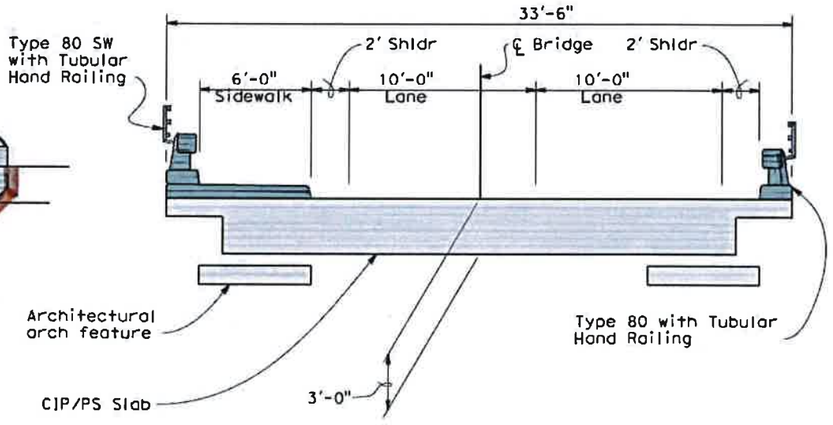

TYPICAL SECTION
No Scale

Note:
Alternate bridge widths considered not shown

X
DESIGN OVERSIGHT

DESIGNED BY D. Mossman	DATE X	D. Mossman PROJECT ENGINEER	PLANNING STUDY
DRAWN BY D. Mossman	DATE X		WARDLAW STREET OVER ST. HELENA CREEK
CHECKED BY X	DATE X		BRIDGE NO. 14C-0035 / UNIT: X
	DATE X		SCALE: As Shown / PROJECT NUMBER & PHASE: X

CONTRACT NO. 14C-0035

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Client\Lake County\L01-120 New bridges 8-12 HBP apps\14C-0035\14C-0035aaps - 2 elev 2 typ.dgn

Aesthetics

Project improvements could include arch elements to mitigate for the removal of the existing historic arch structure. This could include basic levels of aesthetic treatment. Various barrier types and architectural formliner will also be considered to give the new bridge an attractive appearance with clean lines and consistent color. **It has been our experience that additional costs for aesthetic features are considered participating costs when mitigating for impacts to historic structures. Quincy has been successful in securing additional programming dollars for this.**

Project Report

While no formal type selection or project report is outlined in the scope of work, Quincy would recommend preparation of this document for this bridge. As part of the environmental process for historic bridges pros and cons for various project alternatives need to be documented and evaluated for Caltrans and public review. The preferred alternative is not confirmed until the end of the environmental process where a Memorandum of Agreement or (MOA) is issued.

Quincy, with input from the County and other project stakeholders, will assess the available options concluding with the selection of the most appropriate road alignment and bridge type for the site.

The results of this analysis will be summarized in the ***Project Report***, and when approved by the County and Caltrans, will become the basis for the final design of the project.

4. Geotechnical Studies

Taber Consultants will provide the geotechnical services for this project. Quincy and the County have worked with Taber on most of the County bridge projects so there is a high familiarity with this Team.

Published geologic mapping shows surface materials within the channel and to the west as Quaternary alluvium that generally consists of unconsolidated mixtures of clay, silt, sand, gravel and cobble/boulders. East of the bridge, surface materials are mapped as rock associated with the Clear Lakes Volcanics that generally includes dacite, andesite, basalt, rhyolite, tuff and other pyroclastic rocks. Metamorphosed sandstone (metagraywacke) rock of the Jurassic to Cretaceous Franciscan Complex is also mapped further to the south-southeast. Taber Consultants did not observe rock outcrop at the bridge location. Bedload in the channel and surface materials on the banks were observed to consist of sand and gravel with cobbles/boulders (consistent with unconsolidated recent alluvium).

The geologic mapping does not show the project site within an ultramafic rock area, although a zone of ultramafic rock is mapped about 2,600 feet south-southeast from the site. Ultramafic rocks in this area typically include serpentine (or serpentinite) and can, but do not always, contain naturally occurring asbestos (NOA). Taber did not observe rock outcrop containing serpentinite, a host rock for naturally occurring asbestos, at this project site.

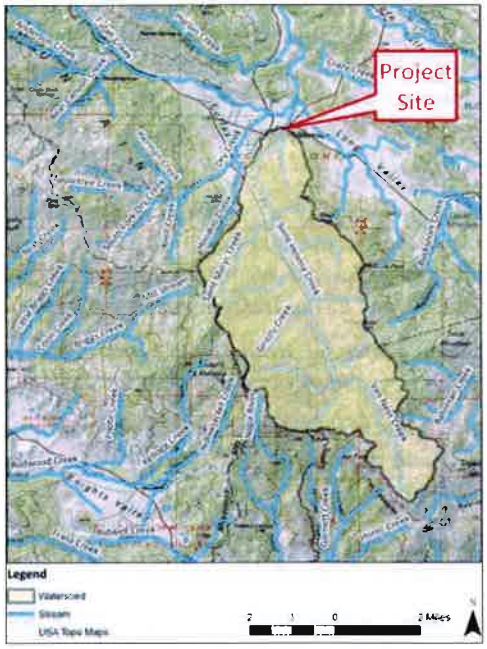
It is planned to replace the bridge with a wider (two-lane) and longer (two-span) structure on the same alignment or on an alignment just upstream from existing. It is anticipated that new approach roadway will extend from each end of the bridge with possible improvements to the intersection located at the east end of the bridge in order to improve sight distance. No retaining walls are indicated for this project.

Key geotechnical elements associated with this project/site are expected to include:

- Susceptibility of overlying materials with respect to erosion and scour;
- Depth to competent bearing material (e.g., older alluvium and/or intact rock) for new bridge foundation;
- Depth to groundwater; and
- Evaluation of the site for Liquefaction and lateral spreading.

Hydraulics

WRECO will provide the project hydrology and hydraulics services for the Team. Similar to Taber, WRECO has worked on most of the County bridge projects so there is again a high degree of familiarity and efficiency that comes with this team.



Hydrology

The western watershed boundary follows adjacent to the Lake/Sonoma county line. The watershed lies within Lake and Napa counties. The watershed encompasses the Robert Louis Stevenson State Park. The peak of Mount Saint Helena is located west of the watershed. At its crossing with Wardlaw Street, St. Helena Creek flows from southwest to north-northeast. St. Helena Creek drains a watershed area of approximately 21.6 square miles at its crossing with Wardlaw Street. St. Helena Creek is a tributary of Putah Creek, and its confluence is located 0.8 mile downstream (north-northeast) of the Project site. There are no known USGS peak stream flow gages along St. Helena Creek. The peak discharges at the Project site were estimated using USGS' StreamStats, and are summarized in Table 1.

Table 1 - USGS Regional Flood-Frequency Peak Discharges at Project Site

Peak Discharge (cubic feet per second)			
500-Year Storm 0.2% Annual Chance Flood	**100-Year Storm** 1% Annual Chance Flood	**50-Year Storm** 2% Annual Chance Flood	**10-Year Storm** 10% Annual Chance Flood
8,570	5,760	4,950	2,990

The Federal Emergency Management Agency (FEMA) Flood Insurance Study (FIS) for Lake County, California and Incorporated Areas also includes frequency discharge, drainage area curves for St. Helena Creek. The peak discharges for 10-, 50-, 100-, and 500-year storm events are determined from the curves using a known drainage area. With a drainage area of 21.6 square miles, the peak discharges at the Project site were estimated using the frequency discharge, drainage area curves, and are summarized in Table 2.

Table 2. FEMA Peak Discharges at Project Site

Peak Discharge (cubic feet per second)			
500-Year Storm 0.2% Annual Chance Flood	**100-Year Storm** 1% Annual Chance Flood	**50-Year Storm** 2% Annual Chance Flood	**10-Year Storm** 10% Annual Chance Flood
12,250	9,250	8,250	5,750

The FEMA peak discharges would be recommended for the analyses because they provide a more conservative estimate of the design peak discharges.

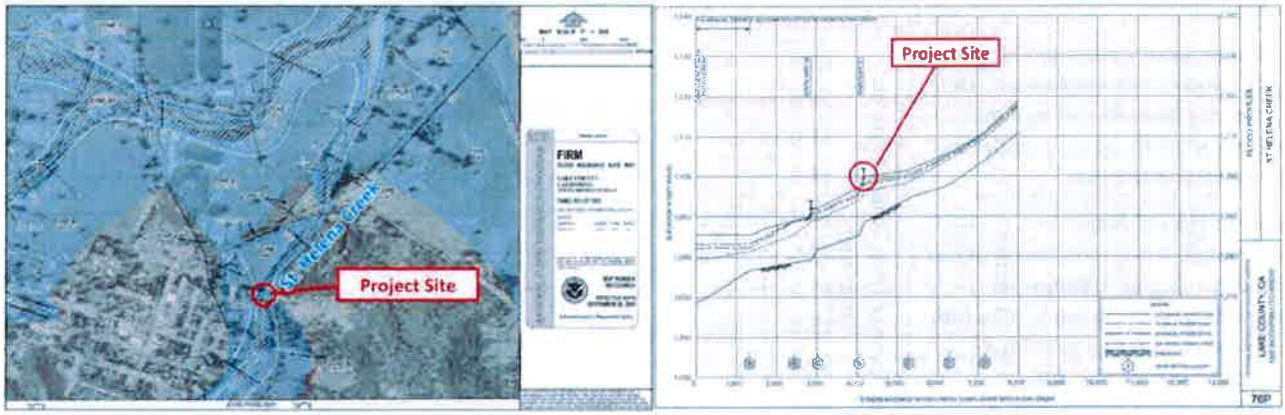
Floodplains

The Flood Insurance Study (FIS) does include detailed flood information for St. Helena Creek.

The FEMA Flood Insurance Rate Maps (FIRMs) were researched for the Project; the FIRM at the Project site is shown below. The Project site is located in Zone AE, which represent areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods. Base flood elevations (BFEs) are shown within these zones.

The Project site is also within a regulatory floodway. According to Title 44, Section 60.3(d)(3) of the Code of Federal Regulations (CFR), a community shall "prohibit encroachments, including fill, new construction, substantial improvements,

and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge." Wardlaw Street bridge is bound by FEMA cross sections D and E, which have surcharge values of 0.4 and 0.5 feet, respectively. No increase of any amount in the base flood elevation is allowed in the floodway.



Hydraulics

The hydraulic characteristics for the Project will be evaluated using HEC-RAS. The effects of the proposed bridge alignment alternatives will be evaluated to determine its effects on the hydraulic grade line. At the Wardlaw Street bridge crossing, the water surface elevations were estimated from the flood profile for St. Helena Creek from the FIS.

Table 3. FEMA Water Surface Elevations at Project Site

Water Surface Elevation (feet NAVD 88)			
500-Year Storm 0.2% Annual Chance Flood	**100-Year Storm** 1% Annual Chance Flood	**50-Year Storm** 2% Annual Chance Flood	**10-Year Storm** 10% Annual Chance Flood
1,100.0	1,099.0	1,098.5	1,096.5

Bridge Freeboard Requirements

According to Lake County Hydrology Design Standards, the proposed bridge may not increase the BFE by more than 1 foot. If a floodway is present, the proposed bridge may not encroach on the floodway or must be designed with no increase of the base flood elevation.

The design of the proposed bridge needs to conform to Chapter 820 of the California Department of Transportation's (Caltrans) Highway Design Manual (HDM). In addition, the FHWA criterion for the hydraulic design of bridges is that they be designed to pass the 2% probability of annual exceedance flow (50-year recurrence interval design discharge) with adequate freeboard, where practicable, to account for debris and bedload.

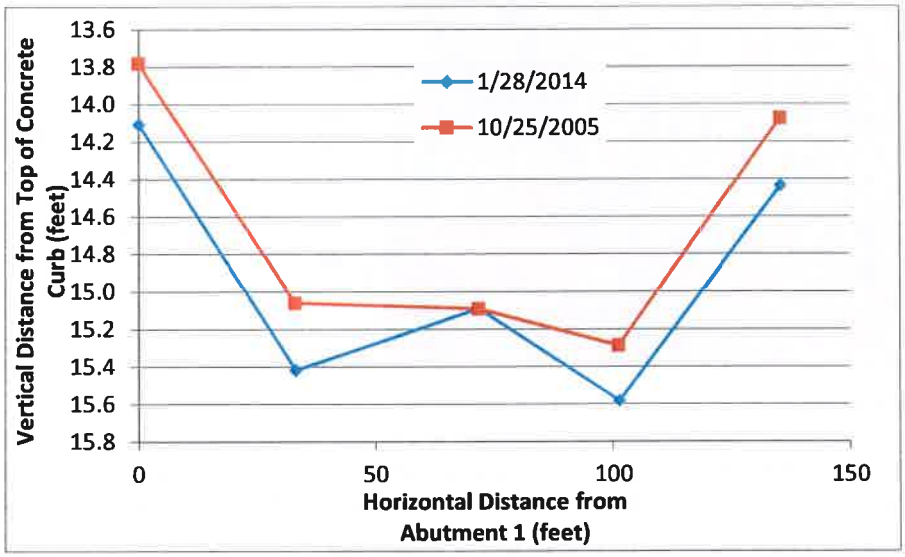
The Caltrans criteria for the hydraulic design of bridges is that they be designed to pass the 2% probability of annual exceedance flow (50-year design discharge) or the flood of record, whichever is greater, with adequate freeboard to pass anticipated drift. Two feet (2 ft) of freeboard is commonly used in bridge designs. The bridge should also be designed to pass the 1% probability of annual exceedance flow (100-year design discharge, or base flood). No freeboard is added to the base flood.

Bridge Scour Considerations

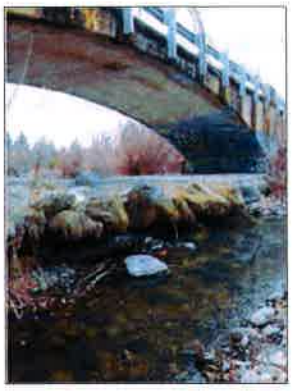
The following table shows relevant scour information from recent Caltrans BIRs for the Project. There is undermining of the concrete invert/apron on the left (downstream) side of the bridge. A large bush is growing directly to the right of Pier 2, which has caused a scour hole to develop. However, the 2012 BIR indicates that there is no threat of scour to the substructure at this time. A stream measurement at the upstream face of the bridge was included in the 2005 and 2014 BIRs, and is shown below. The 2014 BIR indicated that there were no differences between the 2005 and 2014 stream measurements.

The Bridge Scour Evaluation Plan of Action, which was completed by the Lake County Department of Public Works on June 30, 2010, includes a scour history at the site.

The Scour Plan of Action recommends visual monitoring of the abutment and pier footings (for undermining) every 6 months by the County personnel as a proposed scour countermeasure, and monitoring of the bridge during biennial inspections by Caltrans Area Bridge Maintenance Engineer. If signs of degradation and settlement are detected, and excessive settlement occurs, then bridge closure would need to be considered.



Preliminary local scour depths were estimated following FHWA's HEC-18 guidelines. A scour depth of 9 feet was estimated at the pier assuming a 3-foot width, square nose pier wall, and an angle of attack of 0 degrees to the 100-year flow. The depth of flow was based on a 100-year flow event as depicted in the FIS. Although the average channel velocity was estimated to be 3 feet per second, the approach velocity was assumed to be 10 feet per second because the pier is located in a portion of the channel where the velocity would be faster.



A scour depth of 27 feet was estimated at the western abutment and a scour depth of 8 feet was estimated at the eastern abutment. As with almost all projects involving abutment scour, engineering judgment will be required to select a more reasonable scour depth. The abutment scour at the western abutment was estimated to be significantly more because the abutment and embankment are assumed to obstruct a significantly larger amount of flow (based on the FEMA floodplain) than the eastern abutment. There is insufficient information to estimate contraction scour depths. The 2014 BIR indicated that there were no differences between the 2005 and 2014 stream measurements.

5. Utilities

Underground and overhead utilities are located throughout the project limits. Sanitary sewer and domestic waterlines are located west of the existing bridge and serve the adjacent subdivision. There was no evidence of underground natural gas, though it would be expected at this location. Utility joint poles with overhead electric and communications (telephone and television) are located south of Wardlaw Street west of the bridge and then cross to the northeast corner directly over the bridge. The electric line that crosses the bridge are 12kV distribution lines, and may require at least temporary relocation for new foundation installation. Further to the northeast and crossing St Helena Creek Street is a PG&E 60kV transmission line coming from the substation. Additionally, a PG&E underground electric line originating from the substation runs north in the

east side of St Helena Creek Street. This is another area where Quincy will provide added efficiency. Quincy has worked with all of these utility companies on past projects, already know the proper utility contacts, and have established working relationships. Utility coordination site visits can be combined for numerous projects to further reduce costs.

6. Schedule

Quincy has prepared a general milestone schedule for this project. One of the key issues that will impact the schedule will be the environmental process for historic bridges. Should there be public controversy this process can add 1 year or more the environmental approval duration. The key to getting off to a good start will be to secure rights of entry for survey and environmental studies. It is imperative that some environmental studies occur in the spring during the bloom season. Topographic surveys are best conducted in the winter before vegetation obscures sight lines.

PHASE	ESTIMATED COMPLETION
Award Consultant Contract	Winter 2015
Project Development Kick-Off Meeting & Field Review	Winter 2015
Topographic Survey/Stream Cross Sections	Winter 2015
Complete Design Hydraulic Study	Spring 2015
Preliminary Roadway Plans and Bridge APS	Spring 2015
Environmental & Cultural Work	Spring 2015
Preliminary Geotechnical Investigations	Summer 2015
Engineering Feasibility Report & Select Preferred Alternative	Summer 2015
Begin Final Design	Spring 2017
Complete PS&E	Winter 2017
Permits	Winter 2017
Right-of-Way	Spring 2018
Bid & Award Construction Contract	Spring 2018
Complete Construction	Fall 2018

The critical path items are typically environmental and right-of-way. We will maintain constant communication with the Team members to monitor activities internal to the Team to verify adequate progress and timely delivery. The Quincy Team members have adequate staff to ensure timely delivery and our history of delivering on time speaks firmly to this point. Should the schedule need to be accelerated, we have redundancy within our Team to ensure accelerated delivery. Should the schedule slip for reasons beyond our control, our Team members are committed to the completion of this project regardless of duration. Our reputation bears this out.

Cooper Creek at Witter Springs Road (14C-0102)

Witter Springs Road Bridge at Cooper Creek is located northwest of the unincorporated Lake County community of Upper Lake. Witter Springs Road connects SR20 with Bachelor Valley Road in the predominantly agricultural Bachelor Valley. The single lane steel girder bridge was constructed in 1935 and has reached the end of its service life. The Functionally Obsolete structure with a 2014 sufficiency rating of 63.4 makes it eligible for rehabilitation utilizing 88.53% Highway Bridge Program (HBP) funds and 11.47% Federal Toll Credit funds. The County prefers to replace this aging single lane structure which will require an additional justification with Caltrans.

EXISTING SITE

Roadway

The Witter Springs Road Bridge is made up of a single 16' lane with a design speed of 40 mph. This County road is two lanes in each direction both east and west of the bridge so the existing site serves as a constriction. Since the land use in the Bachelor Valley is predominantly agricultural, large farm tractors and trucks regularly use this route and the single lane bridge is much too narrow for this use.

The Witter Springs Road Bridge is typical from a right of way standpoint as there is a unique parcel at each corner of the bridge. Cooper Creek and the roadway serve as the boundaries between each of the parcels. There is a driveway on each side of the bridge that serves the residences located on the parcels north of Witter Springs Road. Three of the four parcels consist of open field and grazing lands, while the parcel southeast of the bridge contains and active orchard. These four parcels will potentially be affected by the bridge replacement project.

Overhead utilities are located throughout the project limits on each side of Witter Springs Road. PG&E overhead electric lines are located along the north side of the roadway with overhead telecommunications located along the south side. Both of these pole lines appear to be within County R/W and each will likely require relocation or at a minimum close coordination during the planning and construction phases.

Bridge

The existing bridge is around 80 years old and at the end of its service life. The 21' long single span consists of rolled steel girders (5 total structural steel S-shape I) with a composite concrete deck. The deck was constructed using corrugated metal pipe cut length wise. These pipe arches span between the girders transversely acting as stay in place deck forms. This superstructure configuration is often called a "Concrete Jack Arch".


Example of a Jack Arch Superstructure

The reinforced concrete abutments are assumed to be supported on spread footings. The abutment and flared wingwalls are approximately 12' above the thalweg (flow line) of Cooper Creek. There is no mention of scour issues in the bridge inspection report although the ends of at least one of the wingwalls has been undermined and is exposed full height. Preliminary hydraulics analysis has shown that the existing bridge will become fully inundated during the base flood.

The existing bridge railing is non-standard and may not meet current crash standards. There are also no approach guardrails or transitions leading the bridge.

The concrete deck has a 5" bituminous wearing surface. The condition of the deck cannot be evaluated due to this covering. It is likely that the condition of this aging deck is poorer than the rating given on the "Structure Inventory and Appraisal Report". The current rating of the deck is "7 - Good Condition - some minor problems". This is a typical rating where the inspector cannot visually inspect the deck element. Based on the photos included in the latest inspection report, the monolithic concrete curb along the edge of deck is showing signs of age and deterioration that likely extent across the hidden surface of the concrete deck.

Currently the bridge is assigned a Sufficiency Rating of 56.0, indicating that the bridge is ***sufficient*** for its intended purpose of providing a safe and reliable crossing of Cooper Creek. However, the bridge is also classified at ***Functionally Obsolete***, indicating that the bridge deck geometry is below minimum standards for today's traffic demands and current design standards. To restore the bridge to current standards and remove all elements which classify the bridge as functionally obsolete, either bridge rehabilitation by widening or bridge replacement would be needed.

Cooper Creek

Cooper Creek intersects Witter Springs Road at approximately a 20 degree skew. The creek is well vegetated with a low hydraulic gradient. There is a bridge just upstream of the project over Cooper Creek (Br. No. 14C-0119) that is located to the northwest. This bridge is currently a temporary Bailey truss that is currently in the preliminary engineering phase of a bridge replacement project. As this upstream project moves forward, information gathering from this nearby site can be used to further develop the project understanding at this tie.

Key Project Issues

Our Team has developed some Key Project Issues based on past project experience and on our efforts to date with the funding assistance for this project. A summary of these issues are presented in the "Key Issues" table: discussion of each issue following:

Key Issues	
1	HBP Funding
2	Roadway Alignment
3	Bridge Replacement/Retrofit Options
4	Geotechnical Studies
5	Hydraulics

1. HBP Funding

The anticipated rehabilitation scope is a full bridge replacement. Although the HBP guidelines typically do not fund replacement projects for existing bridges with sufficiency ratings greater than 50.0, there are HBP guidelines which allow for rehabilitation by replacement when warranted. HBP guidelines permit rehabilitation by replacement if there are reasonable engineering justifications to do so or if the rehabilitation costs start approaching the replacement cost. For this project site, there are hydraulic constraints which would justify full replacement of the existing bridge. However, to be prudent, we have included a rehabilitation alternative since there is a possibility of obtaining funding for rehabilitation project scope.

Quincy has extensive experience with justifying bridge replacement for rehabilitation projects on bridges with sufficiency ratings greater than 50. Typically, Quincy will use a Life Cycle Cost Analysis to justify the high upfront cost of replacement. This analysis usually shows that the long term cost of maintaining an aging structure will exceed the upfront replacement costs. There are other justification that help fund bridge replacement as well.

Preliminary Hydraulic investigations have revealed that the 100 year storm floodplain at the project site would completely inundate the existing bridge. This factor will affect the overall scope and cost of this project more than any other. The importance of understanding the effects of the floodplain due to the actions taken during the course of this project are paramount to minimizing the County's risk and establishing the most economical engineering solution at the site. This project

understanding will detail our approach to tackling these essential issues at this site and help the County to fund and build the proposed bridge at this site.

2. Roadway Alignment

The County has adopted standards for the cross section of the new structure based on the road classification and average daily traffic (ADT). Being a rural minor road with a future ADT of 470 vpd, the County's standard width is 24' from edge of pavement to edge of pavement. An additional 4' on each side consists of graded aggregate base for a total width of 32'.

Preserving the bridge's current alignment appears to be the most feasible for either the rehabilitation or the replacement. This would be consistent with the straight alignment of Witter Springs Road both east and west of the bridge and would minimize cost and permanent environmental impacts. The two alternatives that have been developed address how traffic is handled during construction and will apply for both the rehabilitation and replacement options. The first alternative is to detour Witter Springs Traffic away from the project site entirely and the second is to use a local detour adjacent to the new bridge.

Alignment Alternative 1- Replace on Existing Alignment- Detour

Alignment Alternative 1 would close the roadway at the project site to through traffic and would detour to Bachelor Valley Road and then onto Witter Springs Road for the three to four month construction season. The length of this detour is approximately 2.6 miles. The key to this alternative is the Cooper Creek Bridge (Br. No. 14C-0119) that is located to the northwest. This bridge is currently a temporary Bailey truss that has an unknown load rating but would need to serve as the detour crossing at Cooper Creek. Because of the local agricultural land use, this bridge needs to be able to handle all legal loads. The County has programmed this bridge for replacement and it is currently slated for 2016 construction.

Pros:

- Most cost effective
- Minimizes Right of Way Needed
- Detour uses existing County roads
- Contractor has excellent access to the work zone
- No traffic within the work zone
- Minimizes temporary and permanent environmental impacts

Cons:

- 3 mile detour would be required
- Cooper Creek Bridge (Br. No. 14C-0119) needs to be completed prior to construction
- Possible community opposition

Alignment Alternative 2- Replace on Existing Alignment- Local Detour

Alignment Alternative 2 provides for a local detour around the construction zone during construction. A temporary gravel roadway would be constructed either upstream or downstream of the existing crossing and through traffic would be detoured. It appears that placing the detour on the upstream side would result in the least amount of trees that would be impacted. A series of culverts would be placed in the channel and then covered with engineered material in order to provide for the creek crossing. This diversion and detour could then be removed once the new bridge is complete.

Pros:

- Reduces detour length
- Does not require Cooper Creek Bridge (Br. No. 14C-0119) to be completed

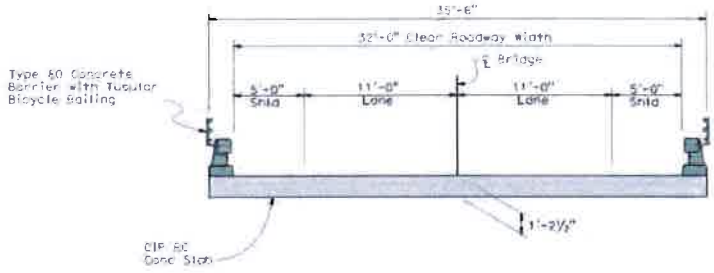
Cons:

- Temporary crossing is more costly
- Greater impacts to riparian habitat
- More costly easement for temporary crossing
- Contractor work zone will be smaller

3. Bridge Replacement/Retrofit Options

Based on the constraints at this unique project site, the following bridge replacement and retrofit alternatives have been developed. Each alternative will maintain the existing roadway alignment and will require a detour during construction. The existing bridge is 20' long and replacement alternatives may need to be longer to convey the flows of Cooper Creek. The replacement alternatives would also probably need to provide for a significantly higher profile elevation (up to 4' higher than the existing bridge deck) to convey design storm flows. Note that Bridge Alternative 3 - Rehabilitation would require a design exception for substandard storm flow conveyance. After hydraulic sections are obtained the best combination of bridge length and height can be explored to maximize the hydraulic opening and minimize profile impacts.

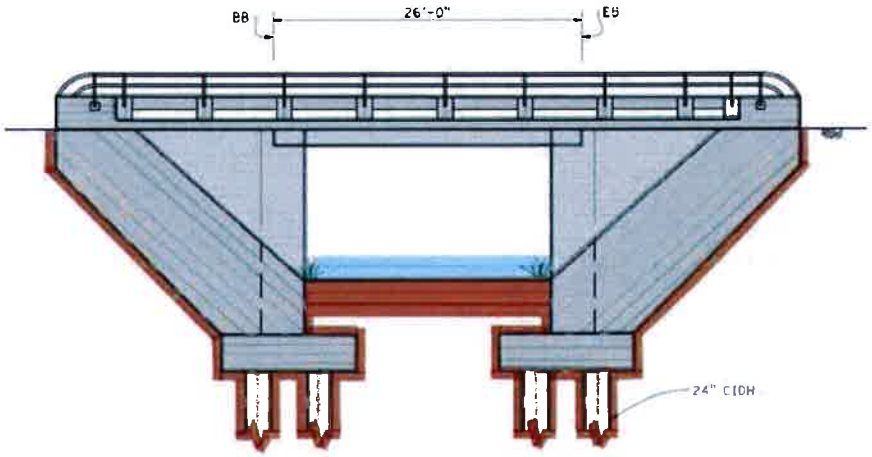
The proposed bridge will need to accommodate two 11' lanes for traffic and two 5' shoulders to meet current standards for the 40 mph design speed and future anticipated ADT. The bridge will likely incorporate Caltrans Type 80 Concrete Barrier to keep traffic safely on the bridge and maintain the aesthetic quality of rural Lake County.



RC SLAB TYPICAL SECTION

Bridge Alternative 1 – Replacement with a Single Span Cast-In-Place Reinforced Concrete Slab

Cast-in-place reinforced concrete slabs are an efficient bridge type for spans less than 50'. For this location, the new bridge would consist of a 26' long single span cast-in-place reinforced concrete slab with a bridge depth of approximately 1'-3". Depending on the base flood water surface elevation, the roadway profile will need to be up to 4' higher than the exiting bridge deck and long approach fills may be required to conform to the existing roadway.



ELEVATION - RC SLAB

A single span alternative is desirable as it eliminates the constrictive support in the channel. This alternative would provide the best hydraulic conveyance of storm flows. It is likely that this bridge will need to be designed for significant amounts of scour, making the abutments quite tall (in the range of 15' to 20' tall).

If there are no anticipated scheduling or environmental issues with installing falsework, a cast-in-place concrete bridge is a very cost effective alternative based on constructability, functionality and other economic considerations.

Preliminary geotechnical investigations at this site as well as nearby investigations at a similar bridge replacement project upstream of this site have revealed that there are possible liquefiable subsurface soil layers beneath Cooper Creek. This condition could require deep and stout foundation elements to properly resist against the increased seismic forces associated with the effects of liquefiable soils during seismic events.

Pros:

- Highest hydraulic conveyance
- Most Aesthetically Pleasing

Cons:

- Costly/ deep foundations
- Longest construction schedule

RIGHT OF WAY
EXISTING BRIDGE
ELECTRIC
TELECOMMUNICATIONS

003-015-120
BOYLE MICHAEL V & YVONNE TRUSTEE

003-015-130
HUBER RALPH G & CAROL M TRUSTEE

003-015-150
BENNETT MARK EV N

TEMPORARY DETOUR

WITTER SPRINGS ROAD

EXISTING BRIDGE TO BE REMOVED

BYPASS PIPES & STREAM PROTECTION

Cooper Creek

003-015-240
ISLEY BERT A & DONNA J

003-015-250
IRWIN JR JOHN D

003-015-070
DRANZIK DARLENE A

DESIGN SPEED = 40 MPH
ROADWAY WIDTH = 24'
FUTURE ADT = 470 VPD

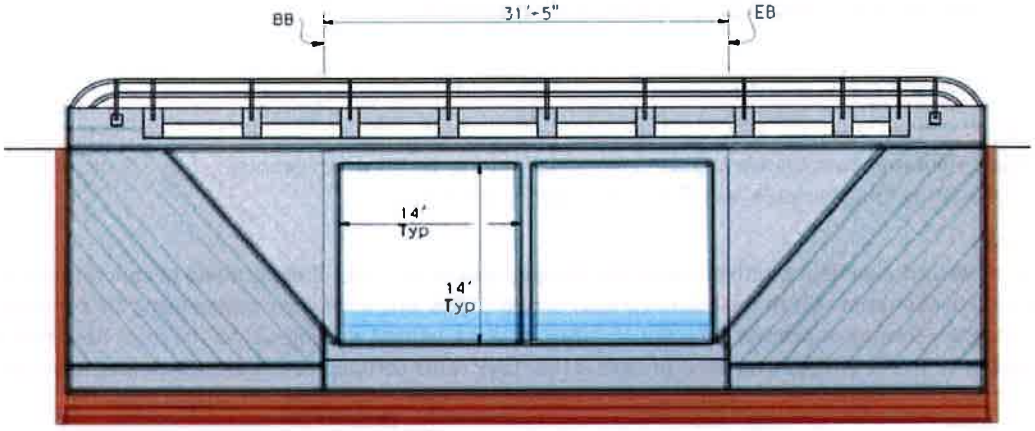
County of Lake

LOCAL DETOUR ALTERNATIVE- BRIDGE 14C-0102

COOPER CREEK BRIDGE AT WITTER SPRINGS ROAD

QUINCY ENGINEERING

Bridge Alternative 2 – Replacement with a Two Span Cast-in-Place Concrete Box Culvert
This alternative would utilize a 26'-9" long, two barrel cast-in-place reinforced concrete box culvert. The design of this structure would follow Caltrans Standard Plan Design tables. Using a Cast-in-place reinforced concrete box culvert would provide the same benefits as a reinforced concrete slab except that the box culvert would have the added benefit of being able to be support on a shallow foundation.



ELEVATION - CIP BOX CULVERT

Precast alternatives are beneficial for locations where the construction window is short and the elements can be manufactured offsite or where environmental constraints do not allow for falsework in the stream channel. Depending upon the final hydraulics, precast box culverts may also be an option to help reduce the length of the anticipated road closure at this site. However, precast culvert sizes are limited to what can be trucked to the site and typically cannot provide as much hydraulic conveyance as cast-in-place culverts.

To span the gap at this location with a box culvert, two cells would be required. This means that a center support is required. This center support consists of a 16" concrete wall. This wall would act as a drift collector during storm events and adversely affect the hydraulic conveyance capacity of the culvert. Scour countermeasures such as rock slope protection would be required at this site. Cutoff walls would also be incorporated to prevent undermining of the culvert invert.

Pros:

- Low cost foundation
- Short construction schedule

Cons:

- Prone to scour maintenance issues
- Reduced to hydraulic conveyance capacity when compared to Alternative 1

Alternative 3 – Retrofit and Widen Existing Bridge
Although this alternative is technically feasible, widening the existing bridge would leave the undesirable storm flow condition in place. Currently, the existing bridge will become inundated during design storm events. Pursuing a retrofit project will likely require the County to acquire a design exception for substandard storm flow conveyance.

The existing superstructure is rated for less than full permit loads. It is not likely that the existing rolled steel girders can be strengthened. This means that the entire superstructure would need to be replaced in order to meet current standards for live load.

The existing bridge would need to be widened to the meet the requirements of County Standard as well as AASHTO bridge widths for the functional class and ADT of Witter Springs Road. The existing 16' wide bridge would be widened on both sides to help strengthen the existing substructure. There are no As Built plans of the existing bridge and therefore, it is not known whether the bridge is supported on piles or a spread footing. Either way, it is likely that the existing foundation could not withstand the effects of liquefied soils in a seismic event so, the existing substructure would need to be supported by the widened substructure. The widened substructure would need deep foundation elements similar to Alternative 1.

The rehabilitated bridge would consist of a new superstructure, new railing, new abutments (end portions) and wingwalls, new footings and new piles. The rehabilitated bridge would need a design exception for hydraulic conveyance. This alternative would likely cost nearly as much as Alternative 1 while providing the County and the public with a non-standard bridge. If pursued further, it is likely that a Life Cycle Cost Analysis would show the cost benefit of bridge replacement instead of attempting to keep portions of the existing bridge. Quincy has extensive experience in helping Counties obtain HBP funding for bridge replacement by retrofit when the sufficiency rating is above 50.

Pros:

- Salvage portions of existing substructure

Cons:

- Substandard Hydraulic Conveyance Capacity (Inundated during design storm events)
- Portions of existing bridge remain, will likely need routine maintenance

Other Bridge Types

The Quincy Team has vast experience with all applicable bridge types at this site. Bridges made of concrete are the most common type used in California. Given the relatively easy access to this site, a concrete bridge using CIP construction methods on temporary shoring or precast concrete arch/box culverts without shoring will be the most desirable options. An added advantage of concrete bridges over steel bridges is that they resist corrosion and have lower long term maintenance costs.

Aesthetics

Project improvements are expected to include basic levels of aesthetic treatment. Concrete slab bridges and box culverts have an attractive appearance due to their clean lines and consistent color. The bridge will feature Type 80 concrete barriers with a post and beam look. This barrier is aesthetically pleasing and growing rapidly in popularity in California. Due to the location and scope of this project, we assume that the County will not request additional aesthetic treatments.

Falsework

Cast-in-place concrete construction methods require that temporary falsework supports be placed within the creek channel. Construction activities in the creek channel will be subject to environmental constraints, including suspension of activity within the channel during the winter and spring months.

4. Geotechnical Studies

It is understood that the county has requested that the structure be replaced and the project may be changed to a bridge replacement. If the bridge is replaced, it is expected that the new structure would be a slightly longer single-span bridge or a reinforced concrete box culvert on the same or similar alignment. It is anticipated that new approach roadway will extend from each end of the bridge and include some widening/improvements.

Published geologic mapping shows surface materials at the site as recent alluvium that generally consist of unconsolidated sand, gravel, and lesser silt/clay. Based on our review of the site, materials exposed in the channel were observed as silt, sand and gravel consistent with the geologic mapping. Such materials are typically erodible, considered susceptible to scour and are potentially susceptible to liquefaction.

Taber Consultants recently completed test borings for the nearby Cooper Creek Bridge at Witter Springs Road (Br. No. 14C-0119) and identified potentially liquefiable soil layers to as deep as 70 feet in those borings. It is therefore anticipated that similar conditions may exist at this project location with similar consideration of potential liquefaction with respect to new bridge foundation support (e.g., liquefaction induced settlement, pile downdrag, lateral spreading, etc.). No retaining walls are indicated for this project.

Key geotechnical elements associated with this project/site are expected to include:

- Susceptibility of subsurface materials with respect to erosion, scour and liquefaction,
- Identification/depth of suitable bearing stratum for new bridge/slab support, and
- Depth to groundwater

5. Hydrology & Hydraulics

Hydrology

The Project site is located within the western Lake County near the county's border with Mendocino County. At its crossing with Witter Springs Road, Cooper Creek flows from northwest to south. Cooper Creek drains a watershed area of approximately 5.5 square miles at the Project site. There are no known USGS peak stream flow gages along Cooper Creek. The peak discharges at the Project site were estimated using USGS' StreamStats, and are summarized in Table 4.

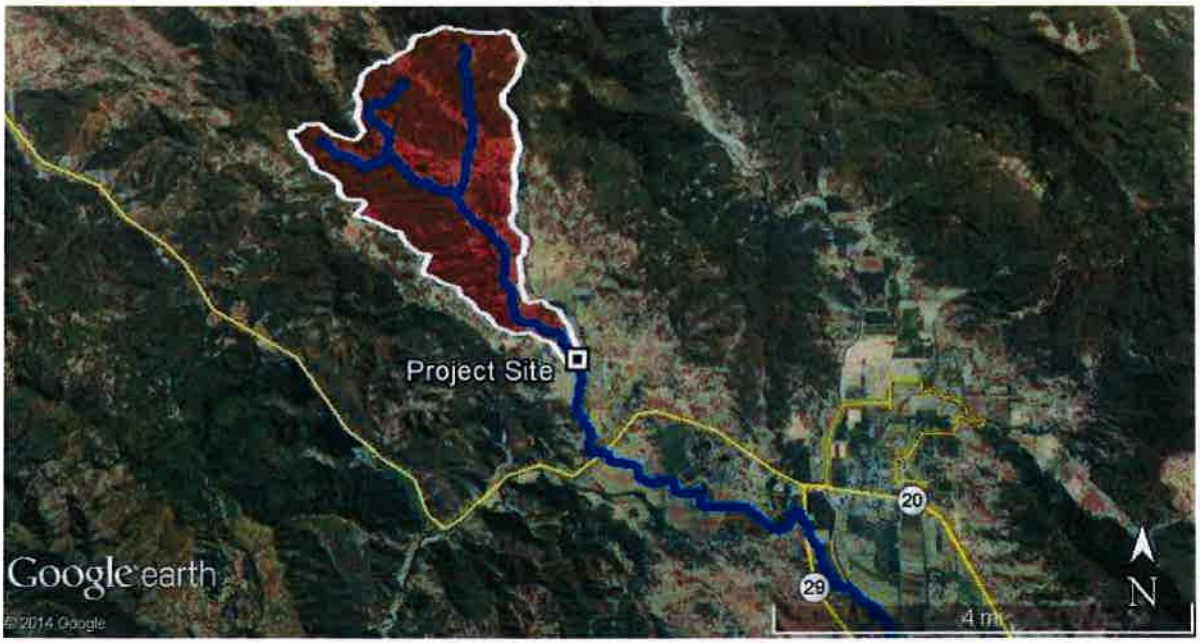


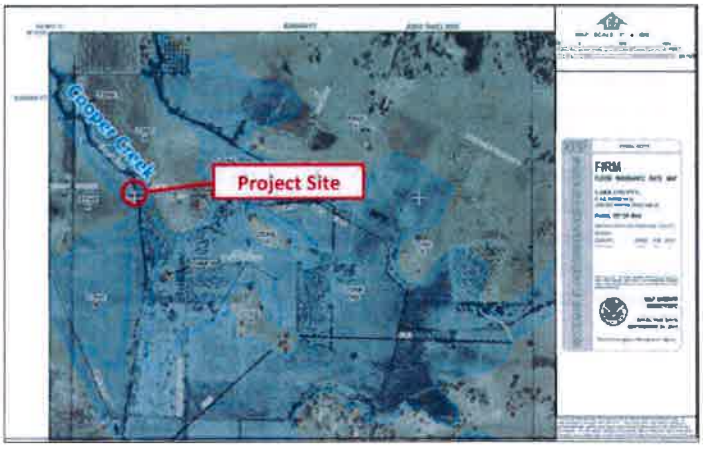
Table 4 - USGS Regional Flood-Frequency Peak Discharges at Project Site

Location	Peak Discharges (cubic feet per second)		
	100-Year Storm	50-Year Storm	25-Year Storm
Cooper Creek at Project Site	1,780	1,520	1,270

Floodplains

The Flood Insurance Study (FIS) does not include detailed flood information for Cooper Creek.

The FEMA Flood Insurance Rate Maps (FIRMs) were researched for the Project; the FIRM at the Project site is shown below. The Project site is located in Zone A, which represent areas subject to inundation by the 1-percent-annual-chance flood event. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. The width of the Zone A floodplain at the Project site, normal to the flow direction, is approximately 400 ft.



Hydraulics

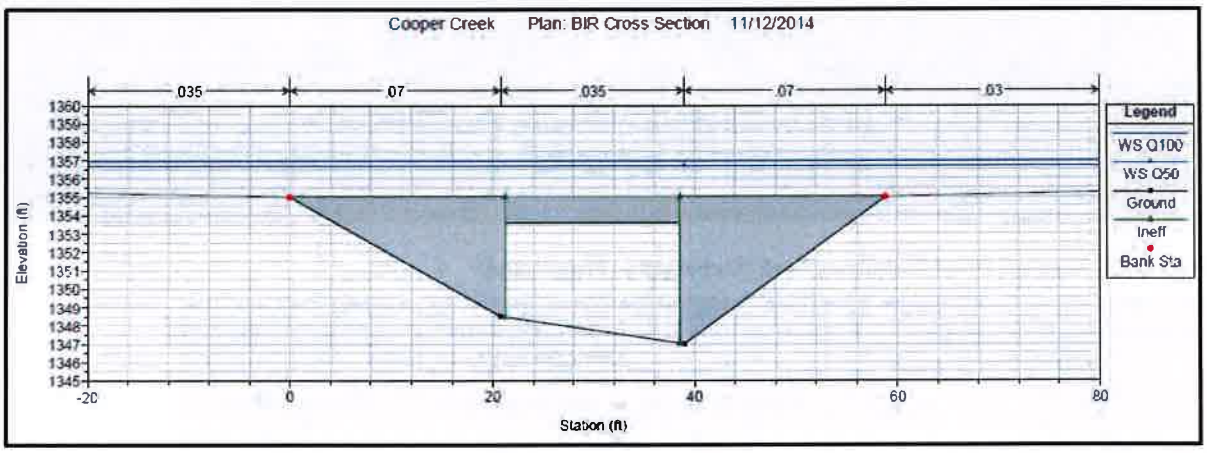
A preliminary hydraulic analysis was performed using the flow rates determined by the USGS regional regression method and the channel cross section from the Caltrans' Bridge Inspection Report that was measured in January 7, 1997. A longitudinal slope of 0.18% was estimated using USGS topographic quadrangle maps. Contours from USGS graphic quadrangle maps were also used to extend the channel cross section to account for the overbank flows as shown in the FEMA FIRM.

The water depths and average channel velocity are summarized in the table below. These estimates assume that there is no backwater at the bridge under normal depth flow conditions. The bridge design is based on the bridge as-builts included in the Caltrans' BIRs. The cross section at the bridge is shown in the figure below.

Preliminary analysis shows that even with raising the new bridge profile approximately 2 or 3 feet, the soffit may not provide the required freeboard in a storm event and a design exception may be required.

Table 5 - Water Depths and Velocities at the Project Site

Water Depth at Upstream Face (feet above bridge deck)		Average Velocity at Upstream Face (feet per second)	
100-Year Storm	**50-Year Storm**	**100-Year Storm**	**50-Year Storm**
1.9	1.7	4.2	4.1



Fish passage

No fish passage barrier between Project site and Clear Lake was identified in the California Department of Fish and Wildlife's Passage Assessment Database. However, approximately 1.1 mi downstream of the Project site, Cooper Creek cross culverts below State Route (SR) 20 could be classified as the fish passage barrier. In addition, aerial imagery captured in-stream structures and culvert crossing in Scotts Creek between SR 20 crossing and the confluence with Scotts Creek. These structures could be potential fish passage barriers.

PROJECT UNDERSTANDING SUMMARY

As you can see from our approach to this project, we understand the project constraints and will deliver the project in a time effective manner that accomplishes the County's project objectives. The County will also benefit from our Team's Local Knowledge.

Our previous experiences with this project and other previous County projects have given us a unique perspective and understanding of the opportunities that still lie ahead. The above project approach presents our ability to capitalize on these opportunities. Our understanding of this project is based on:

- Information provided in the County's RFP
- The work Quincy Team members have performed as part of the HBP Application effort
- Site visits performed by Quincy Team members
- Quincy's experience teaming with the County on other projects with similar features and issues
- Conversations with County personnel
- Conversations with Caltrans Local Assistance as well as Caltrans Programming personnel
- Caltrans reports and records for this bridge

The Quincy Team has been assembled to ***provide the County with the specialized experience*** required to successfully complete these projects. The Scope of Work included with this proposal outlines the detailed tasks to be completed by our Team. The Quincy Team for this project has worked together on numerous occasions and has many of the same Team members that are currently developing other HBP projects for the County. Quincy has an established reputation for the delivery of transportation improvement projects that meet Federal, State, and Local Agency design standards and practices, on schedule and within budget. Given our expertise with Local Assistance Procedures, and familiarity with County staff, ***Quincy can assist the with continued Local Programs compliance for projects utilizing Federal Funds*** as well as assist with the federal-aid paperwork. Our accounting practices and project development procedures are in conformance with the Federal HBP guidelines as administered by Caltrans.

SCOPE OF WORK

This *Detailed Scope of Work* utilizes **Tasks 1-11** identified in the Request for Proposals and fully satisfies all **Scope of Work** requirements and deliverables for this project. The overall Scope has been separated into separate project scopes to clarify differences in Scope between the two projects.

Quincy has generated task hours assuming that the PS&E will be developed based on the recommendations within the Highway Bridge Program (HBP) Applications and Project Study Report (PSR) Equivalents included in the RFP. Assumptions and "Optional" items of work can be found in the appropriate task discussion in this scope. Quincy recognizes the proposed scope and fees exceed the programmed E-76 amounts for each bridge. The approved Phase 1 scope (and associated fee) is intended to complete enough work such that a "decision point" can be reached and the overall project can be determined which will form the basis for the project moving forward, as well as the identification of additional funding needed to complete the work. It is understood the approved scope and associated fee will not exceed this programmed amount until additional funding has been authorized. Should preliminary engineering result in a radically different alternative, a contract amendment may be required prior to final design. Tasks which apply to one specific project site will be clearly identified.

Our Scope of Work for this project is based on:

- Information provided in the County's RFP
- The work Quincy Team members have performed as part of the HBP Application effort
- Site visits performed by Quincy Team members
- Quincy's experience teaming with the County on other projects with similar features and issues
- Conversations with County personnel
- Conversations with Caltrans Local Assistance as well as Caltrans Programming personnel
- Caltrans reports and records for this bridge including the 2014 BIR
- Caltrans Headquarters comments on the HBP applications and their impact on rehabilitation strategies, programmed budget amounts
- Required Caltrans approval to establish final scope and budget

SCOPE OF WORK - St. Helena Creek at Wardlaw Street Project (14C-0035)

Quincy will assist the County in responding to Caltrans Headquarters' comments on the HBP funding applications. It is understood Caltrans will give the final approval for the chosen strategy as it relates to replacement versus rehabilitation alternatives. The following scope assumes the following bridge alternative: **160 foot long two span cast-in-place post tensioned concrete slab with architectural arches.**

Close coordination with Caltrans Local Assistance District 1 and Structures Maintenance will be necessary to agree on the preferred alternative for the project. Due to past project experience with District 1 as well as HQ Programming Quincy (with the County) will communicate directly with Caltrans and define the true project goals. This project will also be an ideal opportunity to increase the **County Staff Involvement** wherever possible. The goal is to involve County staff throughout the project process as a true partner wherever practical. We have identified multiple areas which are candidates for increased County involvement. These are identified with the following symbol:

Quincy has divided the Scope of Work into two phases. The first Phase will be completed under one contract and the contract then amended to add the Phase 2 tasks. The first phase will complete all tasks until submittal of 65 % plans including environmental approval. Phase 2 would commence with independent design checks.

Quincy's *Detailed Scope of Work* approach for this project is as follows:

PHASE 1 - PRELIMINARY ENGINEERING

TASK 1 – PROJECT INITIATION

Task 1.1 – Kick-off Meeting
The Quincy Team (Team) will attend a kick-off meeting to bring all stakeholders, including the County, the Team, and Caltrans together to form a cooperative effort toward the timely completion of this project.

This meeting should also include a discussion of the HBP Application, PSR Equivalent, and potential APE map limits. Participants will then discuss the following: key action items from field review with Caltrans; initial identification of issues; scope of technical studies; approaches to CEQA/NEPA compliance; and schedule for submittals.

It is anticipated that representatives from the County will participate in the kick-off meeting with Quincy, and Caltrans representatives to review other specific environmental/cultural project needs. Quincy assumes the kick-off meeting will be conducted in one day for the two projects.

Task 1.2 - Field Review
Quincy will attend the Field Review with the County and Caltrans District 1 representatives at each project site to review the PES form including the Visual Impact Screen Check form, and APE map. Quincy assumes the Caltrans field review will be conducted in one day for all two projects. Meeting participants would discuss each element of the PES checklist form, refine the APE limits, identify issues of concern, required technical studies, and then come to agreement on appropriate level of NEPA documentation (CE supported by technical studies or EA). Once the review of the project site has been conducted and the checklist items have been discussed, the County and Caltrans representatives would review and sign the PES form. The PES form requires the reviewers to provide a preliminary opinion regarding the type of NEPA documentation required for the project.

Task 1.3 - Scope Verification
Quincy will meet with the County following the Field Review and review this Scope of Work and make changes as required depending on the outcome of the meeting with all stakeholders. It is anticipated some changes to Task 4 could be necessary depending on level of Environmental Studies required.

Task 1.4 - Establish Project Schedule
Quincy will develop a Microsoft Project schedule showing each task, start and end dates, and task duration. This schedule will be updated and coordinated with the County throughout project development as appropriate. The County will be notified immediately of any problems that may adversely impact the project schedule.

Task 1 Deliverables:
- Kickoff Meeting
- Field Review
- Existing Information Review
- Final Scope/Schedule

TASK 2 – PROJECT MANAGEMENT

Task 2.1 – Project Management
The Quincy project manager will coordinate between all Team members to monitor and ensure progress, ensure adherence to the project schedule, ensure the proper resources are assigned to the project, and communicate regularly with the PDT members. Monthly invoices will be reviewed and sent to the County with a progress report on that month's work. Quincy will submit a copy of our internal QA/QC manual which outlines independent reviews and our constructability review procedures.

Task 2.2 - Progress Meetings
Quincy will work with the County to schedule and attend meetings, prepare agenda items, and compile project meeting minutes for distribution. The County has requested meetings a minimum of every other month in the scope. In addition to the kick-off and field review meetings, Quincy anticipates face to face team meetings at the completion of the 35%, 65%, and 95% design completion to review and address County comments. These will be supplemented by monthly conference calls as necessary to keep the County informed as to the project status. Quincy has assumed both projects can be discussed at each project meeting. Additional meetings can be added during scope negotiations if requested. A 1 hour duration per conference call for the PM and PE have been assumed each month and a 4 hr duration in person meeting has been assumed for the PM, PE, and bridge/roadway designer. Quincy has assumed 24 hours for this phase.

Task 2.3 - Assist the County with State Administration Requirements

Quincy will prepare funding documents for the Request for Authorization (RFA) of upcoming phases of work. An E-76, formally called an "Authorization to Proceed" must be processed for federal authorization of funds to establish the reimbursement date for each phase of work. A separate E-76 request (RFA) is required for preliminary engineering (PE) – already obtained by the County, right-of-way/utility relocation (RW), and construction (CON) phases when federal funds are to be used in that phase of work. Quincy will also assist the County with any revisions that may be necessary to receive additional approval or allocations for each phase of the project, and keep the County informed of upcoming documentation requirements. If needed, this could include revisions to the HBP funding through Exhibits 6A, 6B, and 6D, which Quincy regularly assists Local Agencies with. Quincy can also assist with special requests by Caltrans Local Assistance such as annual HBP Surveys (typically sent out in August), or other program updates.

Task 2 Deliverables:
- Project Management
- Progress Meetings (Total 3 in person, 8 conference calls)
- Caltrans Local Assistance Coordination
- HBP Funding Authorizations

TASK 3 - PRELIMINARY ENGINEERING

Task 3.1 - Surveys and Mapping (Conser Land Surveying)

CONSER will perform the necessary field surveys to prepare a complete topographic map with DTM to serve as the Base Map for the preparation of the preliminary and final engineering plans. All surveying work will conform to the requirements of the Caltrans Surveys Manual and Safety Manual for Safe Surveying Practices, tasks include:

- Perform the necessary research of Lake County Records to create a database of record documents to be utilized in the initial preparation of fieldwork scheduling and Base Map calculations.
- Utilizing survey grade Topcon GTS Total Station and Trimble RTK GPS, establish a Control Network that includes nearby record monumentation if existing, NGVD29 vertical datum, any record monuments of adjoining Subdivision Maps or Records of Surveys that may assist in determining the Road Right of Way and adjoiners boundaries will be included if applicable.
- Utilizing survey grade Topcon GTS Total Station and Trimble 5000 Series Robotic Total Station, gather Horizontal and Vertical topographic field data, including, but not limited to, Bridge improvements, creek channel, drainage flowlines, headwalls, culverts, edge of traveled way, center of roadway, adjoining roadways, flowlines, returns, along with any other improvements that may or may not infringe on the preliminary design.
- Prepare electronic Base Maps with DTM, in a .dwg format, including Road Right of Way and adjoining boundaries if applicable.

Task 3.1 Deliverables:
- Topographic Surveys & Mapping
- Creek Cross-Sections
- Right-of-way & Adjoining Property Information

Task 3.2 - Geotechnical Investigations (Taber Consultants)

Task 3.2.1: Preliminary Foundation Memorandum

Taber will prepare a Preliminary Foundation Memorandum for the preliminary engineering phase and bridge-type selection based on review of record documents, published geologic data, aerial photographs, and a site visit that will include a seismic line at/near the proposed bridge location in order to assess the shear wave velocity of the subsurface materials. Seismic lines are an accepted way to generate generalized shear wave velocities for Caltrans ARS curve calculation. Taber also makes allowance to attend the kick-off meeting.

The memorandum is expected to include: Project Location and Vicinity Map; Summary of Site Geology and Subsurface Conditions (based on review of available record documents, published geologic data, and site review); Seismic Data and Evaluation using current Caltrans seismic design criteria (including preliminary ARS curve using Caltrans ARS Online tool); Liquefaction Considerations; Roadway/Subgrade Considerations; Preliminary Foundation Alternatives (e.g., spread footings, cast-in-drilled-hole piling, etc.); Preliminary Foundation Recommendations with conditions and constraints on likely foundation types; and Preliminary Construction Considerations.

Note: Depending on the bridge/layout options being considered, subsurface exploration can be completed as part of the Preliminary Foundation Report to provide more detailed information during the preliminary design phase of the project, if/as desired.

Task 3.2.2: Permit Acquisition and Underground Service Alert (USA) Notification

Test borings are expected to be drilled along the existing roadway(s) and within dry portions of the creek channel during dry field conditions. The field exploration locations are expected to be within county right-of-way and/or private property. Taber

will obtain an encroachment permit and county environmental health permit. Taber assumes that rights-of-entry (if needed) will be provided by others and the county will waive the encroachment permit fees and bond requirements.

Taber will obtain a county encroachment permit and boring permit. It is assumed that the client will provide rights-of-entry (if needed) and the County will waive the encroachment permit fees and bond requirements. For Wardlaw, Taber also makes provision to obtain a California Department of Fish & Wildlife (CAFW) permit to complete borings within the channel. No other permits are expected to be required for these projects.

Prior to commencement of field exploration, Taber personnel will mark the boring locations and notify Underground Service Alert (USA) for location of underground utilities. Field exploration will be coordinated with county and CAFW personnel in accordance with permit requirements as necessary. For these projects lane closure with signs and traffic cones (without flaggers) is expected to be appropriate for borings completed along the roadway at proposed abutment locations.

Task 3.2.3: Subsurface Exploration

This phase will consist of drilling and logging three borings to 70 to 80-ft depth (shallower if rock/ conditions suitable for spread footing foundations is encountered). Exploration/testing in evaluation of roadway subgrade conditions will include two shallow test borings (5-8±ft deep) at the approaches to the bridge. Soil samples will be recovered at 3 to 5-ft intervals. Rock may be encountered at this site and diamond coring equipment will be used to recover rock cores as necessary. Bulk soil samples will also be recovered for laboratory testing and reference. Borings are planned to be drilled with a track-mounted rig in the channel area at/near the pier support and east abutment and in the roadway shoulder at the west abutment. Drill cuttings will be disposed off-site.

Task 3.2.4: Laboratory Testing

Laboratory testing to supplement field evaluation of earth material parameters is expected to include moisture-density, gradation, unconfined compressive strength, Expansion Index (EI), Sand Equivalent (SE), point load index on suitable rock cores, and soil corrosivity screening (pH / minimum Resistivity / sulfate / chloride content) on selected samples. One R-value test will be performed to evaluate subgrade materials for new pavement section recommendations. Screening for the presence of asbestos minerals of soil/rock samples completed in accordance with the California Air Resources Board (CARB) Method 435 will also be completed.

Task 3.2.5: Engineering Evaluation and Analysis

Engineering evaluation and analysis to develop geotechnical recommendations for this project is expected to include: bearing capacity; lateral capacity; site seismicity including, deterministic / probabilistic procedures consistent with current Caltrans Seismic Design Criteria and Caltrans ARS Online tool to determine the site acceleration response spectrum (ARS); lateral earth pressure and coefficient of friction to resist sliding; soil corrosivity; and, new flexible pavement design for roadway approaches.

Task 3.2.6: Draft and Final Foundation Reports

Taber will prepare one Draft Foundation Report for bridge design. The report will provide a site/project description, summarize site geology, subsurface exploration and field and laboratory soil/rock tests, discuss scour considerations (based on Hydraulics Report prepared by others), and include a "Log of Test Borings" (LOTB) drawing. Earth materials and foundation conditions will be discussed including seismic criteria and the design ARS curve. The report will discuss structure foundation conditions/constraints, recommended type, level and loading of bridge foundation elements, and include construction considerations (e.g., excavation, dewatering, storm water quality, naturally occurring asbestos, etc.). Design pavement structural section(s) and earthwork recommendations for associated roadway improvements will also be provided. Taber will complete a Final Foundation Report incorporating the review comments.

Task 3.2 Deliverables:

- Preliminary Foundation Memorandum
- Draft Foundation Report with LOTB
- Final Foundation Report with LOTB

Task 3.3 - Hydrologic/Hydraulic Studies (WRECO)

Task 3.3.1: Obtain existing data

WRECO will review available data, including previous studies, provided by the County and Project Team. Key information to review will be the available hydrologic and hydraulic data for the applicable creek, County and Caltrans Bridge Inspection Reports and maintenance records for the bridge site.

Task 3.3.2: Hydrologic Analysis

WRECO's preliminary research of the Federal Emergency Management Agency's (FEMA) Flood Insurance study (FIS) indicated that there is a detailed study available at the bridge site. WRECO will coordinate with FEMA for the background information of

their published design peak discharges. WRECO will coordinate with the County to confirm the design discharges. As an independent check, WRECO will apply the USGS Regional Regression Method to estimate the peak design discharges.

Task 3.3.3: Hydraulic Analysis

WRECO will perform a hydraulic analysis to determine the design flow characteristics for the existing condition including the limits and water surface profiles through the study area for the base flood and overtopping flood. The hydraulic model of choice will be the U.S. Army Corps of Engineers' HEC-RAS Model. WRECO will coordinate with the Project Team to obtain the surveyed channel cross-sections for setting up the hydraulic model.

COUNTY INVOLVEMENT OPPORTUNITY

WRECO can provide the County the HEC-RAS model for review and independent check

Task 3.3.4: Location Hydraulic Study

Based on WRECO's preliminary qualitative hydrologic, hydraulic, and geomorphic assessments, the Project may potentially result in a floodplain encroachment. Therefore, WRECO will prepare a Floodplain Evaluation Report, including the Location Hydraulic Study form and Floodplain Evaluation Report Summary form to document the investigation and determine the specific impacts to the floodplain.

Task 3.3.5: Scour Analysis

WRECO will perform a bridge scour analysis to determine the scour potential per the methodology specified in the Federal Highway Administration's (FHWA) HEC-18, HEC-20, and HEC-23 manuals. WRECO will make recommendations on the need for scour countermeasures for the proposed bridge per the HEC-23 and *California Bank and Shore Protection Manual*. For the St. Helena Creek bridge WRECO will perform scour analysis of the existing bridge should it be left in place, specifically on the existing apron.

Task 3.3.6: Preliminary Bridge Design Hydraulic Study

WRECO will prepare a Bridge Design Hydraulic Study Report, which will summarize the results from the hydraulic and bridge scour analyses and recommendations for bridge scour countermeasures. The report will also include all of the detailed hydraulic model output.

Task 3.3 Deliverables:

- Draft/Final Floodplain Evaluation Report
- Preliminary Bridge Design Hydraulic Study Memo
- Draft/Final Bridge Design Hydraulic Study Report

Task 3.4 - Advance Planning Studies

As additional study information becomes available, the Quincy Team will revise the concepts that were presented in the PSR Equivalent. The assumptions made for the cost proposal are that Quincy will prepare the following:

- Three (3) Bridge Alternatives and APS's
- Two (2) Road Alternative alignments

The APS will include:

- Feasible alternative bridge types, span arrangements, and construction methods.
- Concept drawings defining each alternative that will include plan, elevation, and section views as required illustrating each of the proposed alternatives.
- Temporary on-site detour considerations for a temporary low water crossing adjacent to the new bridge.
- A description of the advantages and disadvantages of each alternative so that the County can judge each alternative on its own merits.
- An "Engineer's Opinion of Probable Construction Cost" for each alternative.
- Our Team's recommendation as to which of the alternatives is the most appropriate for the site.

These Alternatives will be discussed with the County as concepts. Draft alternative drawings (Bridge APS and Road layout & typical sections) will be submitted for comment.

Task 3.5 - Preliminary Plans

Before commencement of design tasks Quincy could hold one-day design workshops with County staff to assist them in understand the design constraints for each project. The workshop would include roadway design tasks such as typical section design and horizontal/vertical alignment. Bridge design tasks are expected to include bridge layout, type selection and design procedures for box culvert and reinforced concrete slabs.

COUNTY INVOLVEMENT OPPORTUNITY

One Day Design Workshops to involve County staff in Design Tasks.

Basis of Design

Prior to any design, Quincy will draft our recommended design criteria for the project site. Items such as design speed, minimum sight distance, and hydraulic freeboard will be summarized on the Quincy Basis of Design form for County approval. This ensures that all design criteria are established and approved ahead of time so late criteria changes do not result in costly design changes or schedule delays.

Preliminary Roadway Plans

Alternative approach alignments will be discussed with the County staff. Other issues affecting the final design such as right-of-way, environmental, economic and safety issues, construction detours, coordination with local fire districts regarding the detour alternatives, drainage, and anticipated design exceptions (if any) should also be addressed at this time.

Prior to performing the preliminary roadway approach design, Quincy will recommend a method for maintaining traffic during construction for approval by the County. Options include: low water crossing or temporary bridge detour adjacent to the existing bridge and constructing the new bridge on a new alignment allowing the existing bridge to remain in service.

If the detour is selected, a design analysis of the detour site will be conducted. The detour design alignment will take into account environmental (i.e. tree removal) and other impacts. Temporary alignment drawings will be prepared for either the low water crossing or temporary bridge, as appropriate.

Preliminary Plan and Profile (Geometric Approval) drawings will be prepared for a preferred alignment alternative. All aspects of the alternative will be discussed for reference in the environmental documents. An "Engineers Opinion of Probable Construction Cost" will be prepared and will include appropriate contingency factors for this level of design.

Task 3.5 Deliverables:

- Basis of Design
- Preliminary Plan & Profile Sheets
- Preliminary Roadway Cost Estimates
- Bridge Advance Planning Studies
- Bridge Preliminary Structure Cost Estimates

Preliminary Bridge Plans

The appropriate bridge structure type will be dictated by public safety, environmental and hydraulic concerns, right-of-way, and economics. Depending on the final site information, geotechnical report, hydraulics report and the preliminary environmental findings, the Team will refine the Advance Planning Studies (APS) prepared in task 3.4. Different foundation types (i.e., spread footings or drilled piles, etc.) may be evaluated at this time. The preferred alternative will then be converted to general plan for County review and approval.

Project Report/Type Selection Memo (Optional)

While not included in the request scope of work, the County should consider preparation of a Project Report. This is especially recommended for the Wardlaw project where historical bridge alternatives will need to be evaluated and presented to Caltrans for consideration. Caltrans will approve the preferred alternative before Quincy proceeds with Phase 2 work.

TASK 4 - ENVIRONMENTAL STUDIES

Task 4.1 – Prepare Project Description and APE Map

Under this task Quincy Subconsultant, NSR, with input from the County and Quincy, will prepare a written description of the proposed action and project purpose and need for each of the two bridge projects for incorporation into the CEQA and NEPA documents. The draft descriptions and purpose and need statements will be submitted to the County for review and comment. After resolution of the comments, NSR will incorporate the final descriptions and purpose and need statements into the environmental document(s).

NSR will review and provide comment on the draft APE map for each project that clearly delineates the archaeology (horizontal and vertical) APE. It is assumed that Quincy will provide NSR with a draft APE map for review and comment. A final draft of the APE map will be prepared by Quincy and submitted to Caltrans District for review and approval.

Task 4.2 – NEPA/CEQA Technical Studies (North State Resources)

The work plan described below is based on a preliminary assessment of project issues by NSR and will need to be reviewed and approved by Caltrans staff as part of the PES approval process (Task 1.2). As a result, the final work plan for this task may need to be refined following approval of the PES form (Task 1.3). All technical studies will be prepared according to current Caltrans District 1 and FHWA standards. Separate technical reports will be prepared for each bridge project. Based on the combined familiarity of NSR with the environmental issues of the region and requirements of Caltrans District 1, it is anticipated that the following environmental studies will be required:

Subtask 4.2.1: Prepare Natural Environmental Study (NES) Report

For each bridge project site, NSR will prepare a Natural Environment Study (NES) in accordance with the Caltrans Guidance for Consultants: Procedures for Completing the Natural Environment Study and Related Biological Reports (March 1997) and the Caltrans Standard Environmental Reference (Chapter 14) and utilize the current Caltrans template (http://www.dot.ca.gov/ser/forms.htm). The NES will characterize biological resources in the biological study area (BSA) (generally corresponds to the area of potential effects [APE]) and vicinity; assess project impacts to biological resources; identify general mitigation measures, if necessary; summarize the results of other biological studies; and discuss the status of any required agency consultations. Preparation of the NES will entail:

- Coordination with resource agencies, including the CDFW and U.S. Fish and Wildlife Service (USFWS);
- A review of the California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS) database;
- A request for a formal list of special-status species with potential to occur in the project vicinity;
- A reconnaissance-level field investigation, including an assessment of habitat for special-status wildlife (Note: no protocol-level wildlife surveys are proposed at this time);
- Results of the special-status plant survey, to be completed in May/June 2015, will be summarized in the NES. This discussion will include a comprehensive list of all vascular plant species observed within the BSA and a figure showing location(s) and acreage(s) for any special-status plant occurrence(s). Noxious weed species populations will be discussed and evaluated in the NES to ensure that the project complies with Federal Executive Order 13112 (Invasive Species).
- Summary of the wetland delineation (Task 4.2.2);
- Based project site plans and wetland impact calculations provided by Quincy, NSR evaluates impacts on jurisdictional waters affected by the project and provide recommendations for avoidance, minimization, and mitigation measures.

Following the completion of the literature review, conversations with resource agency staff, and field surveys, NSR will prepare an NES report for each bridge site. An internal draft NES will be submitted for review by the County and Quincy. Once County and Quincy comments are addressed, NSR will submit a draft NES for review by Caltrans. We will then finalize and submit the NES to Caltrans for approval. NSR will address comments provided by Caltrans and submit a final NES report for review and approval.

Task 4.2.2: Prepare Wetland Delineation Report

For the bridge project, NSR will conduct a delineation of waters of the United States, including identification of the ordinary high water mark of Saint Helena Creek, and prepare a report that can be submitted to the U.S. Army Corps of Engineers (Corps) for verification in support of Clean Water Act Section 404 permitting. The delineation will entail a review of aerial imagery, topographic maps, and available wetlands data for the study area; a field survey to delineate the boundaries of waters of the United States using methods prescribed by the Corps; and preparation of a report. For the field survey, NSR will perform a routine delineation within the study area and acquire coordinates of wetland/other waters boundaries and other relevant features with GPS.

Maps will be prepared, utilizing geographic information systems technology, on base topographic maps of the study area or aerial imagery provided by the County or Quincy. The delineation report will contain background information, data sheets, site photos, and a delineation map (minimum scale of 1"=200').

A draft delineation report will be submitted to the County and Quincy for review and approval. Following incorporation of comments provided by the County and Quincy, NSR will submit the delineation report to Caltrans District 1 Local Assistance for review and approval. Following approval by Caltrans, NSR will submit final copies (in electronic format) to the County. If requested by the County, NSR will submit the delineation report to Corps (Sacramento District) for verification. NSR will be available to attend a field verification visit with the Corps, as directed by the County, and prepare a final, revised wetland

delineation map based on comments provided by the Corps.

Task 4.2.3: Prepare Archaeological Survey Report/Historical Properties Survey Report

For the bridge site, NSR will conduct a cultural resources inventory of the APE and prepare an ASR and Historic Property Survey Report (HPSR) in Caltrans format and in compliance with Section 106 of the National Historic Preservation Act.

To identify previously recorded or known resources in the APE, NSR will consult the following inventories, facilities, and persons in accordance with 36 CFR 800.4(a)(2-4), 36 CFR 800.4(b), 48 FR 44716, the State Historic Preservation Officer, FHWA, and Caltrans guidance:

- National Register of Historic Places (NRHP) and updates;
- California Register of Historical Resources (CRHR);
- California Inventory of Historic Resources;
- California Historical Landmarks;
- The Northwest Center of the California Historical Resources Information System at Sonoma State University.

In order to provide significant contextual and thematic background information for the ASR, archival historical research may also be performed at local historical societies and libraries. In addition, as part of the archival research, soils surveys and other geological information will be consulted to determine the age of local landforms and the potential for buried archaeological resources to occur within the APE. As part of the minimal required discovery process, form letter notifications, telephone calls, and/or personal communications will be made with local historical societies, local Native American tribes, government agencies (i.e., Native American Heritage Commission), and other interested groups. Section 106 tribal consultation will be required for the project. This consultation will be led by the Caltrans District 1 archaeologist, but will require participation of the NSR archaeologists with the local Native American tribes.

Once the APE map is approved by the County and Caltrans (Task 4.1), a pedestrian survey of the APE will be conducted to complete the required discovery process. This intensive field survey will be conducted by walking systematic transects over accessible and sensitive landforms. Surface scrapes to expose mineral soils may be included in the survey but no subsurface investigations such as shovel test pits or auger probes will be conducted. The pedestrian survey will identify:

- The presence or absence of cultural resources visible on the surface in the APE;
- The present condition of the local environment;
- Environmental factors that may have affected use of the areas by prehistoric and historic occupants (e.g., elevation, food or material resources, proximity to water, etc.); and
- Environmental factors that may have limited the survival or visibility of archaeological remains (e.g., alleviation, erosion, or modern disturbance).

Results of the discovery process will be presented in the ASR and the HPSR. The ASR will document both positive and negative archaeological survey results (it does not evaluate sites for inclusion in the NRHP or the potential significance of project impacts). The ASR demonstrates that a reasonable effort has been made to identify archaeological properties, commensurate with the scale and scope of the undertaking. The HPSR is used by Caltrans to document completion of the cultural resource identification phase, completion of the National Register eligibility evaluation of the resources within the project APE (if any), and, when relevant, a Finding of No Historic Properties Affected or No Adverse Effect with Standard Conditions.

NSR will prepare and submit an administrative draft of the ASR/HPSR to Quincy and the County for review and comment. NSR will incorporate Quincy and County comments and prepare a draft ASR/HPSR for submittal to Caltrans. Following review of the draft ASR/HPSR by Caltrans, NSR will revise and prepare a final ASR/HPSR for approval by Caltrans.

Task 4.2.4: Prepare Historic Resources Evaluation Report (HRER)

JRP, as a subcontractor to NSR, will provide services regarding historic resources for project compliance with Section 106 of the National Historic Preservation Act and the California Environmental Quality Act (CEQA) as it pertains to historical resources for the St. Helena Creek Bridge at Wardlaw Street (14C0035). The St. Helena Creek Bridge (14C0035), built in 1908, is eligible for listing in the National Register of Historic Places (NRHP).

JRP will address historic architectural / built environment resources. Archaeological resources will be addressed by others. The County is conducting the projects with assistance from Caltrans, and the cultural resources documents will be reviewed by

Caltrans District 1. Therefore, JRP will prepare documents for this project following Caltrans' guidelines set forth in the Standard Environmental Reference (SER), Volume 2, Cultural Resources Procedures, and the procedures set forth in the "First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act as it Pertains to the Administration of the Federal-Aid Highway Program in California," (Caltrans Section 106 PA). Documentation will be used to support CEQA compliance. The bridge project will require Section 106 documentation that will be submitted to Caltrans. JRP's tasks specific to this structure will be as follows:

- Assist with establishing the Area of Potential Effects (APE) for historic architectural / built environment resources.
- Review previous documentation and studies. JRP will review previously prepared documentation, if any, regarding built environment / historic architectural resources in the APEs.
- Conduct on-site inspection. JRP will visually inspect and photograph the resources in the APE.
- As part of the project requirements for Section 106 compliance, JRP will send out letters (upon County approval) to parties interested in historic architectural resources, collect responses, and conduct follow-up communication, as needed.
- Prepare a Finding of Effect (FOE) to analyze project effects on the historic bridge and assist with identification of measures to avoid, reduce, or mitigate adverse effects to the historic bridge. If the FOE concludes that the project will have an adverse effect, JRP will prepare a draft Memorandum of Agreement (MOA) that would be submitted to Caltrans for the Department and the State Historic Preservation Officer (SHPO) to finalize and sign.
- Assist project archaeologists with preparation of the Historic Property Survey Report (HPSR), as it pertains to historic architectural resources, including the St. Helena Creek Bridge.
- Prepare a Historical Resources Evaluation Report (HRER) that would evaluate nearby properties in the APE with built environment resources that require evaluation. The APE for this project is likely to include portions of the adjacent properties and temporary construction easements, which may require evaluation of built environment resources. JRP will review previously prepared documentation, if any, regarding built environment / historic architectural resources in the APEs, and visually inspect and photograph the resources in the APE. This scope assumes that the HRER would evaluate one property. The HRER will include appropriate DPR 523 forms.

Task 4.2.5: Farmland Impacts Assessment

For each bridge site noted above, NSR will conduct a farmland impact assessment to describe agricultural operations in the study area and discuss the effects of converting agricultural fields to non-agricultural uses and verify of affected parcels are under existing Williamson Act contracts. This study would provide a quantitative discussion on the amount of farmland to be converted and would generally assess the value of the farmland using available agricultural reports for the County. NSR will complete the pertinent sections of the Farmland Conversion Impact Rating (Form AD 1006) and submit to the local Natural Resource Conservation Services (NRCS) office, along with copies of the proposed project and any alternatives. Upon receipt of a completed Form AD 1006 from NRCS, NSR will submit a copy to Caltrans, along with any recommendations for mitigation. A technical memorandum will be prepared to discuss the results, and the results will be incorporated into the CEQA/NEPA documentation. These reports will be submitted to the County, Quincy, and Caltrans for review and approval.

Task 4.2.6: Section 4(f) Evaluation (Historic Bridge)

Bridge 14C-0035 is a Category 2 bridge that is eligible for listing in the National Register of Historic Places. It is anticipated that the project would likely meet the requirements for a programmatic Section 4(f) evaluation (Historic Bridges). The advantage of the programmatic evaluation is that there is no requirement to circulate the Draft Section 4(f) evaluation to the Department of the Interior, the U.S. Department of Agriculture, or Housing and Urban Development. The Section 4(f) process would be closely coordinated and integrated with preparation of the Draft and Final CEQA/NEPA documents, as well as the Section 106 process (HPSR, Finding of Effect, and Memorandum of Agreement, as applicable). Section 4(f) evaluations cannot start until the Section 106 process is through the "finding of effect" stage. NSR assumes the County or Quincy would provide sufficient engineering and economic data to support the required discussion about the feasibility (or infeasibility) of project alternatives. The Section 4(f) evaluation will include the following elements to ensure compliance with FHWA Technical Advisory T6640.8A:

- Discussion on the purpose of the Section 4(f) evaluation and the purpose and need for the project.
- Document the preliminary coordination with the public officials having jurisdiction over the Section 4(f) properties (e.g. SHPO).
- Description of the Section 4(f) properties that could be affected by the proposed project.
- Description of the impacts that would occur to the Section 4(f) property as a result of project implementation.
- Develop feasible and prudent alternatives to avoid or minimize potential effects.
- If no feasible and prudent avoidance alternatives are identified that completely avoid impacts, recommend mitigation measures that would minimize impacts on the Section 4(f) properties or provide adequate documentation to support proposed demolition of bridge based on engineering constraints data provided by Quincy.
- Pending review of the draft Section 4(f) evaluation, a decision as to whether the alternatives affecting the Section 4(f) land are feasible and prudent will be documented in the final Section 4(f) evaluation. The results of this final Section 4(f) evaluation, including response to comments on the draft Section 4(f) evaluation, will be included in the Final IS and NEPA CE documentation.

Task 4.2.7: Assist County with CEQA Compliance

Note: <u>It is assumed that the County will be responsible for completing all required CEQA documentation.</u>

As requested by the County, NSR will review draft responses provided by the County and prepare written responses on behalf of the County. It is assumed that the County will compile and number all substantive comments before directing NSR to respond to comments. Note: the level of effort to respond to comments assumes up to 8 hours of technical staff time per each bridge project. Additional budget may be required if extensive and substantive comments are received. NSR will provide the County with a set of comments for responses prepared by County staff and draft responses to comments for review and approval for those comments that the County would like NSR to address.

Task 4.2.8: Coordinate NEPA Approval

Coordinate Final CEQA and NEPA Approval

For the bridge site, NSR will complete the Categorical Exclusion Determination Form and prepare a full summary of all mitigation measures and conditions of approval in environmental commitments record (ECR) spreadsheets, and submit to Caltrans for review and final approval of the NEPA CE.

OPTIONAL Task 4.2.9: Conduct California Red-Legged Frog Habitat Assessment

Note: May apply pending discussion with Caltrans District 1 staff during the field review.

If required by Caltrans based on determination of available habitat, a California red-legged frog habitat assessment will be conducted in accordance with the Service's Revised Guidance on Site Assessment and Field Surveys for the California Red-legged Frog (August 2005). This habitat assessment will consist of the following elements:

- Analysis of all documented California red-legged frog occurrences in the project area and vicinity based on a review of the California Natural Diversity Database (CNDDB) and conversations with local resource agencies to determine known occurrences for red-legged frog within 5 miles of the study area;
- Conduct an assessment of potential California red-legged frog habitat within a one-mile radius of the project study area (access permitting) and provide a general characterization of upland and aquatic communities within the study area;
- Identify, characterize, map, and photograph potential California red-legged frog habitat areas within the project study area; and
- Summarize the assessment data in a draft report (including maps and figures) and include a discussion that verifies that the project study area is located outside of the designated critical habitat for the species. A draft copy will be provided to the County for review and comment, with a final version submitted to Caltrans District 1 Local Assistance for review and submittal to the USFWS following authorization from Caltrans District 1 Local Assistance.

OPTIONAL Task 4.2.10: Construction Noise Technical Memorandum

Note: May be required pending discussion with Caltrans District 1 staff during the field review.

Bollard Acoustical Consultants, Inc. (BAC), as a subcontractor to NSR, will conduct an initial noise assessment that consists of the following:

- BAC will identify the noise level standards contained within the Lake County General Plan Noise Element, applicable Caltrans Protocol, and any other germane city, state or federal noise standards applicable to project construction activities.
- BAC will conduct a detailed site inspection and short-term and/or long-term ambient noise survey to identify sensitive receptors located within the project study limits and to generally quantify ambient noise conditions in the immediate project vicinity.
- Using Caltrans Construction Noise Evaluation program, BAC will prepare an assessment of potential noise impacts associated with project construction, including pile driving activities. The evaluation will include consideration of the dates, times, and equipment to be used in the construction project.
- Specific recommendations for noise control at impacted receiver locations in the project vicinity will be provided as required by the Caltrans Protocol.
- BAC will provide a written construction noise memorandum for this project which includes the data, analysis, and results of the study. This memorandum will cover construction noise only and does not include preparation of the project Noise Study Report (NSR) or Noise Abatement Decision Report (NADR).

Task 4.2/4.3 Deliverables:

- Draft/Final NES
- Draft/Final Wetland Delineation Report
- Draft/Final ASR/HPSR
- Draft/Final HRER
- Draft/Final Farmland Impacts Assessment
- Section 4(f) Evaluation
- Assist with CEQA/NEPA Approval
- NESHAP Evaluation

Task 4.3 - NESHAP Compliance (Taber Consultants)

For the bridge site, a certified asbestos consultant will make a site visit and collect up to a total of 7 samples for asbestos analysis. Samples may include structural bridge concrete, utility pipe insulators, conduits, etc. Asbestos will be tested using either EPA 600/R-93/116 and/or EPA 600/M4-82-020. Taber will provide an evaluation report including test results for the certified asbestos consultant for the bridge site.

COUNTY INVOLVEMENT OPPORTUNITY

County staff could assist in review of all Environmental studies and documents

OPTIONAL Task 4.4 - Initial Site Assessment (ISA) (Taber Consultants)

For the bridge site, an Initial Site Assessment (ISA) may be necessary. It has been our recent experience an ISA is typically required on most HBP projects. The ISA would be conducted to identify hazardous materials issues that could affect the constructability, feasibility, and/or cost of the proposed project. The purpose of the ISA, therefore, is to identify whether:

- Any lead paint exists and whether it can affect construction of the planned improvements; and,

- Whether any asbestos containing building materials are present in the bridge structure.

For the purposes of this proposal, the limits of the project are assumed to be the limits of proposed right of way around the bridge structure. Taber anticipates that Assessor's parcel maps and plans showing each project site, stationing, and project limits will be available for use during the study.

The following sections present the suggested scope of services for this optional task.

Records Review

Selected federal, state, and regional environmental agency databases will be reviewed for information pertaining to the sites and properties within a minimum search distance of not less than one-quarter mile from the alignment. This data will be obtained from a vendor specializing in retrieval of environmental information. Chain of title research and/or review is not included.

Telephone interviews will be conducted with representatives of the County Environmental Health Department, the California State Regional Water Quality Control Board or the California Department of Toxic Substances Control for any property identified during database review for which hydrogeologic conditions and other reasonable factors indicate a potential for environmental impact on a site.

Physical Setting and Site History

Review of readily available documents will be performed to identify physical setting of the site and obvious past uses of site and adjoining properties. Elements of the physical setting identified typically include:

- Topographic conditions.
- Geological conditions of area, including the potential for presence of naturally occurring asbestos at the site.
- Hydrogeological conditions including depth to groundwater, depth to other aquifers and regional and local gradient.

Documents reviewed pertaining to site history will include:

- Recent and historical topographic maps.
- Sanborn maps, if they exist for the project area.
- Recent and historical aerial photographs including any provided by the county/client.
- Published geologic maps and reports, and, if provided by the County, any geotechnical, hydrogeologic or environmental reports pertaining to the site or vicinity.
- Limited historical land use documents, if provided by the County, to include the Historical Property Survey Report and other CEQA/NEPA documents.
- Other existing studies completed in the project vicinity as provided by the county/client.
- Environmental reports for contaminated sites identified in the environmental database review or the site reconnaissance.

In addition to the above sources, historic topographic maps and aerial photographs in Taber's library and in the collection at Sacramento State University library, with coverage of the project site will be reviewed.

Site Reconnaissance

Reconnaissance of the site will be performed to identify visual evidence of:

- Current uses and evidence of past uses of the site and adjacent properties.
- Potential areas of concern such as above or below ground fuel storage tanks, vehicle maintenance areas, past mining operations, dump sites, discolored soils or stressed vegetation, discharges, odors, transformers, wells, standing water, hazardous substance containers or unidentified containers, etc.

Reconnaissance will be performed primarily by drive-by observation (windshield survey) along the project corridor, supplemented by local walking traverse at locations where drive-by observation indicates possible evidence of hazardous materials or petroleum products that could affect the project.

Interviews

Reasonable attempts will be made to conduct interviews with persons identified as knowledgeable about potentially

contaminated locations on or adjacent to the site to obtain information indicating their potential impacts on the project. Interviews may be conducted in person, by telephone, or in writing. Individuals interviewed might include owners, occupants, local government officials, or others.

Lead Paint Sampling

For the bridge site, Taber will assess and photo-document the condition of paint on the bridge structure. Should the paint be documented to be flaking, peeling or otherwise in poor condition, Taber will collect up to six (6) samples of potentially lead-based paint on the bridge structure and soil below the bridge. Samples will be collected of different paint types at several locations and analyzed for lead to determine if hazardous levels of lead may be present in the paint and soil. Samples will be analyzed by a California-certified hazardous materials testing laboratory for lead using EPA Method 6010. Results of the lead-based paint sampling, along with recommendations for proper disposal, will be included in the ISA report.

ISA Report

For the bridge site, a report documenting Taber's assessment will be prepared. The reports will include but not necessarily be limited to the following:

- Site Description;
- Records Review;
- Site reconnaissance information;
- Interview Information;
- Photocopied pictures of significant items of environmental concern on the site (if any);
- Pertinent supporting documentation, such as boring logs and laboratory results available from reports reviewed (if any);
- Findings and Conclusions - including opinions on potential impacts of any recognized environmental conditions concerning the project site and, if considered warranted, recommendations for further study.

For the bridge site, the ISA report submittals will include a "draft" version for review, a "revised draft" version incorporating review comments, and a final report incorporating any final comments. The asbestos evaluation report will be appended to the ISA report.

Task 4.4 Deliverables:

- Draft/Final ISA Report (Optional)

TASK 5 – FINAL DESIGN ENGINEERING

Task 5.1 - Design

*Please note that portions of these tasks may be advanced to Task 3.5. There is a fine line between preliminary and final design engineering. Caltrans requires that enough engineering be completed to support the environmental document; however the preferred alternative is not confirmed until after the environmental process. Depending on the project complexity a 65% design may be required to provide environmental support.

Bridge Design*

Bridge design will be performed in accordance with "AASHTO LRFD Bridge Design Specifications" with the latest Caltrans Amendments and other Caltrans design manuals. Design will be based on the "Load and Resistance Factor Design" method, with HL-93 (including alternative) and permit truck design live loads. Seismic design will be performed in accordance with the Caltrans "Seismic Design Criteria Version 1.7" (April 2013), and the latest information available from Caltrans Earthquake Research. Computer analysis and design programs used are "state-of-the-art" for bridge design. Quincy has assumed the following bridge types will be designed: 160 foot long two span cast-in-place post tensioned concrete slab with architectural arches

Should the environmental process result in a dramatically different bridge type then a contract amendment may be required.

Approach Roadway Design*

The final approach roadway design will be performed in accordance with County Standards, AASHTO "Guidelines for Geometric Design of Very Low Volume Local Roads," and Caltrans Standard Specifications. Final grading and drainage details will be developed as well as new/existing roadway conformance details, as required. Cross-sections will be developed per County standards.

All outside environmental mitigation plans, specifications, and estimates will be completed by the Team for inclusion with the roadway and bridge PS&E package. At this time, we do not anticipate major mitigation as part of these projects

Task 5.2 – Prepare Design Exception Fact Sheets
Design Exception Fact Sheets will be prepared for all required design exceptions identified during the project design. We have assumed only (1) design standard will require this documentation at Wardlaw Street.

Task 5.3 – Prepare Plans, Specifications, and Estimate

Plan Preparation*
Based on current County standards, the plan sheets will be prepared in English using the County's drafting standards. All plans will be signed by the civil engineer (registered in the state of California) in responsible charge of the design, in accordance with the Local Programs Manual. Typically, the plans, specifications, and estimate (PS&E) will contain the following plan sheets for a two span reinforced concrete box girder structure (the number of sheets will vary depending on the site and the final structure type):

- Title Sheet & Location Map
- Typical Cross Section
- Layout/Profile Sheets
- Drainage Layouts
- Construction Signs & Traffic Handling/Detour Plan Sheet
- Construction Details
- Drainage Details
- Quantities Sheet
- General Plan
- Deck Contours
- Foundation Plan
- Abutment Layout
- Abutment Details
- Pier Layout
- Pier Details
- Girder Layout
- Girder Reinforcement
- Typical Section
- Barrier Details
- Log of Test Borings Sheets
- Roadway Cross-Sections

Task 5.3 Deliverables:
- 65% Submittal

Submittal of 65% Plans* (Unchecked Details)
We propose that a PDT meeting be held upon completion of the unchecked bridge details to discuss both the bridge and the roadway plans. This should save considerable time in the County's review of the Draft PS&E because most of the major issues will have been previously discussed and addressed.

At this time, preliminary quantities and check quantities will be prepared along with an estimate of probable construction costs. Quantities will be calculated in accordance with Caltrans' practice and segregated into pay items. The estimate will show quantities and costs as well as a project cost summary.

TASK 8 – UTILITY RELOCATION

The Team will provide communication and coordination with the utility companies during the preliminary design process. Quincy will follow the Caltrans utility relocation process and will develop and send "A" Letters to the utility companies.

COUNTY INVOLVEMENT OPPORTUNITY
County staff could assist coordinating Utility related tasks.

PHASE 2 - FINAL ENGINEERING, PERMITS, AND CONSTRUCTION SUPPORT

TASK 2 – PROJECT MANAGEMENT

Task 2.1 – Project Management

The Quincy project manager will coordinate between all Team members to monitor and ensure progress, ensure adherence to the project schedule, ensure the proper resources are assigned to the project, and communicate regularly with the PDT members. Monthly invoices will be reviewed and sent to the County with a progress report on that month's work. Quincy will submit a copy of our internal QA/QC manual which outlines independent reviews and our constructability review procedures.

Task 2.2 - Progress Meetings

Quincy will work with the County to schedule and attend meetings, prepare agenda items, and compile project meeting minutes for distribution. The County has requested meetings a minimum of every other month in the scope. In addition to the kick-off and field review meetings, Quincy anticipates face to face team meetings at the completion of the 35%, 65%, and 95% design completion to review and address County comments. These will be supplemented by monthly conference calls as necessary to keep the County informed as to the project status. Quincy has assumed both projects can be discussed at each project meeting. Additional meetings can be added during scope negotiations if requested. A 1 hour duration per conference call for the PM and PE have been assumed each month and a 4 hr duration in person meeting has been assumed for the PM, PE, and bridge/roadway designer. Quincy has assumed 16 hours for this phase.

TASK 5 – FINAL DESIGN ENGINEERING

Task 5.3 – Prepare Plans, Specifications, and Estimate

Independent Design Check

An independent check of the design will be performed. This involves a completely independent analysis of the project using the unchecked bridge detailed plans and 65% roadway plans by an engineer that has not been intimately involved in the design. This is a big part of the Team's QA/QC Plan and is identical to the Caltrans/Local Agency process. Based upon the independent check and agreement to revisions by the checker and designer, the plans will be revised. Independent Check comments are summarized and resolutions are documented.

COUNTY INVOLVEMENT OPPORTUNITY

County staff could review design and check calculations and perform their own independent design check.

These would be reviewed, approved, and incorporated in the work by our Team.

Technical Specifications

Project specifications will be developed based on Caltrans ***2010 Standard Specifications and Standard Plans***. Quincy will produce the technical special provisions based on Caltrans "Standard Special Provisions" (SSP) templates. The County will provide its boilerplate specifications for Quincy to combine with the technical special provisions, becoming the basis for the project specifications. A construction (working days) schedule will also be developed to determine the number of working days for the construction contract.

The project specifications will be initially submitted with the 90% draft PS&E for County review and comment. The County comments will be summarized by Quincy in a comment resolution table with every comment reviewed and addressed with a written response. Based upon agreement of the responses between the County and Quincy, the specifications will be revised.

Final Construction Quantities & Estimate

The 65% quantities will be updated to final construction quantities, and the Team's estimate of construction costs (Q and E) will be updated.

COUNTY INVOLVEMENT OPPORTUNITY

County staff could perform independent quantity calculations

Quality Control & Constructability Review

As an integral part of the Quincy QA/QC Program, a senior level engineer will review the entire draft PS&E (90% PS&E) package for uniformity, compatibility, and constructability as well as conformance with the federal HBP program requirements.

The review will include comparing bridge plans with the roadway plans for conflicts or inconsistencies, and to ensure that the final design is in accordance with all environmental documents, permit requirements, hydraulics reports, and foundation

recommendations. The specifications and estimate will be reviewed for consistency with the plans, and to ensure that each construction item has been covered.

Submittal of 90% PS&E

The plans, specifications, and estimate, along with design, check, and quantity calculations, will be submitted to the County at the 90% completion stage.

Task 5.3 Deliverables:

- 90% PS&E Submittal
- Final (100%) PS&E Submittal

Submittal of Final (100%) PS&E

Upon receiving review comments from the County and other agencies, each comment will be reviewed, discussed, and addressed in writing. All apparent conflicts will be resolved in person or via telephone/fax as necessary. Appropriate modifications will be made to the plans, specifications, and estimate.

We will furnish the final PS&E package in half-sized plans as well as hard copies and computer files (MS Word format) of special provisions for bidding purposes. It is assumed that the County will compile and duplicate the actual bid documents for advertising.

TASK 6 - PERMITS

Task 6.1 – Environmental Permits (North State Resources)

For the bridge site, NSR will prepare permitting packages for the County's signature and submittal. Based on the issues associated with the proposed project, NSR anticipates the following permits will be required:

Section 404 Permit (U.S. Army Corps of Engineers – Sacramento District)

The form of Corps Section 404 permit needed to construct the project will depend on the area of fill that is discharged into "waters of the U.S." (e.g., wetlands, creeks) and the bridge site location. NSR will apply the most current project design information to the wetlands mapping to determine impacts. Based on our understanding of the proposed project, it is anticipated that each bridge site can be authorized under a Nationwide Permit #14 (Linear Transportation Projects). Preparation of an Individual Permit application or Letter of Permission (LOP) is not expected to be needed and is excluded from this scope of work. As part of the Section 404 permit process, the following tasks will be completed.

Task 6 Deliverables:

- Environmental Permits

- NSR shall prepare a Pre-construction Notification (PCN) letter, which includes a wetland impact map.
- Potential mitigation strategies might include purchasing credits at a mitigation bank or participation in an in-lieu fee program. For purposes of this scope, detailed (i.e., engineering-level design drawings) mitigation planning and design are excluded from this scope of work.
- The County will submit the application and will be responsible for coordination with the Corps. NSR will respond, per the County's request, to Corps comments regarding the processing of the PCN authorization.

Section 401 Water Quality Certification (Central Valley Regional Water Quality Control Board)

- Projects requiring a Section 404 permit from the Corps must also obtain a water quality certification per Section 401 of the Clean Water Act. NSR will prepare a request for water quality certification for the project per Section 401 of the Clean Water Act.
- The County will be responsible for submitting the application to the Central Valley Regional Water Quality Board (Board) and for coordination with the Board. NSR will respond, per the County's request, to RWQCB comments regarding the processing of this application. The County would be responsible for any required fees to the State Water Resources Control Board.

Section 1600 Streambed Alteration Agreement (California Department of Fish and Wildlife)

- Pursuant to the California Fish and Game Code, a public entity proposing an activity that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the CDFW must receive a discretionary Streambed Alteration Agreement. NSR will prepare the application for the Streambed Alteration Agreement for the project per Section 1602 of the California Fish and Game Code.
- The County will submit the application to the CDFW. NSR will respond, per the County's request, to CDFW comments regarding the processing of this application. The County would be responsible for all application fees required by the CDFW.

Deliverables: For the bridge site - one (1) copy of the draft versions for each permit application identified above; One (1) copy of the final versions of each permit application identified above.

Task 6.2 – Caltrans Encroachment Permit Application
No Caltrans Encroachment Permits are anticipated at this time.

TASK 7 – RIGHT-OF-WAY SERVICES

Task 7.1 – Surveying (Conser Land Survey)
Under this task Quincy Subconsultant, **Conser**, will perform the following:

- Prepare and deliver a Right of Way exhibit map noting current record information such as owner name, document number, right of way width, etc.
- Prepare necessary signed and sealed legal descriptions and plats of any fee title acquisitions of adjoiners parcels within the project limits
- Set permanent survey monuments along Right of Way, resulting from any fee title acquisitions. Prepare and record a Record of Survey with the County of Lake if necessary.
- Prepare and record a Record of Survey with the County of Lake if necessary.

It is assumed that five (5) parcels (APNs: 02437401, 01400343, 01400396, 01400378, 02450117) are included for this scope of work.

It is assumed that the corresponding Title Reports will be obtained and paid for by Lake County and supplied to the Team in order to ascertain if any easements or other encumbrances are present.

Where it is necessary to obtain a temporary right to use a portion of the private property during construction, a separate plat will be prepared and submitted to show the temporary area being requested. Lake County will use these plats with their standard "Right-of-Entry" form.

Task 7.2 – Right-of-Way Appraisals (Bender Rosenthal, Inc.)
Under this task Quincy Subconsultant, **Bender Rosenthal, Inc. (BRI)**, will perform the following:

For each appraisal report, BRI will develop a complete appraisal that will state the estimated fair market value of the Temporary Construction Easement (TCE) and/or Permanent Easement interest for that property. The Appraisal report will be a summary appraisal report that will be prepared in conformance with and subject to the requirements of the Code of Professional Ethics and the Standards of Professional Practice of the Appraisal Institute, which fully incorporate the Uniform Standards of Professional Appraisal Practice (USPAP) of the Appraisal Foundation. Jurisdictional exceptions may apply in some cases. Plats and legal descriptions for each of the properties to be appraised will be provided to BRI by others.

If the anticipated parcel take will have a value of less than $10,000 and if the property owner is a willing participant, the County may direct the appraiser to provide a Waiver Valuation instead which does not require the same level as assessment and can be completed at a rate less than an appraisal. Waiver valuations cannot be used for condemnation purposes so should not be used on parcels that may require eminent domain proceedings.

Per Federal and State regulations, (Federal and State Uniform Acts) a qualified reviewing appraiser shall examine all appraisals to assure that they meet applicable appraisal requirements and shall, prior to acceptance, seek necessary correction or revisions. In addition, the review appraiser shall certify that the opinion of fair market value is reasonably supported by an acceptable appraisal. If the appraised value is over $10,000, the appraisals will be reviewed by an independent appraiser from Sierra West Valuation, Inc.

Task 7.3 – Right-of-Way Acquisition (Bender Rosenthal, Inc.)
Upon completion of the appraisals, the acquisition agent will work with the Lake County staff to determine the value to be negotiated for the required property. BRI will work with stakeholders and the property owners to determine the settlement and will maintain the file through escrow.

For each property owner, BRI will maintain an acquisition file that meets the federal, state, and Caltrans ROW standards and is pursuant to Lake County's specifications. BRI will prepare all applicable forms, secure grantor's approval and signature and submit the forms to the staff of Lake County for review and acceptance. Once approved by Lake County staff, the acquisition

agent will make the First Written Offer to the property owner.

BRI will develop and maintain the escrow schedule, deliver documents and checks to escrow companies, review all documents for submission to escrow companies, review title and escrow documents, and BRI will coordinate escrow closings and file all applicable forms and documents with the County Assessor's office. BRI will work with all parties to encourage acquisition within 30 days of the approval of the appraisal.

At the completion of the project, BRI will provide the original acquisition file for each of the parcels.

Additional Service: Eminent Domain Proceeding Support

BRI's team of appraisers and acquisition agents strive to provide tailored services with the goal to complete the transaction in the best interest of all parties involved while adhering to all applicable regulations and guidelines. However, even with the best intentions and attention to details, some acquisitions will need to be completed through eminent domain. BRI staff will support the Lake County staff by preparing staff reports and presentations to the County Board for the Resolution of Necessity (RON). In addition, we will work with the Lake County legal team to develop the minimum 15-day notice of hearing for the RON and provide assistance in preparing any legal declarations in support of the court hearings. Our appraisers are qualified and available to provide testimony during condemnation trials as an additional service. BRI will provide support services to the condemnation attorney such as appearing as an expert witness, delivery of parcel file including the title report, legal description, appraisal, negotiation records and all correspondence; and assisting the attorney with locating the property owner and other interest holders. BRI will bill the services based on an hourly rate.

Task 7.4 – Right-of-Way Certification (Bender Rosenthal, Inc.)
Upon completion of the ROW acquisition, BRI will prepare the ROW Certification per Chapter 14 of the Caltrans ROW Manual. BRI will provide coordination services with Caltrans District 1 and the property owners, as required.

TASK 8 – UTILITY RELOCATION

The Team will provide communication and coordination with the utility companies during the preliminary and final design process. Quincy will prepare a plan of existing utilities for the project based on the information obtained from the various affected utilities and determine which are in conflict. Quincy will follow the Caltrans utility relocation process and develop Report of Investigation (ROI), Notice to Owner (NTO), and Utility Agreement (UA) for execution to be transmitted to the affected utility companies along with a County signed relocation notice.

COUNTY INVOLVEMENT OPPORTUNITY
County staff could assist coordinating Utility related tasks.

Depending on the final bridge type selected, Quincy may be able to provide adequate openings for utilities in the bridge. It will be the responsibility of each utility owner to provide a design of their facility.

TASK 9 – BIDDING ASSISTANCE

The individuals that were directly involved in the design will be available during the bid period to interpret the plans and specifications, prepare addenda if needed, and provide general consultation to the County to obtain bids. The Quincy Team will be available to answer contractor inquiries during the bidding phase. When the construction bids are opened, we will be available to provide analysis and recommendations concerning award of the contract. Quincy has assumed a 16 hour effort for this task.

TASK 10 – CONSTRUCTION SUPPORT

After award of the construction contract, the Team will be available to continue providing services such as reviewing contractor submittals, reviewing shop plans, reviewing falsework plans and calculations, preparing and/or reviewing change orders, and making other field observations, at the Resident Engineer's or County's request. All activities include appropriate recommendations and documentation of the Team's activities.

COUNTY INVOLVEMENT OPPORTUNITY
Under the supervision of our Team, County staff could provide construction support for the projects and review contractor submittals.

Quincy maintains the same high level of service through the completion of construction. We work closely with the Construction Management Team to provide clarifications as needed to the design to ensure timely response to the contractor. Quincy places a "number 1" priority on contractor submittals or Requests for Information (RFIs) to ensure the contractor is never held up by the design Team. We work closely with the Construction Management firm to identify the timing of upcoming shop plan reviews and other contractor submittals to have resources ready.

Full construction management services including materials testing, inspection services, and contract administration are also available if the County desires. Due to the unknown scope of work and schedule for construction activities, the County has requested that this optional task be negotiated and added as an addendum prior to bidding of the project for construction. Quincy has assumed 160 hours for this effort.

Task 10 Deliverables:

- Construction Support
- Answer RFIs
- Review Shop Plans
- Construction Management

Task 11 Deliverables:

- As-Builts

TASK 11 – PREPARE RECORD (AS-BUILT) DRAWINGS

When construction is completed, Quincy could prepare Record Drawings (As-builts) for the County's files. These as-builts will be based on information clearly marked on a set of contract plans prepared by the Resident Engineer.

SCOPE OF WORK - Cooper Creek at Witter Springs Road (14C-0102)

Quincy will assist the County in responding to Caltrans Headquarters' comments on the HBP funding applications. It is understood Caltrans will give the final approval for the chosen strategy as it relates to replacement versus rehabilitation alternatives. The following scope assumes the following bridge alternative: a **21 foot long single span cast-in-place reinforced concrete slab**

Close coordination with Caltrans Local Assistance District 1 and Structures Maintenance will be necessary to agree on the need for the project as well as close coordination with Caltrans HQ Programming as to whether the project is still participating. Due to past project experience with District 1 as well as HQ Programming Quincy (with the County) will communicate directly with Caltrans and define the true project need. This project will also be an ideal opportunity to increase the **County Staff Involvement** wherever possible. The goal is to involve County staff throughout the project process as a true partner wherever practical. We have identified multiple areas which are candidates for increased County involvement. These are identified with the following symbol:

COUNTY INVOLVEMENT OPPORTUNITY

Quincy has divided the Scope of Work into two phases. The first Phase will be completed under one contract and the contract then amended to add the Phase 2 tasks. Phase 1 will complete Preliminary Engineering and define the project as a rehabilitation or replacement. Phase 1 will generate a Type Selection Report, which will define the remaining project scope and include completion of 6D funding form application for Phase 2 engineering of the project.

Quincy's *Detailed Scope of Work* approach for this project is as follows:

PHASE 1 - PRELIMINARY ENGINEERING

TASK 1 – PROJECT INITIATION

Task 1.1 – Kick-off Meeting
The Quincy Team (Team) will attend a kick-off meeting to bring all stakeholders, including the County, the Team, and Caltrans together to form a cooperative effort toward the timely completion of this project.

This meeting should also include a discussion of the HBP Application, PSR Equivalent, and potential APE map limits. Participants will then discuss the following: key action items from field review with Caltrans; initial identification of issues; scope of technical studies; approaches to CEQA/NEPA compliance; and schedule for submittals.

It is anticipated that representatives from the County will participate in the kick-off meeting with Quincy, and Caltrans representatives to review other specific environmental/cultural project needs. Quincy assumes the kick-off meeting will be conducted in one day for both projects.

Task 1.2 - Field Review
Quincy will attend the Field Review with the County and Caltrans District 1 representatives at each project site to review the PES form including the Visual Impact Screen Check form, and APE map. Quincy assumes the Caltrans field review will be conducted in one day for the two projects. Meeting participants would discuss each element of the PES checklist form, refine the APE limits, identify issues of concern, required technical studies, and then come to agreement on appropriate level of NEPA documentation (CE supported by technical studies or EA). Once the review of the project site has been conducted and the checklist items have been discussed, the County and Caltrans representatives would review and sign the PES form. The PES form requires the reviewers to provide a preliminary opinion regarding the type of NEPA documentation required for the project.

Task 1.3 - Scope Verification
Quincy will meet with the County following the Field Review and review this Scope of Work and make changes as required depending on the outcome of the meeting with all stakeholders. It is anticipated some changes to Task 4 could be necessary depending on level of Environmental Studies required.

Task 1 Deliverables:
- Kickoff Meeting
- Field Review
- Existing Information Review
- Final Scope/Schedule

Task 1.4 - Establish Project Schedule
Quincy will develop a Microsoft Project schedule showing each task, start and end dates, and task duration. This schedule will be updated and coordinated with the County throughout project development as appropriate. The County will be notified immediately

of any problems that may adversely impact the project schedule.

TASK 2 – PROJECT MANAGEMENT

Task 2.1 – Project Management

The Quincy project manager will coordinate between all Team members to monitor and ensure progress, ensure adherence to the project schedule, ensure the proper resources are assigned to the project, and communicate regularly with the PDT members. Monthly invoices will be reviewed and sent to the County with a progress report on that month's work. Quincy will submit a copy of our internal QA/QC manual which outlines independent reviews and our constructability review procedures.

Task 2.3 - Assist the County with State Administration Requirements

Quincy will prepare funding documents for the Request for Authorization (RFA) of upcoming phases of work. An E-76, formally called an "Authorization to Proceed" must be processed for federal authorization of funds to establish the reimbursement date for each phase of work. A separate E-76 request (RFA) is required for preliminary engineering (PE) – already obtained by the County, right-of-way/utility relocation (RW), and construction (CON) phases when federal funds are to be used in that phase of work. Quincy will also assist the County with any revisions that may be necessary to receive additional approval or allocations for each phase of the project, and keep the County informed of upcoming documentation requirements. If needed, this could include revisions to the HBP funding through Exhibits 6A, 6B, and 6D, which Quincy regularly assists Local Agencies with. Quincy can also assist with special requests by Caltrans Local Assistance such as annual HBP Surveys (typically sent out in August), or other program updates.

Task 2 Deliverables:

- Project Management
- Caltrans Local Assistance Coordination
- HBP Funding Authorizations

TASK 3 - PRELIMINARY ENGINEERING

Task 3.1 - Surveys and Mapping (Conser Land Surveying)

CONSER will perform the necessary field surveys to prepare a complete topographic map with DTM to serve as the Base Map for the preparation of the preliminary and final engineering plans. All surveying work will conform to the requirements of the Caltrans Surveys Manual and Safety Manual for Safe Surveying Practices, tasks include:

- Perform the necessary research of Lake County Records to create a database of record documents to be utilized in the initial preparation of fieldwork scheduling and Base Map calculations.
- Utilizing survey grade Topcon GTS Total Station and Trimble RTK GPS, establish a Control Network that includes nearby record monumentation if existing, NGVD29 vertical datum, any record monuments of adjoining Subdivision Maps or Records of Surveys that may assist in determining the Road Right of Way and adjoiners boundaries will be included if applicable.
- Utilizing survey grade Topcon GTS Total Station and Trimble 5000 Series Robotic Total Station, gather Horizontal and Vertical topographic field data, including, but not limited to, Bridge improvements, creek channel, drainage flowlines, headwalls, culverts, edge of traveled way, center of roadway, adjoining roadways, flowlines, returns, along with any other improvements that may or may not infringe on the preliminary design.
- Prepare electronic Base Maps with DTM, in a .dwg format, including Road Right of Way and adjoining boundaries if applicable.

Task 3.1 Deliverables:

- Topographic Surveys & Mapping
- Creek Cross-Sections
- Right-of-way & Adjoining Property Information

Task 3.2 - Geotechnical Investigations (Taber Consultants)

Task 3.2.1: Preliminary Foundation Memorandum

Taber will prepare a Preliminary Foundation Memorandum for the preliminary engineering phase and bridge-type selection based on review of record documents, published geologic data, aerial photographs, and a site visit that will include a seismic line at/near the proposed bridge location in order to assess the shear wave velocity of the subsurface materials. Seismic lines are an accepted way to generate generalized shear wave velocities for Caltrans ARS curve calculation. Taber also makes allowance to attend the kick-off meeting.

Task 3.2 Deliverables:

- Preliminary Foundation Memorandum

The memorandum is expected to include: Project Location and Vicinity Map; Summary of Site Geology and Subsurface Conditions (based on review of available record documents, published geologic data, and site review); Seismic Data and

Evaluation using current Caltrans seismic design criteria (including preliminary ARS curve using Caltrans ARS Online tool); Liquefaction Considerations; Roadway/Subgrade Considerations; Preliminary Foundation Alternatives (e.g., spread footings, cast-in-drilled-hole piling, etc.); Preliminary Foundation Recommendations with conditions and constraints on likely foundation types; and Preliminary Construction Considerations.

Note: Depending on the bridge/layout options being considered, subsurface exploration can be completed as part of the Preliminary Foundation Report to provide more detailed information during the preliminary design phase of the project, if/as desired.

Task 3.3 - Hydrologic/Hydraulic Studies (WRECO)

Task 3.3.1: Obtain existing data

WRECO will review available data, including previous studies, provided by the County and Project Team. Key information to review will be the available hydrologic and hydraulic data for the applicable creek, County and Caltrans Bridge Inspection Reports and maintenance records for the bridge site.

Task 3.3.2: Hydrologic Analysis

WRECO's preliminary research of the Federal Emergency Management Agency's (FEMA) Flood Insurance study (FIS) indicated that there is a detailed study available at the bridge site. WRECO will coordinate with FEMA for the background information of their published design peak discharges. WRECO will coordinate with the County to confirm the design discharges. As an independent check, WRECO will apply the USGS Regional Regression Method to estimate the peak design discharges.

Task 3.3.3: Hydraulic Analysis

WRECO will perform a hydraulic analysis to determine the design flow characteristics for the existing condition including the limits and water surface profiles through the study area for the base flood and overtopping flood. The hydraulic model of choice will be the U.S. Army Corps of Engineers' HEC-RAS Model. WRECO will coordinate with the Project Team to obtain the surveyed channel cross-sections for setting up the hydraulic model.

COUNTY INVOLVEMENT OPPORTUNITY

WRECO can provide the County the HEC-RAS model for review and independent check

Task 3.3.4: Location Hydraulic Study

Based on WRECO's preliminary qualitative hydrologic, hydraulic, and geomorphic assessments, the Project may potentially result in a floodplain encroachment. Therefore, WRECO will prepare a Floodplain Evaluation Report, including the Location Hydraulic Study form and Floodplain Evaluation Report Summary form to document the investigation and determine the specific impacts to the floodplain.

Task 3.3.5: Scour Analysis

WRECO will perform a bridge scour analysis to determine the scour potential per the methodology specified in the Federal Highway Administration's (FHWA) HEC-18, HEC-20, and HEC-23 manuals. WRECO will make recommendations on the need for scour countermeasures for the proposed bridge per the HEC-23 and *California Bank and Shore Protection Manual*.

Task 3.3.6: Preliminary Bridge Design Hydraulic Study

WRECO will prepare a Bridge Design Hydraulic Study Report, which will summarize the results from the hydraulic and bridge scour analyses and recommendations for bridge scour countermeasures. The report will also include all of the detailed hydraulic model output.

Task 3.3 Deliverables:

- Draft/Final Floodplain Evaluation Report
- Preliminary Bridge Design Hydraulic Study Memo
- Draft/Final Bridge Design Hydraulic Study Report

Task 3.4 - Advance Planning Studies

As additional study information becomes available, the Quincy Team will revise the concepts that were presented in the PSR Equivalent. The assumptions made for the cost proposal are that Quincy will prepare the following:

- Three (3) Bridge Alternatives and APS's
- Two (2) Road Alternative alignments

The APS will include:

- Feasible alternative bridge types, span arrangements, and construction methods.
- Concept drawings defining each alternative that will include plan, elevation, and section views as required illustrating each of the proposed alternatives.
- Temporary on-site detour considerations for a temporary low water crossing adjacent to the new bridge.

- A description of the advantages and disadvantages of each alternative so that the County can judge each alternative on its own merits.
- An "Engineer's Opinion of Probable Construction Cost" for each alternative.
- Our Team's recommendation as to which of the alternatives is the most appropriate for the site.

These Alternatives will be discussed with the County as concepts. Draft alternative drawings (Bridge APS and Road layout & typical sections) will be submitted for comment.

Task 3.5 - Preliminary Plans

Before commencement of design tasks Quincy could hold one-day design workshops with County staff to assist them in understand the design constraints for each project. The workshop would include roadway design tasks such as typical section design and horizontal/vertical alignment. Bridge design tasks are expected to include bridge layout, type selection and design procedures for box culvert and reinforced concrete slabs.

COUNTY INVOLVEMENT OPPORTUNITY

One Day Design Workshops to involve County staff in Design Tasks.

Basis of Design

Prior to any design, Quincy will draft our recommended design criteria for the project site. Items such as design speed, minimum sight distance, and hydraulic freeboard will be summarized on the Quincy Basis of Design form for County approval. This ensures that all design criteria are established and approved ahead of time so late criteria changes do not result in costly design changes or schedule delays.

Preliminary Roadway Plans

Alternative approach alignments will be discussed with the County staff. Other issues affecting the final design such as right-of-way, environmental, economic and safety issues, construction detours, coordination with local fire districts regarding the detour alternatives, drainage, and anticipated design exceptions (if any) should also be addressed at this time.

Prior to performing the preliminary roadway approach design, Quincy will recommend a method for maintaining traffic during construction for approval by the County. Options include: low water crossing or temporary bridge detour adjacent to the existing bridge and constructing the new bridge on a new alignment allowing the existing bridge to remain in service.

If the detour is selected, a design analysis of the detour site will be conducted. The detour design alignment will take into account environmental (i.e. tree removal) and other impacts. Temporary alignment drawings will be prepared for either the low water crossing or temporary bridge, as appropriate.

Preliminary Plan and Profile (Geometric Approval) drawings will be prepared for a preferred alignment alternative. All aspects of the alternative will be discussed for reference in the environmental documents. An "Engineers Opinion of Probable Construction Cost" will be prepared and will include appropriate contingency factors for this level of design.

Task 3.5 Deliverables:

- Basis of Design
- Preliminary Plan & Profile Sheets
- Preliminary Roadway Cost Estimates
- Bridge Advance Planning Studies
- Bridge Preliminary Structure Cost Estimates
- Project Report/Type Selection Memo

Preliminary Bridge Plans

The appropriate bridge structure type will be dictated by public safety, environmental and hydraulic concerns, right-of-way, and economics. Depending on the final site information, geotechnical report, hydraulics report and the preliminary environmental findings, the Team will refine the Advance Planning Studies (APS) prepared in task 3.4. Different foundation types (i.e., spread footings or drilled piles, etc.) may be evaluated at this time. The preferred alternative will then be converted to general plan for County review and approval.

Project Report/Type Selection Memo

While not included in the request scope of work, the County should consider preparation of a Project Report. This is especially recommended for the Witter project where rehabilitation and replacement bridge alternatives will need to be evaluated and presented to Caltrans for consideration. Caltrans will approve the preferred alternative before Quincy proceeds with Phase 2 work.

TASK 4 - ENVIRONMENTAL STUDIES

Task 4.1 – Prepare Project Description and APE Map

Under this task Quincy Subconsultant, NSR, with input from the County and Quincy, will prepare a written description of the proposed action and project purpose and need for each of the two bridge projects for incorporation into the CEQA and NEPA documents. The draft descriptions and purpose and need statements will be submitted to the County for review and comment. After resolution of the comments, NSR will incorporate the final descriptions and purpose and need statements into the environmental document(s).

Task 4 Deliverables:
- APE Map

NSR will review and provide comment on the draft APE map for each project that clearly delineates the archaeology (horizontal and vertical) APE. It is assumed that Quincy will provide NSR with a draft APE map for review and comment. A final draft of the APE map will be prepared by Quincy and submitted to Caltrans District for review and approval.

PHASE 2 - FINAL ENGINEERING, PERMITS, AND CONSTRUCTION SUPPORT

TASK 2 – PROJECT MANAGEMENT

Task 2.1 – Project Management

The Quincy project manager will coordinate between all Team members to monitor and ensure progress, ensure adherence to the project schedule, ensure the proper resources are assigned to the project, and communicate regularly with the PDT members. Monthly invoices will be reviewed and sent to the County with a progress report on that month's work. Quincy will submit a copy of our internal QA/QC manual which outlines independent reviews and our constructability review procedures.

Task 2.2 - Progress Meetings

Quincy will work with the County to schedule and attend meetings, prepare agenda items, and compile project meeting minutes for distribution. The County has requested meetings a minimum of every other month in the scope. In addition to the kick-off and field review meetings, Quincy anticipates face to face team meetings at the completion of the 35%, 65%, and 95% design completion to review and address County comments. These will be supplemented by monthly conference calls as necessary to keep the County informed as to the project status. Quincy has assumed all 3 projects can be discussed at each project meeting. Additional meetings can be added during scope negotiations if requested. A 1 hour duration per conference call for the PM and PE have been assumed each month and a 4 hr duration in person meeting has been assumed for the PM, PE, and bridge/roadway designer. Quincy has assumed 40 hours for this task.

Task 2 Deliverables:
- Project Management
- Progress Meetings (Total 3 in person, 8 conference calls)

Task 3.2.2: Permit Acquisition and Underground Service Alert (USA) Notification

Test borings are expected to be drilled along the existing roadway(s) and within dry portions of the creek channel during dry field conditions. The field exploration locations are expected to be within county right-of-way and/or private property. Taber will obtain an encroachment permit and county environmental health permit. Taber assumes that rights-of-entry (if needed) will be provided by others and the county will waive the encroachment permit fees and bond requirements.

Taber will obtain a county encroachment permit and boring permit. It is assumed that the client will provide rights-of-entry (if needed) and the County will waive the encroachment permit fees and bond requirements.

Prior to commencement of field exploration, Taber personnel will mark the boring locations and notify Underground Service Alert (USA) for location of underground utilities. Field exploration will be coordinated with county and CAFW personnel in accordance with permit requirements as necessary. For these projects lane closure with signs and traffic cones (without flaggers) is expected to be appropriate for borings completed along the roadway at proposed abutment locations.

Task 3.2.3: Subsurface Exploration

Taber makes provision to complete one deep boring to 80 to 90-ft depth in consideration of possible bridge replacement at this site and to address the likely presence of potentially liquefiable soils. The sampled boring will be supplemented by a dynamic cone penetration borings at the other abutment to correlate earth materials. Exploration and testing in evaluation of roadway subgrade conditions will include two shallow test borings (5-8±ft deep). Soil samples will be recovered at 3 to 5-ft intervals. Bulk soil samples will also be recovered for laboratory testing and reference. The borings will be drilled by Woodward Drilling, a Disadvantaged Business Enterprise (DBE) company.

Task 3.2.4: Laboratory Testing

Laboratory testing to supplement field evaluation of earth material parameters is expected to include moisture-density, gradation, unconfined compressive strength, Expansion Index (EI), Sand Equivalent (SE), point load index on suitable rock cores, and soil corrosivity screening (pH / minimum Resistivity / sulfate / chloride content) on selected samples. One R-value test will be performed to evaluate subgrade materials for new pavement section recommendations. Screening for the presence of asbestos minerals of soil/rock samples completed in accordance with the California Air Resources Board (CARB) Method 435 will also be completed.

Task 3.2.5: Engineering Evaluation and Analysis

Engineering evaluation and analysis to develop geotechnical recommendations for this project is expected to include: bearing capacity; lateral capacity; site seismicity including, deterministic / probabilistic procedures consistent with current Caltrans Seismic Design Criteria and Caltrans ARS Online tool to determine the site acceleration response spectrum (ARS); lateral earth pressure and coefficient of friction to resist sliding; soil corrosivity; and, new flexible pavement design for roadway approaches.

Task 3.2.6: Draft and Final Foundation Reports

Taber will prepare one Draft Foundation Report for bridge design. The report will provide a site/project description, summarize site geology, subsurface exploration and field and laboratory soil/rock tests, discuss scour considerations (based on Hydraulics Report prepared by others), and include a "Log of Test Borings" (LOTB) drawing. Earth materials and foundation conditions will be discussed including seismic criteria and the design ARS curve. The report will discuss structure foundation conditions/constraints, recommended type, level and loading of bridge foundation elements, and include construction considerations (e.g., excavation, dewatering, storm water quality, naturally occurring asbestos, etc.). Design pavement structural section(s) and earthwork recommendations for associated roadway improvements will also be provided. Taber will complete a Final Foundation Report incorporating the review comments.

Task 3.2 Deliverables:

- Preliminary Foundation Memorandum
- Draft Foundation Report with LOTB
- Final Foundation Report with LOTB

Task 4.2 – NEPA/CEQA Technical Studies (North State Resources)

The work plan described below is based on a preliminary assessment of project issues by NSR and will need to be reviewed and approved by Caltrans staff as part of the PES approval process (Task 1.2). As a result, the final work plan for this task may need to be refined following approval of the PES form (Task 1.3). All technical studies will be prepared according to current Caltrans District 1 and FHWA standards. Separate technical reports will be prepared for each bridge project. Based on the combined familiarity of NSR with the environmental issues of the region and requirements of Caltrans District 1, it is anticipated that the following environmental studies will be required:

Subtask 4.2.1: Prepare Natural Environmental Study (NES) Report

For the bridge project site, NSR will prepare a Natural Environment Study (NES) in accordance with the Caltrans Guidance for Consultants: Procedures for Completing the Natural Environment Study and Related Biological Reports (March 1997) and the Caltrans Standard Environmental Reference (Chapter 14) and utilize the current Caltrans template (http://www.dot.ca.gov/ser/forms.htm). The NES will characterize biological resources in the biological study area (BSA) (generally corresponds to the area of potential effects [APE]) and vicinity; assess project impacts to biological resources; identify general mitigation measures, if necessary; summarize the results of other biological studies; and discuss the status of any required agency consultations. Preparation of the NES will entail:

- Coordination with resource agencies, including the CDFW and U.S. Fish and Wildlife Service (USFWS);
- A review of the California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS) database;
- A request for a formal list of special-status species with potential to occur in the project vicinity;
- A reconnaissance-level field investigation, including an assessment of habitat for special-status wildlife (Note: no protocol-level wildlife surveys are proposed at this time);
- Results of the special-status plant survey, to be completed in May/June 2015, will be summarized in the NES. This discussion will include a comprehensive list of all vascular plant species observed within the BSA and a figure showing location(s) and acreage(s) for any special-status plant occurrence(s). Noxious weed species populations will be discussed and evaluated in the NES to ensure that the project complies with Federal Executive Order 13112 (Invasive Species).
- Summary of the wetland delineation (Task 4.2.2);

- Based project site plans and wetland impact calculations provided by Quincy, NSR evaluates impacts on jurisdictional waters affected by the project and provide recommendations for avoidance, minimization, and mitigation measures.

Following the completion of the literature review, conversations with resource agency staff, and field surveys, NSR will prepare an NES report for each bridge site. An internal draft NES will be submitted for review by the County and Quincy. Once County and Quincy comments are addressed, NSR will submit a draft NES for review by Caltrans. We will then finalize and submit the NES to Caltrans for approval. NSR will address comments provided by Caltrans and submit a final NES report for review and approval.

Task 4.2.2: Prepare Wetland Delineation Report

For the bridge project, NSR will conduct a delineation of waters of the United States, including identification of the ordinary high water mark of Cooper Creek, and prepare a report that can be submitted to the U.S. Army Corps of Engineers (Corps) for verification in support of Clean Water Act Section 404 permitting. The delineation will entail a review of aerial imagery, topographic maps, and available wetlands data for the study area; a field survey to delineate the boundaries of waters of the United States using methods prescribed by the Corps; and preparation of a report. For the field survey, NSR will perform a routine delineation within the study area and acquire coordinates of wetland/other waters boundaries and other relevant features with GPS.

Maps will be prepared, utilizing geographic information systems technology, on base topographic maps of the study area or aerial imagery provided by the County or Quincy. The delineation report will contain background information, data sheets, site photos, and a delineation map (minimum scale of 1"=200').

A draft delineation report will be submitted to the County and Quincy for review and approval. Following incorporation of comments provided by the County and Quincy, NSR will submit the delineation report to Caltrans District 1 Local Assistance for review and approval. Following approval by Caltrans, NSR will submit final copies (in electronic format) to the County. If requested by the County, NSR will submit the delineation report to Corps (Sacramento District) for verification. NSR will be available to attend a field verification visit with the Corps, as directed by the County, and prepare a final, revised wetland delineation map based on comments provided by the Corps.

Task 4.2.3: Prepare Archaeological Survey Report/Historical Properties Survey Report

For each bridge site, NSR will conduct a cultural resources inventory of the APE and prepare an ASR and Historic Property Survey Report (HPSR) in Caltrans format and in compliance with Section 106 of the National Historic Preservation Act.

To identify previously recorded or known resources in the APE, NSR will consult the following inventories, facilities, and persons in accordance with 36 CFR 800.4(a)(2-4), 36 CFR 800.4(b), 48 FR 44716, the State Historic Preservation Officer, FHWA, and Caltrans guidance:

- National Register of Historic Places (NRHP) and updates;
- California Register of Historical Resources (CRHR);
- California Inventory of Historic Resources;
- California Historical Landmarks;
- The Northwest Center of the California Historical Resources Information System at Sonoma State University.

In order to provide significant contextual and thematic background information for the ASR, archival historical research may also be performed at local historical societies and libraries. In addition, as part of the archival research, soils surveys and other geological information will be consulted to determine the age of local landforms and the potential for buried archaeological resources to occur within the APE. As part of the minimal required discovery process, form letter notifications, telephone calls, and/or personal communications will be made with local historical societies, local Native American tribes, government agencies (i.e., Native American Heritage Commission), and other interested groups. Section 106 tribal consultation will be required for the project. This consultation will be led by the Caltrans District 1 archaeologist, but will require participation of the NSR archaeologists with the local Native American tribes.

Once the APE map is approved by the County and Caltrans (Task 4.1), a pedestrian survey of the APE will be conducted to complete the required discovery process. This intensive field survey will be conducted by walking systematic transects over accessible and sensitive landforms. Surface scrapes to expose mineral soils may be included in the survey but no subsurface investigations such as shovel test pits or auger probes will be conducted. The pedestrian survey will identify:

- The presence or absence of cultural resources visible on the surface in the APE;
- The present condition of the local environment;
- Environmental factors that may have affected use of the areas by prehistoric and historic occupants (e.g., elevation, food or material resources, proximity to water, etc.); and
- Environmental factors that may have limited the survival or visibility of archaeological remains (e.g., alleviation, erosion, or modern disturbance).

Results of the discovery process will be presented in the ASR and the HPSR. The ASR will document both positive and negative archaeological survey results (it does not evaluate sites for inclusion in the NRHP or the potential significance of project impacts). The ASR demonstrates that a reasonable effort has been made to identify archaeological properties, commensurate with the scale and scope of the undertaking. The HPSR is used by Caltrans to document completion of the cultural resource identification phase, completion of the National Register eligibility evaluation of the resources within the project APE (if any), and, when relevant, a Finding of No Historic Properties Affected or No Adverse Effect with Standard Conditions.

NSR will prepare and submit an administrative draft of the ASR/HPSR to Quincy and the County for review and comment. NSR will incorporate Quincy and County comments and prepare a draft ASR/HPSR for submittal to Caltrans. Following review of the draft ASR/HPSR by Caltrans, NSR will revise and prepare a final ASR/HPSR for approval by Caltrans.

Task 4.2.4: Prepare Historic Resources Evaluation Report (HRER)

JRP, as a subcontractor to NSR, will provide services regarding historic resources for project compliance with Section 106 of the National Historic Preservation Act and the California Environmental Quality Act (CEQA) as it pertains to historical resources for the Cooper Creek Bridge at Witter Springs Road (14C0102). Cooper Creek Bridge (14C0102) is listed "not eligible" for the NRHP in the Caltrans Historic Bridge Inventory, however, that designation may be inaccurate.

JRP will address historic architectural / built environment resources. Archaeological resources will be addressed by others. The County is conducting the projects with assistance from Caltrans, and the cultural resources documents will be reviewed by Caltrans District 1. Therefore, JRP will prepare documents for this project following Caltrans' guidelines set forth in the Standard Environmental Reference (SER), Volume 2, Cultural Resources Procedures, and the procedures set forth in the "First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act as it Pertains to the Administration of the Federal-Aid Highway Program in California," (Caltrans Section 106 PA). Documentation will be used to support CEQA compliance. Each of the two bridge projects will require separate Section 106 documentation that will be submitted to Caltrans. JRP's tasks specific to each of the structures will be as follows:

- Assist with establishing the APE for historic architectural / built environment resources.
- As part of the project requirements for Section 106 compliance, JRP will send out letters (upon County approval) to parties interested in historic architectural resources, collect responses, and conduct follow-up communication, as needed.
- Optional Task: Prepare a HRER (if needed) to evaluate nearby properties in the APE with built environment resources that require evaluation. The APE for this project is likely to include portions of the adjacent properties and temporary construction easements, which may require evaluation of built environment resources. JRP will review previously prepared documentation, if any, regarding built environment / historic architectural resources in the APEs, and visually inspect and photograph the resources in the APE. The HRER will include appropriate DPR 523 forms.
- Assist project archaeologists with preparation of the HPSR, as it pertains to historic architectural resources, including the Copper Creek Bridge.

Task 4.2.5: Farmland Impacts Assessment

For the bridge site, NSR will conduct a farmland impact assessment to describe agricultural operations in the study area and discuss the effects of converting agricultural fields to non-agricultural uses and verify of affected parcels are under existing Williamson Act contracts. This study would provide a quantitative discussion on the amount of farmland to be converted and would generally assess the value of the farmland using available agricultural reports for the County. NSR will complete the pertinent sections of the Farmland Conversion Impact Rating (Form AD 1006) and submit to the local Natural Resource Conservation Services (NRCS) office, along with copies of the proposed project and any alternatives. Upon receipt of a completed Form AD 1006 from NRCS, NSR will submit a copy to Caltrans, along with any recommendations for mitigation. A

technical memorandum will be prepared to discuss the results, and the results will be incorporated into the CEQA/NEPA documentation. These reports will be submitted to the County, Quincy, and Caltrans for review and approval.

Task 4.2.7: Assist County with CEQA Compliance

Note: It is assumed that the County will be responsible for completing all required CEQA documentation.

As requested by the County, NSR will review draft responses provided by the County and prepare written responses on behalf of the County. It is assumed that the County will compile and number all substantive comments before directing NSR to respond to comments. Note: the level of effort to respond to comments assumes up to 8 hours of technical staff time per each bridge project. Additional budget may be required if extensive and substantive comments are received. NSR will provide the County with a set of comments for responses prepared by County staff and draft responses to comments for review and approval for those comments that the County would like NSR to address.

Task 4.2.8: Coordinate NEPA Approval

Coordinate Final CEQA and NEPA Approval

For each bridge site, NSR will complete the Categorical Exclusion Determination Form and prepare a full summary of all mitigation measures and conditions of approval in environmental commitments record (ECR) spreadsheets, and submit to Caltrans for review and final approval of the NEPA CE.

OPTIONAL Task 4.2.9: Conduct California Red-Legged Frog Habitat Assessment

Note: May apply pending discussion with Caltrans District 1 staff during the field review.

If required by Caltrans based on determination of available habitat, a California red-legged frog habitat assessment will be conducted in accordance with the Service's Revised Guidance on Site Assessment and Field Surveys for the California Red-legged Frog (August 2005). This habitat assessment will consist of the following elements:

- Analysis of all documented California red-legged frog occurrences in the project area and vicinity based on a review of the California Natural Diversity Database (CNDDB) and conversations with local resource agencies to determine known occurrences for red-legged frog within 5 miles of the study area;
- Conduct an assessment of potential California red-legged frog habitat within a one-mile radius of the project study area (access permitting) and provide a general characterization of upland and aquatic communities within the study area;
- Identify, characterize, map, and photograph potential California red-legged frog habitat areas within the project study area; and
- Summarize the assessment data in a draft report (including maps and figures) and include a discussion that verifies that the project study area is located outside of the designated critical habitat for the species. A draft copy will be provided to the County for review and comment, with a final version submitted to Caltrans District 1 Local Assistance for review and submittal to the USFWS following authorization from Caltrans District 1 Local Assistance.

OPTIONAL Task 4.2.10: Construction Noise Technical Memorandum

Note: May not pertain to Bridge 14C-0102; pending discussion with Caltrans District 1 staff during the field review.

Bollard Acoustical Consultants, Inc. (BAC), as a subcontractor to NSR, will conduct an initial noise assessment that consists of the following:

- BAC will identify the noise level standards contained within the Lake County General Plan Noise Element, applicable Caltrans Protocol, and any other germane city, state or federal noise standards applicable to project construction activities.
- BAC will conduct a detailed site inspection and short-term and/or long-term ambient noise survey to identify sensitive receptors located within the project study limits and to generally quantify ambient noise conditions in the immediate project vicinity.
- Using Caltrans Construction Noise Evaluation program, BAC will prepare an assessment of potential noise impacts associated with project construction, including pile driving activities. The evaluation will include consideration of the dates, times, and equipment to be used in the construction project.
- Specific recommendations for noise control at impacted receiver locations in the project vicinity will be provided as required by the Caltrans Protocol.

- BAC will provide a written construction noise memorandum for this project which includes the data, analysis, and results of the study. This memorandum will cover construction noise only and does not include preparation of the project Noise Study Report (NSR) or Noise Abatement Decision Report (NADR).

Task 4.3 - NESHAP Compliance (Taber Consultants)
For the bridge site, a certified asbestos consultant will make a site visit and collect up to a total of 7 samples for asbestos analysis. Samples may include structural bridge concrete, utility pipe insulators, conduits, etc. Asbestos will be tested using either EPA 600/R-93/116 and/or EPA 600/M4-82-020. Taber will provide an evaluation report including test results for the certified asbestos consultant for each of the 3 bridge sites.

OPTIONAL Task 4.4 - Initial Site Assessment (ISA) (Taber Consultants)
For the bridge site, an Initial Site Assessment (ISA) may be necessary. It has been our recent experience an ISA is typically required on most HBP projects. The ISA would be conducted to identify hazardous materials issues that could affect the constructability, feasibility, and/or cost of the proposed project. The purpose of the ISA, therefore, is to identify whether:

- Any lead paint exists and whether it can affect construction of the planned improvements; and,
- Whether any asbestos containing building materials are present in the bridge structure.

For the purposes of this proposal, the limits of the project are assumed to be the limits of proposed right of way around the bridge structure. Taber anticipates that Assessor's parcel maps and plans showing each project site, stationing, and project limits will be available for use during the study.

The following sections present the suggested scope of services for this optional task.

Records Review
Selected federal, state, and regional environmental agency databases will be reviewed for information pertaining to the sites and properties within a minimum search distance of not less than one-quarter mile from the alignment. This data will be obtained from a vendor specializing in retrieval of environmental information. Chain of title research and/or review is not included.

Telephone interviews will be conducted with representatives of the County Environmental Health Department, the California State Regional Water Quality Control Board or the California Department of Toxic Substances Control for any property identified during database review for which hydrogeologic conditions and other reasonable factors indicate a potential for environmental impact on a site.

Physical Setting and Site History
Review of readily available documents will be performed to identify physical setting of the site and obvious past uses of site and adjoining properties. Elements of the physical setting identified typically include:

- Topographic conditions.
- Geological conditions of area, including the potential for presence of naturally occurring asbestos at the site.
- Hydrogeological conditions including depth to groundwater, depth to other aquifers and regional and local gradient.

Documents reviewed pertaining to site history will include:

- Recent and historical topographic maps.
- Sanborn maps, if they exist for the project area.
- Recent and historical aerial photographs including any provided by the county/client.
- Published geologic maps and reports, and, if provided by the County, any geotechnical, hydrogeologic or environmental reports pertaining to the site or vicinity.

Task 4.2 Deliverables:
- Draft/Final NES
- Draft/Final Wetland Delineation Report
- Draft/Final ASR/HPSR
- Draft/Final HRER (If Required)(Optional)
- Draft/Final Farmland Impacts Assessment
- Assist with CEQA/NEPA Approval
- NESHAP Evaluation

COUNTY INVOLVEMENT OPPORTUNITY
County staff could assist in review of all Environmental studies and documents

- Limited historical land use documents, if provided by the County, to include the Historical Property Survey Report and other CEQA/NEPA documents.
- Other existing studies completed in the project vicinity as provided by the county/client.
- Environmental reports for contaminated sites identified in the environmental database review or the site reconnaissance.

In addition to the above sources, historic topographic maps and aerial photographs in Taber's library and in the collection at Sacramento State University library, with coverage of the project site will be reviewed.

Site Reconnaissance

Reconnaissance of the site will be performed to identify visual evidence of:

- Current uses and evidence of past uses of the site and adjacent properties.
- Potential areas of concern such as above or below ground fuel storage tanks, vehicle maintenance areas, past mining operations, dump sites, discolored soils or stressed vegetation, discharges, odors, transformers, wells, standing water, hazardous substance containers or unidentified containers, etc.

Reconnaissance will be performed primarily by drive-by observation (windshield survey) along the project corridor, supplemented by local walking traverse at locations where drive-by observation indicates possible evidence of hazardous materials or petroleum products that could affect the project.

Interviews

Reasonable attempts will be made to conduct interviews with persons identified as knowledgeable about potentially contaminated locations on or adjacent to the site to obtain information indicating their potential impacts on the project. Interviews may be conducted in person, by telephone, or in writing. Individuals interviewed might include owners, occupants, local government officials, or others.

Lead Paint Sampling

For the bridge site, Taber will assess and photo-document the condition of paint on the bridge structure. Should the paint be documented to be flaking, peeling or otherwise in poor condition, Taber will collect up to six (6) samples of potentially lead-based paint on each bridge structure and soil below each bridge. Samples will be collected of different paint types at several locations and analyzed for lead to determine if hazardous levels of lead may be present in the paint and soil. Samples will be analyzed by a California-certified hazardous materials testing laboratory for lead using EPA Method 6010. Results of the lead-based paint sampling, along with recommendations for proper disposal, will be included in the ISA report.

ISA Report

For the bridge site, a report documenting Taber's assessment will be prepared. The reports will include but not necessarily be limited to the following:

- Site Description;
- Records Review;
- Site reconnaissance information;
- Interview Information;
- Photocopied pictures of significant items of environmental concern on the site (if any);
- Pertinent supporting documentation, such as boring logs and laboratory results available from reports reviewed (if any);
- Findings and Conclusions - including opinions on potential impacts of any recognized environmental conditions concerning the project site and, if considered warranted, recommendations for further study.

For the bridge site, the ISA report submittals will include a "draft" version for review, a "revised draft" version incorporating review comments, and a final report incorporating any final comments. The asbestos evaluation report will be appended to the ISA report.

Task 4.4 Deliverables:

- Draft/Final ISA Report (Optional)

TASK 5 – FINAL DESIGN ENGINEERING

Task 5.1 - Design

*Please note that portions of these tasks may be advanced to Task 3.5. There is a fine line between preliminary and final

design engineering. Caltrans requires that enough engineering be completed to support the environmental document; however the preferred alternative is not confirmed until after the environmental process. Depending on the project complexity a 65% design may be required to provide environmental support.

Bridge Design*

Bridge design will be performed in accordance with "AASHTO LRFD Bridge Design Specifications" with the latest Caltrans Amendments and other Caltrans design manuals. Design will be based on the "Load and Resistance Factor Design" method, with HL-93 (including alternative) and permit truck design live loads. Seismic design will be performed in accordance with the Caltrans "Seismic Design Criteria Version 1.7" (April 2013), and the latest information available from Caltrans Earthquake Research. Computer analysis and design programs used are "state-of-the-art" for bridge design. Quincy has assumed the following bridge type will be designed: a 21 foot long single span cast-in-place reinforced concrete slab

Should the environmental process result in a dramatically different bridge type then a contract amendment may be required.

Approach Roadway Design*

The final approach roadway design will be performed in accordance with County Standards, AASHTO "Guidelines for Geometric Design of Very Low Volume Local Roads," and Caltrans Standard Specifications. Final grading and drainage details will be developed as well as new/existing roadway conformance details, as required. Cross-sections will be developed per County standards.

All outside environmental mitigation plans, specifications, and estimates will be completed by the Team for inclusion with the roadway and bridge PS&E package. At this time, we do not anticipate major mitigation as part of these projects

Task 5.2 – Prepare Design Exception Fact Sheets

Design Exception Fact Sheets will be prepared for all required design exceptions identified during the project design. We have assumed only (1) design standard will require this documentation Witter Springs Road location.

Task 5.3 – Prepare Plans, Specifications, and Estimate

Plan Preparation*

Based on current County standards, the plan sheets will be prepared in English using the County's drafting standards. All plans will be signed by the civil engineer (registered in the state of California) in responsible charge of the design, in accordance with the Local Programs Manual. Typically, the plans, specifications, and estimate (PS&E) will contain the following plan sheets for a two span reinforced concrete box girder structure (the number of sheets will vary depending on the site and the final structure type):

- Title Sheet & Location Map
- Typical Cross Section
- Layout/Profile Sheets
- Drainage Layouts
- Construction Signs & Traffic Handling/Detour Plan Sheet
- Construction Details
- Drainage Details
- Quantities Sheet
- General Plan
- Deck Contours
- Foundation Plan
- Abutment Layout
- Abutment Details
- Pier Layout
- Pier Details
- Girder Layout
- Girder Reinforcement
- Typical Section
- Barrier Details

COUNTY INVOLVEMENT OPPORTUNITY

County staff could review design and check calculations and perform their own independent design check.

These would be reviewed, approved, and incorporated in the work by our Team.

- Log of Test Borings Sheets
- Roadway Cross-Sections

Task 5.3 Deliverables:

- 65% Submittal
- 90% PS&E Submittal
- Final (100%) PS&E Submittal

Submittal of 65% Plans (Unchecked Details)*

We propose that a PDT meeting be held upon completion of the unchecked bridge details to discuss both the bridge and the roadway plans. This should save considerable time in the County's review of the Draft PS&E because most of the major issues will have been previously discussed and addressed.

At this time, preliminary quantities and check quantities will be prepared along with an estimate of probable construction costs. Quantities will be calculated in accordance with Caltrans' practice and segregated into pay items. The estimate will show quantities and costs as well as a project cost summary.

Independent Design Check

An independent check of the design will be performed. This involves a completely independent analysis of the project using the unchecked bridge detailed plans and 65% roadway plans by an engineer that has not been intimately involved in the design. This is a big part of the Team's QA/QC Plan and is identical to the Caltrans/Local Agency process. Based upon the independent check and agreement to revisions by the checker and designer, the plans will be revised. Independent Check comments are summarized and resolutions are documented.

Technical Specifications

Project specifications will be developed based on Caltrans ***2010 Standard Specifications and Standard Plans***. Quincy will produce the technical special provisions based on Caltrans "Standard Special Provisions" (SSP) templates. The County will provide its boilerplate specifications for Quincy to combine with the technical special provisions, becoming the basis for the project specifications. A construction (working days) schedule will also be developed to determine the number of working days for the construction contract.

The project specifications will be initially submitted with the 90% draft PS&E for County review and comment. The County comments will be summarized by Quincy in a comment resolution table with every comment reviewed and addressed with a written response. Based upon agreement of the responses between the County and Quincy, the specifications will be revised.

Final Construction Quantities & Estimate

The 65% quantities will be updated to final construction quantities, and the Team's estimate of construction costs (Q and E) will be updated.

COUNTY INVOLVEMENT OPPORTUNITY

County staff could perform independent quantity calculations

Quality Control & Constructability Review

As an integral part of the Quincy QA/QC Program, a senior level engineer will review the entire draft PS&E (90% PS&E) package for uniformity, compatibility, and constructability as well as conformance with the federal HBP program requirements.

The review will include comparing bridge plans with the roadway plans for conflicts or inconsistencies, and to ensure that the final design is in accordance with all environmental documents, permit requirements, hydraulics reports, and foundation recommendations. The specifications and estimate will be reviewed for consistency with the plans, and to ensure that each construction item has been covered.

Submittal of 90% PS&E

The plans, specifications, and estimate, along with design, check, and quantity calculations, will be submitted to the County at the 90% completion stage.

Submittal of Final (100%) PS&E

Upon receiving review comments from the County and other agencies, each comment will be reviewed, discussed, and addressed in writing. All apparent conflicts will be resolved in person or via telephone/fax as necessary. Appropriate modifications will be made to the plans, specifications, and estimate.

We will furnish the final PS&E package in half-sized plans as well as hard copies and computer files (MS Word format) of special provisions for bidding purposes. It is assumed that the County will compile and duplicate the actual bid documents for advertising.

TASK 6 - PERMITS

Task 6 Deliverables:
- Environmental Permits

Task 6.1 – Environmental Permits (North State Resources)
For the bridge site, NSR will prepare permitting packages for the County's signature and submittal. Based on the issues associated with the proposed project, NSR anticipates the following permits will be required:

Section 404 Permit (U.S. Army Corps of Engineers – Sacramento District)

The form of Corps Section 404 permit needed to construct the project will depend on the area of fill that is discharged into "waters of the U.S." (e.g., wetlands, creeks) and the bridge site location. NSR will apply the most current project design information to the wetlands mapping to determine impacts. Based on our understanding of the proposed project, it is anticipated that each bridge site can be authorized under a Nationwide Permit #14 (Linear Transportation Projects). Preparation of an Individual Permit application or Letter of Permission (LOP) is not expected to be needed and is excluded from this scope of work. As part of the Section 404 permit process, the following tasks will be completed.

- NSR shall prepare a Pre-construction Notification (PCN) letter, which includes a wetland impact map.
- Potential mitigation strategies might include purchasing credits at a mitigation bank or participation in an in-lieu fee program. For purposes of this scope, detailed (i.e., engineering-level design drawings) mitigation planning and design are excluded from this scope of work.
- The County will submit the application and will be responsible for coordination with the Corps. NSR will respond, per the County's request, to Corps comments regarding the processing of the PCN authorization.

Section 401 Water Quality Certification (Central Valley Regional Water Quality Control Board)

- Projects requiring a Section 404 permit from the Corps must also obtain a water quality certification per Section 401 of the Clean Water Act. NSR will prepare a request for water quality certification for the project per Section 401 of the Clean Water Act.
- The County will be responsible for submitting the application to the Central Valley Regional Water Quality Board (Board) and for coordination with the Board. NSR will respond, per the County's request, to RWQCB comments regarding the processing of this application. The County would be responsible for any required fees to the State Water Resources Control Board.

Section 1600 Streambed Alteration Agreement (California Department of Fish and Wildlife)

- Pursuant to the California Fish and Game Code, a public entity proposing an activity that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the CDFW must receive a discretionary Streambed Alteration Agreement. NSR will prepare the application for the Streambed Alteration Agreement for the project per Section 1602 of the California Fish and Game Code.
- The County will submit the application to the CDFW. NSR will respond, per the County's request, to CDFW comments regarding the processing of this application. The County would be responsible for all application fees required by the CDFW.

Deliverables: For the bridge site - one (1) copy of the draft versions for each permit application identified above; One (1) copy of the final versions of each permit application identified above.

Task 6.2 – Caltrans Encroachment Permit Application
No Caltrans Encroachment Permits are anticipated at this time.

TASK 7 – RIGHT-OF-WAY SERVICES

Task 7.1 – Surveying (Conser Land Survey)
Under this task Quincy Subconsultant, **Conser**, will perform the following:

- Prepare and deliver a Right of Way exhibit map noting current record information such as owner name, document number, right of way width, etc.
- Prepare necessary signed and sealed legal descriptions and plats of any fee title acquisitions of adjoiners parcels within the project limits
- Set permanent survey monuments along Right of Way, resulting from any fee title acquisitions. Prepare and record a Record of Survey with the County of Lake if necessary.
- Prepare and record a Record of Survey with the County of Lake if necessary.

It is assumed that four (4) parcels (APNs: 003015130, 003015120, 003015240, 003015250) are included for this scope of work.

It is assumed that the corresponding Title Reports will be obtained and paid for by Lake County and supplied to the Team in order to ascertain if any easements or other encumbrances are present.

Where it is necessary to obtain a temporary right to use a portion of the private property during construction, a separate plat will be prepared and submitted to show the temporary area being requested. Lake County will use these plats with their standard "Right-of-Entry" form.

Task 7.2 – Right-of-Way Appraisals (Bender Rosenthal, Inc.)
Under this task Quincy Subconsultant, **Bender Rosenthal, Inc. (BRI)**, will perform the following:

For each appraisal report, BRI will develop a complete appraisal that will state the estimated fair market value of the Temporary Construction Easement (TCE) and/or Permanent Easement interest for that property. The Appraisal report will be a summary appraisal report that will be prepared in conformance with and subject to the requirements of the Code of Professional Ethics and the Standards of Professional Practice of the Appraisal Institute, which fully incorporate the Uniform Standards of Professional Appraisal Practice (USPAP) of the Appraisal Foundation. Jurisdictional exceptions may apply in some cases. Plats and legal descriptions for each of the properties to be appraised will be provided to BRI by others.

If the anticipated parcel take will have a value of less than $10,000 and if the property owner is a willing participant, the County may direct the appraiser to provide a Waiver Valuation instead which does not require the same level as assessment and can be completed at a rate less than an appraisal. Waiver valuations cannot be used for condemnation purposes so should not be used on parcels that may require eminent domain proceedings.

Per Federal and State regulations, (Federal and State Uniform Acts) a qualified reviewing appraiser shall examine all appraisals to assure that they meet applicable appraisal requirements and shall, prior to acceptance, seek necessary correction or revisions. In addition, the review appraiser shall certify that the opinion of fair market value is reasonably supported by an acceptable appraisal. If the appraised value is over $10,000, the appraisals will be reviewed by an independent appraiser from Sierra West Valuation, Inc.

Task 7.3 – Right-of-Way Acquisition (Bender Rosenthal, Inc.)
Upon completion of the appraisals, the acquisition agent will work with the Lake County staff to determine the value to be negotiated for the required property. BRI will work with stakeholders and the property owners to determine the settlement and will maintain the file through escrow.

For each property owner, BRI will maintain an acquisition file that meets the federal, state, and Caltrans ROW standards and is pursuant to Lake County's specifications. BRI will prepare all applicable forms, secure grantor's approval and signature and submit the forms to the staff of Lake County for review and acceptance. Once approved by Lake County staff, the acquisition agent will make the First Written Offer to the property owner.

BRI will develop and maintain the escrow schedule, deliver documents and checks to escrow companies, review all documents for submission to escrow companies, review title and escrow documents, and BRI will coordinate escrow closings and file all applicable forms and documents with the County Assessor's office. BRI will work with all parties to encourage acquisition within 30 days of the approval of the appraisal.

At the completion of the project, BRI will provide the original acquisition file for each of the parcels.

Additional Service: Eminent Domain Proceeding Support

BRI's team of appraisers and acquisition agents strive to provide tailored services with the goal to complete the transaction in the best interest of all parties involved while adhering to all applicable regulations and guidelines. However, even with the best intentions and attention to details, some acquisitions will need to be completed through eminent domain. BRI staff will support the Lake County staff by preparing staff reports and presentations to the County Board for the Resolution of Necessity (RON). In addition, we will work with the Lake County legal team to develop the minimum 15-day notice of hearing for the RON and provide assistance in preparing any legal declarations in support of the court hearings. Our appraisers are qualified and available to provide testimony during condemnation trials as an additional service. BRI will provide support services to the condemnation attorney such as appearing as an expert witness, delivery of parcel file including the title report, legal description, appraisal, negotiation records and all correspondence; and assisting the attorney with locating the property owner and other interest holders. BRI will bill the services based on an hourly rate.

Task 7.4 – Right-of-Way Certification (Bender Rosenthal, Inc.)

Upon completion of the ROW acquisition, BRI will prepare the ROW Certification per Chapter 14 of the Caltrans ROW Manual. BRI will provide coordination services with Caltrans District 1 and the property owners, as required

TASK 8 – UTILITY RELOCATION

The Team will provide communication and coordination with the utility companies during the preliminary and final design process. Quincy will prepare a plan of existing utilities for the project based on the information obtained from the various affected utilities and determine which are in conflict. Quincy will follow the Caltrans utility relocation process and develop Report of Investigation (ROI), Notice to Owner (NTO), and Utility Agreement (UA) for execution to be transmitted to the affected utility companies along with a County signed relocation notice.

COUNTY INVOLVEMENT OPPORTUNITY

County staff could assist coordinating Utility related tasks.

Depending on the final bridge type selected, Quincy may be able to provide adequate openings for utilities in the bridge. It will be the responsibility of each utility owner to provide a design of their facility.

TASK 9 – BIDDING ASSISTANCE

The individuals that were directly involved in the design will be available during the bid period to interpret the plans and specifications, prepare addenda if needed, and provide general consultation to the County to obtain bids. The Quincy Team will be available to answer contractor inquiries during the bidding phase. When the construction bids are opened, we will be available to provide analysis and recommendations concerning award of the contract. Quincy has assumed a 16 hour effort for this task.

TASK 10 – CONSTRUCTION SUPPORT

After award of the construction contract, the Team will be available to continue providing services such as reviewing contractor submittals, reviewing shop plans, reviewing falsework plans and calculations, preparing and/or reviewing change orders, and making other field observations, at the Resident Engineer's or County's request. All activities include appropriate recommendations and documentation of the Team's activities.

COUNTY INVOLVEMENT OPPORTUNITY

Under the supervision of our Team, County staff could provide construction support for the projects and review contractor submittals.

Quincy maintains the same high level of service through the completion of construction. We work closely with the Construction Management Team to provide clarifications as needed to the design to ensure timely response to the contractor. Quincy places a "number 1" priority on contractor submittals or Requests for Information (RFIs) to ensure the contractor is never held up by the design Team. We work closely with the Construction Management firm to identify the timing of upcoming shop plan reviews and other contractor submittals to have resources ready.

Full construction management services including materials testing, inspection services, and contract administration are also available if the County desires. Due to the unknown scope of work and schedule for construction activities, the County has requested that this optional task be negotiated and added as an addendum prior to bidding of the project for construction. Quincy has assumed 160 hours for this effort.

Task 10 Deliverables:

- Construction Support
- Answer RFIs
- Review Shop Plans
- Construction Management

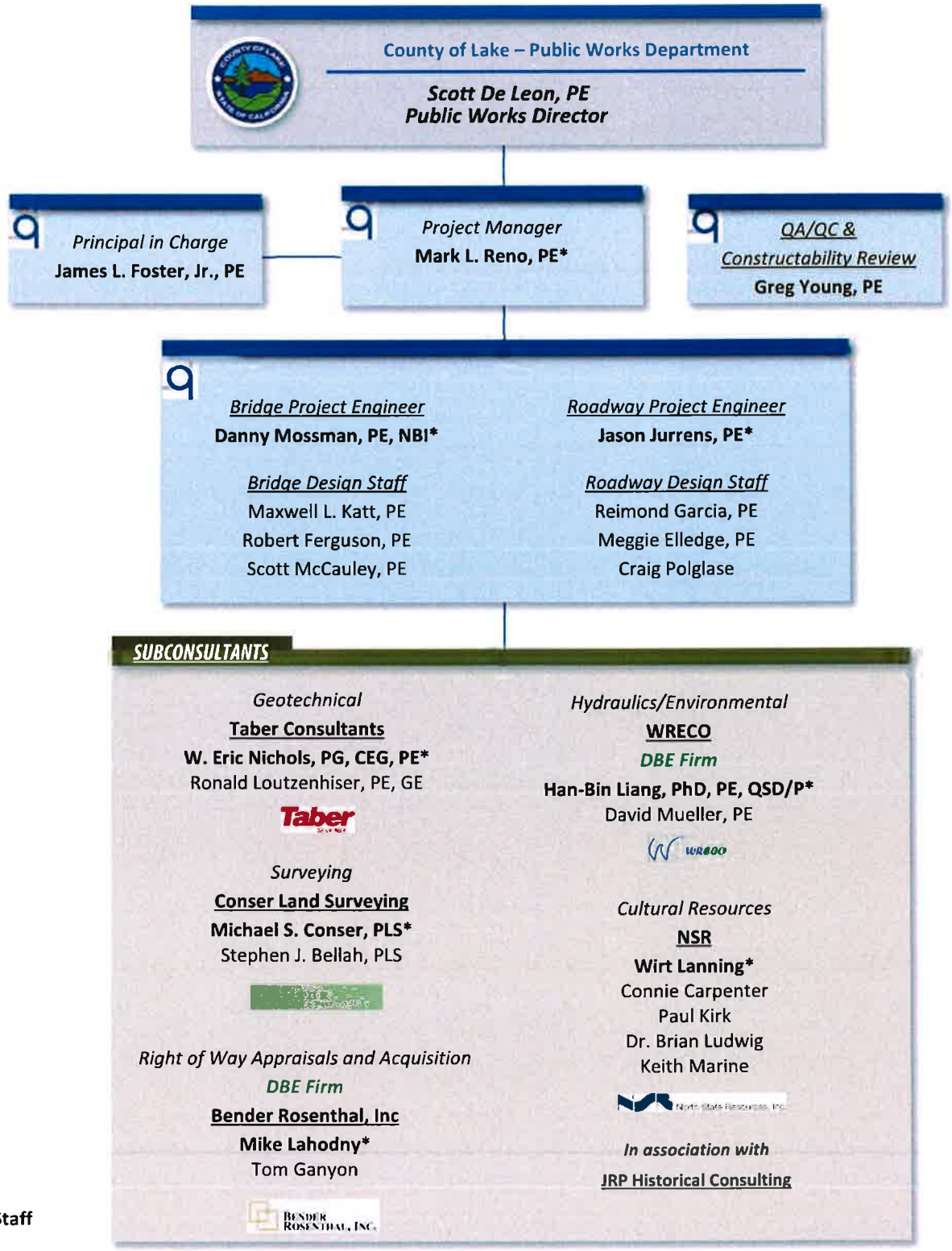
Task 11 Deliverables:

- As-Builts

TASK 11 – PREPARE RECORD (AS-BUILT) DRAWINGS

When construction is completed, Quincy could prepare Record Drawings (As-builts) for the County's files. These as-builts will be based on information clearly marked on a set of contract plans prepared by the Resident Engineer.

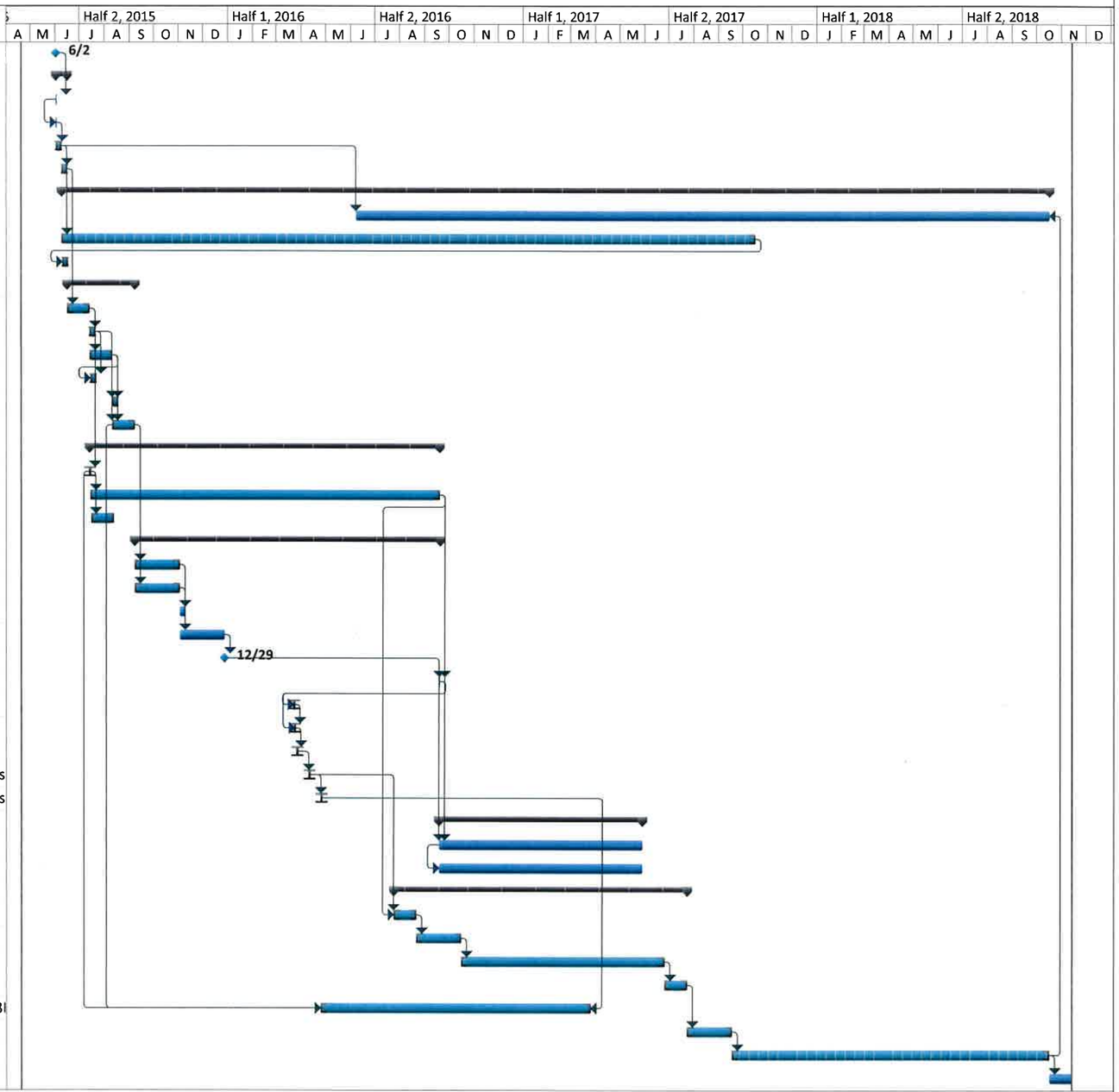
Staff Qualifications



* - Key Staff

St. Helena Creek at Wardlaw Street Project (14C-0035)

ID	Task Name	Duration	Start	Finish	Predecessors
1	NTP	0 days	Tue 6/2/15	Tue 6/2/15	
2	**TASK 1 - PROJECT INITIATION**	**10 days**	**Tue 6/2/15**	**Mon 6/15/15**	
3	Kick-Off Meeting	1 day	Tue 6/2/15	Tue 6/2/15	1
4	Field Review	1 day	Tue 6/2/15	Tue 6/2/15	3SS
5	Scope Verification	5 days	Tue 6/2/15	Mon 6/8/15	4
6	Establish Project Schedule	5 days	Tue 6/9/15	Mon 6/15/15	5
7	**TASK 2 - PROJECT MANAGEMENT**	**876 days**	**Tue 6/9/15**	**Tue 10/16/18**	
8	Project Management	615 days	Wed 6/8/16	Tue 10/16/18	5,44FF
9	Progress Meetings	615 days	Tue 6/9/15	Mon 10/16/17	5
10	Assist the County with State Administration Requirements	5 days	Wed 6/10/15	Tue 6/16/15	9
11	**TASK 3 - PRELIMINARY ENGINEERING**	**60 days**	**Tue 6/16/15**	**Mon 9/7/15**	
12	Surveys and Mapping	20 days	Tue 6/16/15	Mon 7/13/15	6
13	Geotechnical Investigations	5 days	Tue 7/14/15	Mon 7/20/15	12
14	Hydrologic/Hydraulic Studies	20 days	Tue 7/14/15	Mon 8/10/15	12
15	Advance Planning Studies	5 days	Wed 7/15/15	Tue 7/21/15	13,14
16	Preliminary Plans	5 days	Tue 8/11/15	Mon 8/17/15	13,14
17	Project Report/Type Selection Memo	20 days	Tue 8/11/15	Mon 9/7/15	13,14
18	**TASK 4 - ENVIRONMENTAL STUDIES**	**311 days**	**Tue 7/14/15**	**Tue 9/20/16**	
19	Prepare Project Description and APE Map	1 day	Tue 7/14/15	Tue 7/14/15	12
20	NEPA/CEQA Technical Studies	310 days	Wed 7/15/15	Tue 9/20/16	19
21	NESHAP Compliance	20 days	Thu 7/16/15	Wed 8/12/15	19
22	**TASK 5 - FINAL DESIGN ENGINEERING**	**272 days**	**Tue 9/8/15**	**Wed 9/21/16**	
23	Bridge Design	40 days	Tue 9/8/15	Mon 11/2/15	17
24	Roadway Design	40 days	Tue 9/8/15	Mon 11/2/15	17
25	Prepare Design Exception Fact Sheets	5 days	Tue 11/3/15	Mon 11/9/15	24
26	Plan Preparation	40 days	Tue 11/3/15	Mon 12/28/15	23,24
27	Submittal of 65% Plans	0 days	Tue 12/29/15	Tue 12/29/15	26
28	Independent Design Checks	1 day	Wed 9/21/16	Wed 9/21/16	27,20
29	Technical Specifications	1 day	Thu 3/24/16	Thu 3/24/16	28
30	Final Construction Quantities & Estimate	1 day	Fri 3/25/16	Fri 3/25/16	28,29
31	QA/QC	1 day	Mon 3/28/16	Mon 3/28/16	30
32	Submittal of 90% PS&E	1 day	Tue 4/12/16	Tue 4/12/16	31FS+10 days
33	Submittal of 100% PS&E	1 day	Wed 4/27/16	Wed 4/27/16	32FS+10 days
34	**TASK 6 - PERMITS**	**180 days**	**Wed 9/21/16**	**Tue 5/30/17**	
35	Environmental Permits	180 days	Wed 9/21/16	Tue 5/30/17	20,27
36	Caltrans Encroachment Permit Application	180 days	Wed 9/21/16	Tue 5/30/17	35SS
37	**TASK 7 - RIGHT OF WAY SERVICES**	**260 days**	**Wed 7/27/16**	**Tue 7/25/17**	
38	Surveying	20 days	Wed 7/27/16	Tue 8/23/16	20,32
39	Right of Way Appraisals	40 days	Wed 8/24/16	Tue 10/18/16	38
40	Right of Way Acquisition	180 days	Wed 10/19/16	Tue 6/27/17	39
41	Right of Way Certification	20 days	Wed 6/28/17	Tue 7/25/17	40
42	TASK 8 -Utility Relocation	240 days	Wed 4/27/16	Tue 3/28/17	17SS,19SS,33
43	TASK 9 - Bidding Assistance	40 days	Wed 7/26/17	Tue 9/19/17	41
44	TASK 10 - Construction Support	280 days	Wed 9/20/17	Tue 10/16/18	43
45	TASK 11 - Prepare Record (As-Built) Drawings	20 days	Wed 10/17/18	Tue 11/13/18	44



Project: Wardlaw Schedule
Date: Mon 4/20/15

Task	Summary	External Milestone	Inactive Summary	Manual Summary Rollup	Finish-only
Split	Project Summary	Inactive Task	Manual Task	Manual Summary	Deadline
Milestone	External Tasks	Inactive Milestone	Duration-only	Start-only	Progress

Cooper Creek at Witter Springs Road Project (14C-0102)

ID	Task Name	Duration	Start	Finish	Predecessors
1	NTP	0 days	Tue 6/2/15	Tue 6/2/15	
2	**TASK 1 - PROJECT INITIATION**	**10 days**	**Tue 6/2/15**	**Mon 6/15/15**	
3	Kick-Off Meeting	1 day	Tue 6/2/15	Tue 6/2/15	1
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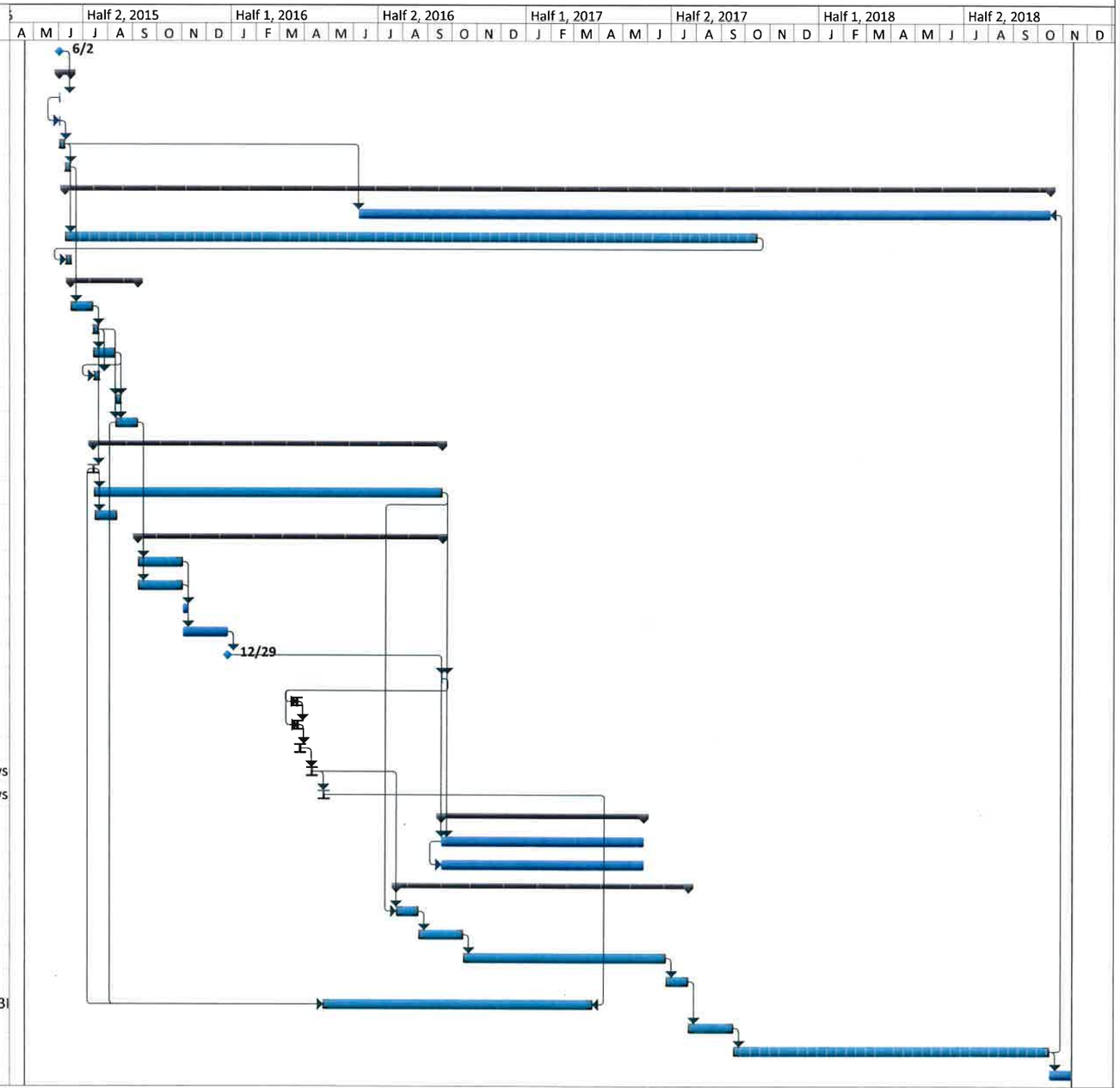

Project: Witter Schedule
Date: Mon 4/20/15

Task	Summary	External Milestone	Inactive Summary	Manual Summary Rollup	Finish-only
Split	Project Summary	Inactive Task	Manual Task	Manual Summary	Deadline
Milestone	External Tasks	Inactive Milestone	Duration-only	Start-only	Progress

EXHIBIT "B"

TO

AGREEMENT FOR ENGINEERING SERVICES

FOR

REPLACEMENT OF ST. HELENA CREEK BRIDGE AT WARDLAW STREET (14C-0035)

AND

REHABILITATION OF COOPER CREEK BRIDGE AT WITTER SPRINGS ROAD (14C-0102)

IN LAKE COUNTY, CALIFORNIA

EXHIBIT 10-O2 CONSULTANT CONTRACT DBE INFORMATION

(Inclusive of all DBEs listed at contract award. Refer to instructions on the reverse side of this form)

Consultant to Complete this Section

1. Local Agency Name: Lake County
2. Project Location: Cooper Creek at Witter Springs Road
3. Project Description: Bridge Rehabilitation (14C-0102, BRLO-5914(090))
4. Total Contract Award Amount: $ 377,220.00
5. Consultant Name: Quincy Engineering, Inc.
6. Contract DBE Goal %: 11.0%
7. Total Dollar Amount for all Subconsultants: $ 195,165.78
8. Total Number of all Subconsultants: 5

Award DBE/DBE Information

9. Description of Services to be Provided	10. DBE/DBE Firm Contact Information	11. DBE Cert. Number	12. DBE Dollar Amount
Hydraulics/Environmental	WRECO 1243 Alpine Road, Suite 108 Walnut Creek, CA 94596 (925) 941-0017	BART #30066	$18,072.25
Right of Way Appraisals and Acquisition	Bender Rosenthal, Inc. 4400 Auburn Boulevard, #102 Sacramento, CA 95841 (916) 978-4900	Caltrans #23506	$40,685.70
Drilling	Woodward Drilling Co., Inc. 221 Montezuma Rio Vista, CA 94571 (707) 374-4300	Caltrans #37887	$10,872.00

Local Agency to Complete this Section

20. Local Agency Contract Number: _____

21. Federal-aid Project Number: _____

22. Contract Execution Date: _____

Local Agency certifies that all DBE certifications are valid and the information on this form is complete and accurate:

23. Local Agency Representative Name (Print)

24. Local Agency Representative Signature — 25. Date

26. Local Agency Representative Title — 27. (Area Code) Tel. No.

13. Total Dollars Claimed	$ 69,629.95
14. Total % Claimed	18.46 %

Mark L. Reno

15. Preparer's Signature

Mark L. Reno, PE

16. Preparer's Name (Print)

Project Manager

17. Preparer's Title

04/20/2015 — 18. Date

(916) 368-9181 — 19. (Area Code) Tel. No.

Caltrans to Complete this Section

Caltrans District Local Assistance Engineer (DLAE) certifies that this form has been reviewed for completeness:

28. DLAE Name (Print) — 29. DLAE Signature — 30. Date

Distribution: (1) Copy – Email a copy to the Caltrans District Local Assistance Engineer (DLAE) within 30 days of contract award. Failure to send a copy to the DLAE within 30 days of contract award may result in delay of payment.
(2) Copy – Include in award package sent to Caltrans DLAE
(3) Original – Local agency files

INSTRUCTIONS - CONSULTANT CONTRACT AWARD DBE INFORMATION

Consultant Section

The Consultant shall:

1. **Local Agency Name** – Enter the name of the local or regional agency that is funding the contract.
2. **Project Location** - Enter the project location as it appears on the project advertisement.
3. **Project Description** - Enter the project description as it appears on the project advertisement (Bridge Rehab, Seismic Rehab, Overlay, Widening, etc).
4. **Total Contract Award Amount** - Enter the total contract award dollar amount for the prime consultant.
5. **Consultant Name** - Enter the consultant's firm name.
6. **Contract DBE Goal %** - Enter the contract DBE goal percentage, as it was reported on the Exhibit 10-I *Notice to Proposers DBE Information* form. See LAPM Chapter 10.
7. **Total Dollar Amount for all Subconsultants** – Enter the total dollar amount for all subcontracted consultants. SUM = (DBE's + all Non-DBE's). Do **not** include the prime consultant information in this count.
8. **Total number of all subconsultants** – Enter the total number of all subcontracted consultants. SUM = (DBE's + all Non-DBE's). Do **not** include the prime consultant information in this count.
9. **Description of Services to be Provided** - Enter item of work description of services to be provided. Indicate all work to be performed by DBEs including work performed by the prime consultant's own forces, if the prime is a DBE. If 100% of the item is not to be performed or furnished by the DBE, describe the exact portion to be performed or furnished by the DBE. See LAPM Chapter 9 to determine how to count the participation of DBE firms.
10. **DBE Firm Contact Information** - Enter the name and telephone number of all DBE subcontracted consultants. Also, enter the prime consultant's name and telephone number, if the prime is a DBE.
11. **DBE Cert. Number** - Enter the DBE's Certification Identification Number. All DBEs must be certified on the date bids are opened. (DBE subcontracted consultants should notify the prime consultant in writing with the date of the decertification if their status should change during the course of the contract.)
12. **DBE Dollar Amount** - Enter the subcontracted dollar amount of the work to be performed or service to be provided. Include the prime consultant if the prime is a DBE, and include DBEs that are not identified as subconsultants on the Exhibit 10-O1 *Consultant Proposal DBE Commitment* form. See LAPM Chapter 9 for how to count full/partial participation.
13. **Total Dollars Claimed** – Enter the total dollar amounts for column 13.
14. **Total % Claimed** – Enter the total DBE participation claimed for column 13. SUM = (item "14. Total Participation Dollars Claimed" divided by item "4. Total Contract Award Amount"). If the Total % Claimed is less than item "6. Contract DBE Goal", an adequately documented Good Faith Effort (GFE) is required (see Exhibit 15-H *DBE Information - Good Faith Efforts* of the LAPM).
15. **Preparer's Signature** – The person completing this section of the form for the consultant's firm must sign their name.
16. **Preparer's Name (Print)** – Clearly enter the name of the person signing this section of the form for the consultant.
17. **Preparer's Title** - Enter the position/title of the person signing this section of the form for the consultant.
18. **Date** - Enter the date this section of the form is signed by the preparer.
19. **(Area Code) Tel. No.** - Enter the area code and telephone number of the person signing this section of the form for the consultant.

Local Agency Section:

The Local Agency representative shall:

20. **Local Agency Contract Number** - Enter the Local Agency Contract Number.
21. **Federal-Aid Project Number** - Enter the Federal-Aid Project Number.
22. **Contract Execution Date** - Enter the date the contract was executed and Notice to Proceed issued. See LAPM Chapter 10, page 23.
23. **Local Agency Representative Name (Print)** - Clearly enter the name of the person completing this section.
24. **Local Agency Representative Signature** - The person completing this section of the form for the Local Agency must sign their name to certify that the information in this and the Consultant Section of this form is complete and accurate.
25. **Date** - Enter the date the Local Agency Representative signs the form.
26. **Local Agency Representative Title** - Enter the position/title of the person signing this section of the form.
27. **(Area Code) Tel. No.** - Enter the area code and telephone number of the Local Agency representative signing this section of the form.

Caltrans Section:

Caltrans District Local Assistance Engineer (DLAE) shall:

28. **DLAE Name (Print)** – Clearly enter the name of the DLAE.
29. **DLAE Signature** – DLAE must sign this section of the form to certify that it has been reviewed for completeness.
30. **Date** - Enter the date that the DLAE signs this section the form.

EXHIBIT 10-O2 CONSULTANT CONTRACT DBE INFORMATION

(Inclusive of all DBEs listed at contract award. Refer to instructions on the reverse side of this form)

Consultant to Complete this Section

1. Local Agency Name: Lake County
2. Project Location: St. Helena Creek at Wardlaw Street
3. Project Description: Bridge Replacement (14C-0035, BRLO-5914(088))
4. Total Contract Award Amount: $ 507,110.00
5. Consultant Name: Quincy Engineering, Inc.
6. Contract DBE Goal %: 11.0%
7. Total Dollar Amount for all Subconsultants: $ 256,798.64
8. Total Number of all Subconsultants: 5

Award DBE/DBE Information

9. Description of Services to be Provided	10. DBE/DBE Firm Contact Information	11. DBE Cert. Number	12. DBE Dollar Amount
Hydraulics/Environmental	WRECO 1243 Alpine Road, Suite 108 Walnut Creek, CA 94596 (925) 941-0017	BART #30066	$18,072.25
Right of Way Appraisals and Acquisition	Bender Rosenthal, Inc. 4400 Auburn Boulevard, #102 Sacramento, CA 95841 (916) 978-4900	Caltrans #23506	$40,685.70

Local Agency to Complete this Section

20. Local Agency Contract Number: _____

21. Federal-aid Project Number: _____

22. Contract Execution Date: _____

Local Agency certifies that all DBE certifications are valid and the information on this form is complete and accurate:

23. Local Agency Representative Name (Print)

24. Local Agency Representative Signature — 25. Date

26. Local Agency Representative Title — 27. (Area Code) Tel. No.

13. Total Dollars Claimed	$ 58,757.95
14. Total % Claimed	11.58 %

Mark L. Reno

15. Preparer's Signature

Mark L. Reno, PE

16. Preparer's Name (Print)

Project Manager

17. Preparer's Title

04/20/2015 — (916) 368-9181

18. Date — 19. (Area Code) Tel. No.

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Caltrans District Local Assistance Engineer (DLAE) certifies that this form has been reviewed for completeness:

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17. **Preparer's Title** - Enter the position/title of the person signing this section of the form for the consultant.
18. **Date** - Enter the date this section of the form is signed by the preparer.
19. **(Area Code) Tel. No.** - Enter the area code and telephone number of the person signing this section of the form for the consultant.

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The Local Agency representative shall:

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21. **Federal-Aid Project Number** - Enter the Federal-Aid Project Number.
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23. **Local Agency Representative Name (Print)** - Clearly enter the name of the person completing this section.
24. **Local Agency Representative Signature** - The person completing this section of the form for the Local Agency must sign their name to certify that the information in this and the Consultant Section of this form is complete and accurate.
25. **Date** - Enter the date the Local Agency Representative signs the form.
26. **Local Agency Representative Title** - Enter the position/title of the person signing this section of the form.
27. **(Area Code) Tel. No.** - Enter the area code and telephone number of the Local Agency representative signing this section of the form.

Caltrans Section:

Caltrans District Local Assistance Engineer (DLAE) shall:

28. **DLAE Name (Print)** – Clearly enter the name of the DLAE.
29. **DLAE Signature** – DLAE must sign this section of the form to certify that it has been reviewed for completeness.
30. **Date** - Enter the date that the DLAE signs this section the form.

Cost Proposal - St. Helena Creek at Wardlaw Street (14C-0035) - PHASE 1

Lake County - St. Helena Creek at Wardlaw Street Project (14C-0035) - PHASE 1

PHASE 1

				Date:	4/20/2015
	Quincy Engineering, Inc.				
	Direct Labor:				$53,821.09
	Escalation for Multi-Year Project (3.0%):				$1,614.63
	Subtotal				$55,435.72
	Overhead (1.6389):				$90,853.61
A.	Labor Subtotal				$146,289.33
	Subconsultant Costs:				
	NSR				$87,176.34
	Taber				$63,072.80
	WRECO				$18,072.25
	Conser				$36,294.52
	Bender Roenthal, Inc				$0.00
B.	Subconsultant Subtotal				$204,615.91
	Other Direct Costs:				
	Travel	1800	miles @	$0.575	$1,035.00
	Pier Diem/ Hotel		days @	$150.00	$0.00
	Delivery and Printing				$400.00
	Printing: Mylars				
	Vellum				
	81/2 X 11 Reproduction				
	11 X 17 Reproduction				
	Lab Testing				
	Database Report				
	Title Report				
	Survey Prevailing Wage Differential				$0.00
	Mailings (6x)				
C.	Direct Cost Subtotal:				$1,435.00
	Labor Subtotal A. =				$146,289.33
	Fixed Fee (10.0%):				$14,628.93
	Subconsultant Subtotal B. =				$204,615.91
	Fixed Fee (0.0%):				$0.00
	Direct Cost Subtotal: C. =				$1,435.00
	Fixed Fee (0.0%):				$0.00
	TOTAL =				**$366,969.17**
				USE	**$366,970.00**

Note: Invoices will be based upon actual QEI hourly rates plus overhead at 163.89% plus prorated portion of fixed fee. Subconsultant and Direct Costs will be billed at actual cost.

QUINCY ENGINEERING

Cost Proposal - St. Helena Creek at Wardlaw Street (14C-0035) - PHASE 1

Project Name: Lake County - St. Helena Creek at Wardlaw Street Project (14C-0035) - PHASE 1

	No.	TASKS		Project Manager	Project Engineer (Bridge)	Project Engineer (Road)	Senior Engineer - QA/QC/Const Review	Design Engineer (Bridge)	Design Engineer (Bridge)	Design Engineer (Bridge)	Design Engineer (Road)	Senior Engineer - SSPs	Design Engineer (Road)	Design Engineer (Road)	Quincy Total Hours	Quincy Total Labor Dollars	Quincy Total Labor Dollars	Quincy Labor	Quincy Profit	Quincy NLF Budget	NSR	Taber	WRECO	Conser	Bender Rosenthal, Inc	Subconsultant Subtotal
		Initial Hourly Rate		MR $74.37	DM $51.87	JJ $66.00	GY $58.06	Mka $49.85	RF $45.88	SMc $48.81	Rga $48.34	KG $61.44	CP $40.38	ME $39.81		Direct Labor	Escalation Multiplier 3.0%	Labor+OH Multiplier 2.639	Profit Multiplier 10%	Actual Labor Multiplier 2.903						
		PHASE 1																								
TASK 1 - Project Initiation	1.1	Kick-Off Meeting		4	4	4									12	$769	$792	$2,090	$209.01	$2,299			$743			$743
	1.2	Field Review		4	4	4									12	$769	$792	$2,090	$209.01	$2,299			$866			$866
	1.3	Scope Verification		4	4										8	$505	$520	$1,373	$137.25	$1,510						$0
	1.4	Establish Project Schedule		2	16										18	$979	$1,008	$2,660	$266.01	$2,926						$0
TASK 2 - Project Management	2.1	Project Management		24											24	$1,785	$1,838	$4,851	$485.14	$5,337	$5,918					$5,918
	2.2	Progress Meetings		8	8			8							24	$1,409	$1,451	$3,829	$382.90	$4,212			$1,060			$1,060
	2.3	Assist the County with State Administration Requirements		3	24										27	$1,468	$1,512	$3,990	$399.01	$4,389						$0
TASK 3 - Preliminary Engineering	3.1	Surveys and Mapping			4	8									12	$735	$758	$1,999	$199.91	$2,199				$36,295		$36,295
	3.2	Geotechnical Investigations			8										8	$415	$427	$1,128	$112.79	$1,241		$36,603				$36,603
	3.3	Hydrologic/Hydraulic Studies			8	2									10	$547	$563	$1,487	$148.67	$1,635			$10,920			$10,920
	3.4	Advance Planning Studies			16				24				16		56	$2,672	$2,753	$7,264	$726.38	$7,990						$0
	3.5	Preliminary Plans				16					24		24		64	$3,185	$3,281	$8,658	$865.78	$9,524						$0
		Project Report/Type Selection Memo			16	16		40			24				96	$5,040	$5,191	$13,699	$1,369.93	$15,069						$0
TASK 4 - Environmental Studies	4.1	Prepare Project Description and APE Map		2	8	8					8				26	$1,478	$1,523	$4,018	$401.84	$4,420	$4,971					$4,971
	4.2	NEPA/CEQA Technical Studies		12	24	24									60	$3,721	$3,833	$10,115	$1,011.48	$11,126	$70,972					$70,972
	4.3	NESHAP Compliance			2										2	$104	$107	$282	$28.20	$310		$1,295				$1,295
TASK 5 - Final Design Engineering	5.1	Bridge Design			24			120							144	$7,227	$7,444	$19,643	$1,964.31	$21,607			$3,483			$3,483
		Roadway Design				24					80				104	$5,451	$5,615	$14,817	$1,481.67	$16,298						$0
	5.2	Prepare Design Exception Fact Sheets													0	$0	$0	$0	$0.00	$0						$0
		Plan Preparation											240		240	$9,691	$9,982	$26,341	$2,634.13	$28,975						$0
		Submittal of 65% Plans		8	8	8		8			8				40	$2,323	$2,393	$6,315	$631.53	$6,947						$0
		Independent Design Checks													0	$0	$0	$0	$0.00	$0						$0
	5.3	Technical Specifications													0	$0	$0	$0	$0.00	$0						$0
		Final Construction Quantities & Estimate													0	$0	$0	$0	$0.00	$0						$0
		QA/QC													0	$0	$0	$0	$0.00	$0						$0
		Submittal of 90% PS&E													0	$0	$0	$0	$0.00	$0						$0
		Submittal of 100% PS&E													0	$0	$0	$0	$0.00	$0						$0
TASK 6 - Permits	6.1	Environmental Permits													0	$0	$0	$0	$0.00	$0						$0
	6.2	Caltrans Encroachment Permit Application													0	$0	$0	$0	$0.00	$0						$0
TASK 7 - Right of Way Services	7.1	Surveying													0	$0	$0	$0	$0.00	$0						$0
	7.2	Right of Way Appraisals													0	$0	$0	$0	$0.00	$0						$0
	7.3	Right of Way Acquisition													0	$0	$0	$0	$0.00	$0						$0
	7.4	Right of Way Certification													0	$0	$0	$0	$0.00	$0						$0
TASK 8 - Utilities	8	Utility Relocation		8	4	24					24				60	$3,547	$3,653	$9,640	$963.99	$10,604						$0
TASK 9 - Bidding Assistance	9	Bidding Assistance													0	$0	$0	$0	$0.00	$0						$0
TASK 10 - Construction Support	10	Construction Support													0	$0	$0	$0	$0.00	$0						$0
TASK 11 - As-builts	11	Prepare Record (As-Built) Drawings													0	$0	$0	$0	$0.00	$0						$0
		Subtotal- Hours		79	182	138	0	200	0	0	168	0	280	0	1047											0
		Other Direct Costs																			$1,435	$5,315	$25,175	$1,000	$0	$0	31,490
		Total Cost		$5,875	$9,440	$9,108	$0	$9,970	$0	$0	$8,121	$0	$11,306	$0	$53,821	$53,821	$55,436	$146,289	$14,629	$162,353	$87,176	$63,073	$18,072	$36,295	$0	$204,616

QUINCY ENGINEERING

Cost Proposal - St. Helena Creek at Wardlaw Street (14C-0035) - PHASE 1

Exhibit 10-H Cost Proposal

Cost Proposal

Contract No. Lake County - St. Helena Creek at Wardlaw Street Project (14C-0035) - PHASE 1

Consultant Quincy Engineering, Inc.

Date 4/20/2015

DIRECT LABOR

Classification/Title	Name	Initials	Range	Hours	Actual Hourly	Total
Principal Eng.	Mark Reno	MR	$62-$84	79	$74.37	$ 5,875.23
Senior Eng.	Danny Mossman	DM	$46-$75	182	$51.87	$ 9,440.34
Senior Eng.	Jason Jurrens	JJ	$46-$75	138	$66.00	$ 9,108.00
Senior Eng.	Greg Young	GY	$46-$75	0	$58.06	$ -
Assoc Eng.	Maxwell Katt	Mka	$33-$60	200	$49.85	$ 9,970.00
Assoc Eng.	Robert Ferguson	RF	$33-$60	0	$45.88	$ -
Assoc Eng.	Scott McCauley	SMc	$33-$60	0	$48.81	$ -
Assoc Eng.	Reimond Garcia	Rga	$33-$60	168	$48.34	$ 8,121.12
Senior Eng.	Kelly Gallagher	KG	$46-$75	0	$61.44	$ -
Senior Eng Tech	Craig Polglase	CP	$62-$84	280	$40.38	$ 11,306.40
Assoc Eng.	Meggie Elledge	ME	$33-$60	0	$39.81	$ -

LABOR COSTS

a)	Subtotal Direct Labor Costs	$53,821.09
b)	Escalation for Multi-Year Project (3.0%):	$1,614.63
c)	TOTAL DIRECT LABOR COSTS [(a) + (b)]	**$55,435.72**

FRINGE BENEFITS

d)	Fringe Benefits (Rate: 38.97%):	$21,603.30
e)	TOTAL FRINGE BENEFITS [(c) x (d)]	**$21,603.30**

INDIRECT COSTS

f)	Overhead (96.58%):	
g)	Overhead [(c) x (f)]	$53,539.82
h)	General Administration Rate (28.34%):	
i)	Gen & Admin [(c) x (h)]	$15,710.48
j)	TOTAL INDIRECT COSTS [(g) + (i)]	**$69,250.30**

FIXED FEE (Profit)

k)	Fixed Fee (10.0%):	
l)	TOTAL PROFIT [(c) + (e) + (j)] x (q)	**$14,628.93**

OTHER DIRECT COSTS (ODC)

m)	Travel/Mileage	$1,035.00
n)	Equipment Rental & Supplies	$400.00
o)	Permit Fees, Plan Sheets, etc	$0.00
p)	Subconsultant Costs (attach detailed cost proposal in same format as prime consultant estimate for each subconsultant)	$204,615.91
q)	**TOTAL OTHER DIRECT COSTS**	**$206,050.91**
r)	**TOTAL COST**	**$366,969.17**

QUINCY ENGINEERING

County of Lake
Three Bridges Project
St. Helena Creek at Wardlaw Street, 14C-0035 (Bridge Replacement) - PHASE 1

North State Resources, Inc.

CONTRACT No. BRLO-5914(088)
SUB CONSULTANT: North State Resources, Inc.

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
0	0	0	$0.00	$0.00
W. Lanning	Program Manager 4	106	$53.56	$5,677.36
B. Ludwig	Cultural Resources Specialist 4	22	$42.80	$941.60
M. Roeder	Cultural Resources Specialist 2	120	$21.00	$2,520.00
H. Kelly	Biologist 4	16	$36.80	$588.80
M. Gorman	Biologist 3	2	$28.60	$57.20
P. Kirk	Biologist 3	182	$28.60	$5,205.20
C. Carpenter	Environmental Scientist 3	172	$32.00	$5,504.00
T. Mooney	GIS Analyst 2	34	$24.96	$848.64
S. Cantu	Admin Assistant 3	36	$26.08	$938.88
B. Weichman	Admin Manager 3	18	$30.68	$552.24
0	0	0	$0.00	$0.00
		708		
		Subtotal Direct Labor Costs		$22,833.92
		Anticipated Salary Increases (3%)		$685.02
			TOTAL - Direct Labor	$23,518.94

INDIRECT COSTS	Rate	Total	
Overhead	89.00%	$20,931.85	
Fringe Benefit	29.00%	$6,820.49	
General & Administrative	29.00%	$6,820.49	
	147.00%		
		TOTAL - Indirect Costs	$34,572.84

FEE	(10.00%)			TOTAL - Fee	$5,809.18

OTHER DIRECT COSTS			Total	
Travel Costs	2960 @	$0.56	$ 1,657.60	
Photocopies			$ 2,300.00	
Overnight Service	6 @	$15.00	$ 90.00	
Information Center	1 @	$300	$ 300.00	
				$4,347.60
			TOTAL COST	$68,248.56

Subcontractor Costs	$	-
Total Contract	$	68,248.56

County of Lake
Three Bridges Project
St. Helena Creek at Wardlaw Street, 14C-0035 (Bridge Replacement) - PHASE 1

JRP Historical Consulting, LLC

CONTRACT No. BRLO-5914(088) CONSULTANT COST PROPOSAL
SUB CONSULTANT: JRP Historical Consulting, LLC April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
Herbert	Principal/Partner	0	$70.59	$0.00
Wee	Principal/Partner	0	$70.59	$0.00
Bunse	Partner	0	$65.45	$0.00
McMorris	Partner	56	$61.58	$3,448.59
Larson, B.	Senior Historian II	0	$48.77	$0.00
Webb	Architectural Historian III	0	$39.40	$0.00
Miltenberger	Senior Historian I	0	$36.40	$0.00
Melvin	Historian II	80	$28.56	$2,284.80
Freeman	Historian II	0	$27.87	$0.00
Norby	Historian II	0	$27.73	$0.00
Brookshear	Architectural Historian II	0	$27.70	$0.00
Larson, K.	Office Manager	4	$25.00	$100.00
Miller, C.	Historian I	0	$23.68	$0.00
Trew	Historian I	0	$21.99	$0.00
Flores	Graphics/GIS Technician I	12	$21.90	$262.85
Miller, H.	Research Assistant II	52	$19.69	$1,023.89
Koontz	Administrative Assistant I	7	$18.03	$126.18
		211		
			Subtotal Direct Labor Costs	$7,246.31
			Anticipated Salary Increases	$144.93
			TOTAL - Direct Labor	$7,391.24

INDIRECT COSTS	Rate	Total	
Overhead	30.58%	$2,260.24	
Fringe Benefit	49.91%	$3,688.97	
General & Administrative	40.42%	$2,987.54	
	120.91%		
		TOTAL - Indirect Costs	$8,936.74

FEE	(10.00%)			TOTAL - Fee	$1,632.80

OTHER DIRECT COSTS			Total	
Travel Costs	475 @	$0.56	$ 266.00	
Photocopies	140 @	$0.15	$ 21.00	
Report Production	16 @	$40.00	$ 640.00	
Postage / Shipping	4 @	$10.00	$ 40.00	
				$967.00
			TOTAL COST	$18,927.78

Subcontractor Costs	$	-
Total Contract	$	18,927.78

County of Lake
Three Bridges Project
St. Helena Creek at Wardlaw Street, 14C-0035 (Bridge Replacement) - PHASE 1

Taber Consultants

CONTRACT No. BRLO-5914(088)
SUB CONSULTANT: Taber Consultants

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
Eric Nichols	Principal	14	$56.48	$790.72
Ron Loutzenhiser	Project Manager	71	$43.04	$3,055.84
Amand Kahn	Staff Engineer/Geologist	110	$30.93	$3,402.30
Xor Vang	CAD Technician	24	$29.59	$710.16
Ray Downes	Laboratory Technician	50	$29.59	$1,479.50
Alex Taber	Staff Technician	8	$25.55	$204.40
Rosina Florez	Admistrative Assistant	10	$20.18	$201.80
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
		287		
		Subtotal Direct Labor Costs		$9,844.72
		Anticipated Salary Increases		$0.00
			TOTAL - Direct Labor	$9,844.72

INDIRECT COSTS	Rate	Total	
Overhead	38.00%	$3,740.99	
Fringe Benefit	90.00%	$8,860.25	
General & Administrative	110.00%	$10,829.19	
	238.00%		
		TOTAL - Indirect Costs	$23,430.43

FEE (10.00%) TOTAL - Fee $3,327.52

OTHER DIRECT COSTS			Total	
Seismic Timer	1 @	$500.00	$ 500.00	
County Encroachment Permit (Fees Waived)	1 @	$0.00	$ -	
County Environmental Health Permit and Inspection Fees	2 @	$500.00	$ 1,000.00	
California Department of Fish and Wildlife Permit Fee	1 @	$800.00	$ 800.00	
Drill Rig and Crew (mob/demob, borings, moves, set-ups, cleanup)	1 @	$20,900.00	$ 20,900.00	
Traffic Control (signs and cones for shoulder closure)	1 @	$500.00	$ 500.00	
Professional Expenses (Field Engineer/Geologist)	4.5 @	$150.00	$ 675.00	
				$24,375.00
			TOTAL COST	$60,977.67

Subcontractor Costs	$	-
Total Contract	$	60,977.67

County of Lake
Three Bridges Project
St. Helena Creek at Wardlaw Street, 14C-0035 (Bridge Replacement) - PHASE 1

Taber Consultants

CONTRACT No. BRLO-5914(088)
SUB CONSULTANT: Taber Consultants
NESHAP Compliance

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
Eric Nichols	Principal	2	$56.48	$112.96
Ron Loutzenhiser	Project Manager	5	$43.04	$215.20
Amand Kahn	Staff Engineer/Geologist	0	$30.93	$0.00
Xor Vang	CAD Technician	0	$29.59	$0.00
Ray Downes	Laboratory Technician	0	$29.59	$0.00
Rosina Florez	Admistrative Assistant	1	$20.18	$20.18
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
		8		
		Subtotal Direct Labor Costs		$348.34
		Anticipated Salary Increases		$0.00
			TOTAL - Direct Labor	$348.34

INDIRECT COSTS	Rate	Total	
Overhead	38.00%	$132.37	
Fringe Benefit	90.00%	$313.51	
General & Administrative	110.00%	$383.17	
	238.00%		
		TOTAL - Indirect Costs	$829.05

FEE	(10.00%)		TOTAL - Fee	$117.74

OTHER DIRECT COSTS			Total	
Environmental Data Report	0 @	$275.00	$ -	
Analytical Testing (8 Total Lead, 4 diWET Lead Tests)	0 @	$800.00	$ -	
N.A.L. Certified Asbestos Consultant	1 @	$800.00	$ 800.00	
Professional Expenses (Field Engineer/Geologist)	0 @	$150.00	$ -	
				$800.00
			TOTAL COST	$2,095.13

Subcontractor Costs	$	-
Total Contract	$	2,095.13

County of Lake
Three Bridges Project
St. Helena Creek at Wardlaw Street, 14C-0035 (Bridge Replacement) - PHASE 1

WRECO

CONTRACT No. BRLO-5914(088)
SUB CONSULTANT: WRECO

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
Han-Bin Liang	Principal Engineer	7	$89.44	$626.08
Analette Ochoca	Supervising Engineer	16	$73.93	$1,182.88
David Mueller	Senior Engineer	28	$50.73	$1,420.44
Kazuya Tsurushita	Associate Engineer	48	$35.43	$1,700.64
PatrickYim	Staff Engineer	62	$27.04	$1,676.48
MeiDu	Technician	2	$28.00	$56.00
Kathryn Stelljes	Clerical/Tech Editor	5	$26.00	$130.00
		168		
			Subtotal Direct Labor Costs	$6,792.52
			Anticipated Salary Increases	$0.00
			TOTAL - Direct Labor	$6,792.52

INDIRECT COSTS	Rate	Total
Overhead	43.97%	$2,986.67
Fringe Benefit	51.20%	$3,477.77
General & Administrative	33.32%	$2,263.27
	128.49%	
	TOTAL - Indirect Costs	$8,727.71

FEE (10.00%) TOTAL - Fee $1,552.02

OTHER DIRECT COSTS			Total
Travel Costs	715 @	$0.56	$ 400.00
Photocopies	16 @	$25.00	$ 400.00
Overnight Service	4 @	$50.00	$ 200.00
			$1,000.00
		TOTAL COST	$18,072.25

Subcontractor Costs	$ -
Total Contract	$ 18,072.25

County of Lake
Three Bridges Project
St. Helena Creek at Wardlaw Street, 14C-0035 (Bridge Replacement) - PHASE 1

CONSER LAND SURVEYING

CONTRACT No. BRLO-5914(088)
SUB CONSULTANT: Conser Land Surveying

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
Michael Conser	Principal Admin _ QA/QC	24	$80.00	$1,920.00
Stephen Bellah	Project Surveyor TOPO	34	$35.00	$1,190.00
Stephen Bellah	Project Surveyor ROW	48	$35.00	$1,680.00
Ryan D. (Party Chief)	Field Crew CONTROL	24	$20.00	$480.00
Dustin W. (Party Chief)	Field Crew CONTROL	24	$20.00	$480.00
Blake B. (Rod Person)	Field Crew CONTROL	24	$13.00	$312.00
Ryan D. (Party Chief)	Field Crew TOPO	32	$20.00	$640.00
Dustin W. (Party Chief)	Field Crew TOPO	32	$20.00	$640.00
Blake B. (Rod Person)	Field Crew TOPO	32	$13.00	$416.00
Ryan D. (Party Chief)	Field Crew ROW	40	$20.00	$800.00
Dustin W. (Party Chief)	Field Crew ROW	20	$20.00	$400.00
Blake B. (Rod Person)	Field Crew ROW	40	$13.00	$520.00
Ryan D. (Party Chief)	Field Crew ADDITIONAL	12	$20.00	$240.00
Dustin W. (Party Chief)	Field Crew ADDITIONAL	12	$20.00	$240.00
Dustin Williams	Survey Technician RESEARCH	24	$20.00	$480.00
Hilary Klassen	Office Administrator	12	$20.00	$240.00
		434		
			Subtotal Direct Labor Costs	$10,678.00
			Anticipated Salary Increases	$0.00
			TOTAL - Direct Labor	$10,678.00

INDIRECT COSTS	Rate	Total	
Overhead	125.00%	$13,347.50	
Fringe Benefit	30.00%	$3,203.40	
General & Administrative	54.00%	$5,766.12	
	209.00%		
		TOTAL - Indirect Costs	$22,317.02

FEE	(10.00%)			
			TOTAL - Fee	$3,299.50

OTHER (ALTERNATIVE) DIRECT COSTS			Total	
Centerline Well Monuments if needed	4 @	$2,000.00	$ 8,000.00	NAP
Benchmark RM-128 Preservation/Perpetuation Field	16 @	$95.00	$ 1,520.00	NAP
Benchmark RM-128 Preservation/Perpetuation Office	6	$50.00	$300.00	NAP
			TOTAL COST	$36,294.52

Subcontractor Costs	$ -
Total Contract	$ 36,294.52

Cost Proposal - St. Helena Creek at Wardlaw Street (14C-0035)

Lake County - St. Helena Creek at Wardlaw Street Project (14C-0035)

				Date:	4/20/2015
	Quincy Engineering, Inc.				
	Direct Labor:				$83,237.15
	Escalation for Multi-Year Project (3.0%):				$2,497.11
	Subtotal				$85,734.26
	Overhead (1.639):				$140,509.89
A.	Labor Subtotal				$226,244.15
	Subconsultant Costs:				
	NSR				$98,673.37
	Taber				$63,072.80
	WRECO				$18,072.25
	Conser				$36,294.52
	Bender Roenthal, Inc				$40,685.70
B.	Subconsultant Subtotal				$256,798.64
	Other Direct Costs:				
	Travel	1800	miles @	$0.575	$1,035.00
	Pier Diem/ Hotel		days @	$150.00	$0.00
	Delivery and Printing				$400.00
	Printing: Mylars				
	Vellum				
	81/2 X 11 Reproduction				
	11 X 17 Reproduction				
	Lab Testing				
	Database Report				
	Title Report				
	Survey Prevailing Wage Differential				$0.00
	Mailings (6x)				
C.	Direct Cost Subtotal:				$1,435.00
	Labor Subtotal A. =				$226,244.15
	Fixed Fee (10.0%):				$22,624.42
	Subconsultant Subtotal B. =				$256,798.64
	Fixed Fee (0.0%):				$0.00
	Direct Cost Subtotal: C. =				$1,435.00
	Fixed Fee (0.0%):				$0.00
	TOTAL =				**$507,102.21**
				USE	**$507,110.00**

Note: Invoices will be based upon actual QEI hourly rates plus overhead at 163.89% plus prorated portion of fixed fee. Subconsultant and Direct Costs will be billed at actual cost.

QUINCY ENGINEERING

Cost Proposal - St. Helena Creek at Wardlaw Street (14C-0035)

Project Name: Lake County - St. Helena Creek at Wardlaw Street Project (14C-0035)

	No.	TASKS		Project Manager	Project Engineer (Bridge)	Project Engineer (Road)	Senior Engineer - QA/QC/Const Review	Design Engineer (Bridge)	Design Engineer (Bridge)	Design Engineer (Bridge)	Design Engineer (Road)	Senior Engineer - SSPs	Design Engineer (Road)	Design Engineer (Road)	Quincy Total Hours	Quincy Total Labor Dollars	Quincy Total Labor Dollars	Quincy Labor	Quincy Profit	Quincy NLF Budget	NSR	Taber	WRECO	Conser	Bender Rosenthal, Inc	Subconsultant Subtotal
				MR	DM	JJ	GY	Mka	RF	SMc	Rga	KG	CP	ME		Direct Labor	Escalation Multiplier	Labor+OH Multiplier	Profit Multiplier	Actual Labor Multiplier						
		Initial Hourly Rate		$74.37	$51.87	$66.00	$58.06	$49.85	$45.88	$48.81	$48.34	$61.44	$40.38	$39.81			3.0%	2.639	10%	2.903						
TASK 1 - Project Initiation	1.1	Kick-Off Meeting		4	4	4									12	$769	$792	$2,090	$209.01	$2,299			$743			$743
	1.2	Field Review		4	4	4									12	$769	$792	$2,090	$209.01	$2,299			$866			$866
	1.3	Scope Verification		4	4										8	$505	$520	$1,373	$137.25	$1,510						$0
	1.4	Establish Project Schedule		2	16										18	$979	$1,008	$2,660	$266.01	$2,926						$0
TASK 2 - Project Management	2.1	Project Management		64	16										80	$5,590	$5,757	$15,193	$1,519.29	$16,712	$5,918					$5,918
	2.2	Progress Meetings		16	16			8							40	$2,419	$2,491	$6,574	$657.40	$7,231			$1,060			$1,060
	2.3	Assist the County with State Administration Requirements		3	24										27	$1,468	$1,512	$3,990	$399.01	$4,389						$0
TASK 3 - Preliminary Engineering	3.1	Surveys and Mapping			4	8									12	$735	$758	$1,999	$199.91	$2,199				$36,295		$36,295
	3.2	Geotechnical Investigations			8										8	$415	$427	$1,128	$112.79	$1,241		$36,603				$36,603
	3.3	Hydrologic/Hydraulic Studies			8	2									10	$547	$563	$1,487	$148.67	$1,635			$10,920			$10,920
	3.4	Advance Planning Studies			16			24					16		56	$2,672	$2,753	$7,264	$726.38	$7,990						$0
	3.5	Preliminary Plans				16					24		24		64	$3,185	$3,281	$8,658	$865.78	$9,524						$0
	3.5	Project Report/Type Selection Memo			16	16		40			24				96	$5,040	$5,191	$13,699	$1,369.93	$15,069						$0
TASK 4 - Environmental Studies	4.1	Prepare Project Description and APE Map		2	8	8					8				26	$1,478	$1,523	$4,018	$401.84	$4,420	$4,971					$4,971
	4.2	NEPA/CEQA Technical Studies		12	24	24									60	$3,721	$3,833	$10,115	$1,011.48	$11,126	$70,972					$70,972
	4.3	NESHAP Compliance			2										2	$104	$107	$282	$28.20	$310		$1,295				$1,295
TASK 5 - Final Design Engineering	5.1	Bridge Design			24			120							144	$7,227	$7,444	$19,643	$1,964.31	$21,607			$3,483			$3,483
		Roadway Design				24					80				104	$5,451	$5,615	$14,817	$1,481.67	$16,298						$0
	5.2	Prepare Design Exception Fact Sheets													0	$0	$0	$0	$0.00	$0						$0
		Plan Preparation											240		240	$9,691	$9,982	$26,341	$2,634.13	$28,975						$0
		Submittal of 65% Plans		8	8	8		8			8				40	$2,323	$2,393	$6,315	$631.53	$6,947						$0
		Independent Design Checks			8	8				60				40	116	$5,464	$5,628	$14,851	$1,485.14	$16,337						$0
	5.3	Technical Specifications										32			32	$1,966	$2,025	$5,344	$534.39	$5,878						$0
		Final Construction Quantities & Estimate			8	4		24		24	16			8	84	$4,139	$4,263	$11,249	$1,124.93	$12,374						$0
		QA/QC					24								24	$1,393	$1,435	$3,787	$378.75	$4,166						$0
		Submittal of 90% PS&E		8	8	8		8			8				40	$2,323	$2,393	$6,315	$631.53	$6,947						$0
		Submittal of 100% PS&E		4	4	4		4			4				20	$1,162	$1,197	$3,158	$315.76	$3,473						$0
TASK 6 - Permits	6.1	Environmental Permits		2	2	4									8	$516	$532	$1,404	$140.38	$1,544	$11,297					$11,297
	6.2	Caltrans Encroachment Permit Application													0	$0	$0	$0	$0.00	$0						$0
TASK 7 - Right of Way Services	7.1	Surveying													0	$0	$0	$0	$0.00	$0						$0
	7.2	Right of Way Appraisals		2		4									6	$413	$425	$1,122	$112.19	$1,234					$14,230	$14,230
	7.3	Right of Way Acquisition		2		4									6	$413	$425	$1,122	$112.19	$1,234					$20,120	$20,120
	7.4	Right of Way Certification													0	$0	$0	$0	$0.00	$0						$0
TASK 8 - Utilities	8	Utility Relocation		8	4	24					24				60	$3,547	$3,653	$9,640	$963.99	$10,604						$0
TASK 9 - Bidding Assistance	9	Bidding Assistance		8	4	4									16	$1,066	$1,098	$2,899	$289.87	$3,189						$0
TASK 10 - Construction Support	10	Construction Support		4	16	16		40			16				92	$4,951	$5,099	$13,457	$1,345.67	$14,802						$0
TASK 11 - As-builts	11	Prepare Record (As-Built) Drawings		2									16		18	$795	$819	$2,160	$216.04	$2,376						$0
		Subtotal- Hours		159	256	194	24	276	0	84	212	32	296	48	1581											0
		Other Direct Costs																			$1,435	$5,515	$25,175	$1,000	$0	$6,336	38,026
		Total Cost		$11,825	$13,279	$12,804	$1,393	$13,759	$0	$4,100	$10,248	$1,966	$11,952	$1,911	$83,237	$83,237	$85,734	$226,244	$22,624	$250,304	$98,673	$63,073	$18,072	$36,295	$40,686	$256,799

Cost Proposal - St. Helena Creek at Wardlaw Street (14C-0035)

Exhibit 10-H Cost Proposal

Cost Proposal

Contract No. Lake County - St. Helena Creek at Wardlaw Street Project (14C-0035)

Consultant Quincy Engineering, Inc.

Date 4/20/2015

DIRECT LABOR

1.6389 Classification/Title	Name	Initials	Range	Hours	Actual Hourly	Total
Principal Eng.	Mark Reno	MR	$62-$84	159	$74.37	$ 11,824.83
Senior Eng.	Danny Mossman	DM	$46-$75	256	$51.87	$ 13,278.72
Senior Eng.	Jason Jurrens	JJ	$46-$75	194	$66.00	$ 12,804.00
Senior Eng.	Greg Young	GY	$46-$75	24	$58.06	$ 1,393.44
Assoc Eng.	Maxwell Katt	Mka	$33-$60	276	$49.85	$ 13,758.60
Assoc Eng.	Robert Ferguson	RF	$33-$60	0	$45.88	$ -
Assoc Eng.	Scott McCauley	SMc	$33-$60	84	$48.81	$ 4,100.04
Assoc Eng.	Reimond Garcia	Rga	$33-$60	212	$48.34	$ 10,248.08
Senior Eng.	Kelly Gallagher	KG	$46-$75	32	$61.44	$ 1,966.08
Senior Eng Tech	Craig Polglase	CP	$62-$84	296	$40.38	$ 11,952.48
Assoc Eng.	Meggie Elledge	ME	$33-$60	48	$39.81	$ 1,910.88

LABOR COSTS

a)	Subtotal Direct Labor Costs	$83,237.15
b)	Escalation for Multi-Year Project (3.0%):	$2,497.11
c)	TOTAL DIRECT LABOR COSTS [(a) + (b)]	**$85,734.26**

FRINGE BENEFITS

d)	Fringe Benefits (Rate: 38.97%):	$33,410.64
e)	TOTAL FRINGE BENEFITS [(c) x (d)]	**$33,410.64**

INDIRECT COSTS

f)	Overhead (96.58%):	
g)	Overhead [(c) x (f)]	$82,802.15
h)	General Administration Rate (28.34%):	
i)	Gen & Admin [(c) x (h)]	$24,297.09
j)	TOTAL INDIRECT COSTS [(g) + (i)]	**$107,099.24**

FIXED FEE (Profit)

k)	Fixed Fee (10.0%):	
l)	TOTAL PROFIT [(c) + (e) + (j)] x (q)	**$22,624.42**

OTHER DIRECT COSTS (ODC)

m)	Travel/Mileage	$1,035.00
n)	Equipment Rental & Supplies	$400.00
o)	Permit Fees, Plan Sheets, etc	$0.00
p)	Subconsultant Costs (attach detailed cost proposal in same format as prime consultant estimate for each subconsultant)	$256,798.64
q)	**TOTAL OTHER DIRECT COSTS**	**$258,233.64**
r)	**TOTAL COST**	**$507,102.21**

QUINCY ENGINEERING

County of Lake
Three Bridges Project
St. Helena Creek at Wardlaw Street, 14C-0035 (Bridge Replacement)

North State Resources, Inc.

CONTRACT No. BRLO-5914(088)
SUB CONSULTANT: North State Resources, Inc.

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
0	0	0	$0.00	$0.00
W. Lanning	Program Manager 4	114	$53.56	$6,105.84
B. Ludwig	Cultural Resources Specialist 4	22	$42.80	$941.60
M. Roeder	Cultural Resources Specialist 2	120	$21.00	$2,520.00
H. Kelly	Biologist 4	16	$36.80	$588.80
M. Gorman	Biologist 3	2	$28.60	$57.20
P. Kirk	Biologist 3	182	$28.60	$5,205.20
C. Carpenter	Environmental Scientist 3	272	$32.00	$8,704.00
T. Mooney	GIS Analyst 2	42	$24.96	$1,048.32
S. Cantu	Admin Assistant 3	44	$26.08	$1,147.52
B. Weichman	Admin Manager 3	18	$30.68	$552.24
0	0	0	$0.00	$0.00
		832		
		Subtotal Direct Labor Costs		$26,870.72
		Anticipated Salary Increases (3%)		$806.12
			TOTAL - Direct Labor	$27,676.84

INDIRECT COSTS	Rate	Total	
Overhead	89.00%	$24,632.39	
Fringe Benefit	29.00%	$8,026.28	
General & Administrative	29.00%	$8,026.28	
	147.00%		
		TOTAL - Indirect Costs	$40,684.96

FEE	(10.00%)		$6,836.18

OTHER DIRECT COSTS			Total	
Travel Costs	2960 @	$0.56	$ 1,657.60	
Photocopies			$ 2,500.00	
Overnight Service	6 @	$15.00	$ 90.00	
Information Center	1 @	$300	$ 300.00	
				$4,547.60
			TOTAL COST	$79,745.58

Subcontractor Costs	$	-
Total Contract	$	79,745.58

County of Lake
Three Bridges Project
St. Helena Creek at Wardlaw Street, 14C-0035 (Bridge Replacement)

JRP Historical Consulting, LLC

CONTRACT No. BRLO-5914(088) — CONSULTANT COST PROPOSAL
SUB CONSULTANT: JRP Historical Consulting, LLC — April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
Herbert	Principal/Partner	0	$70.59	$0.00
Wee	Principal/Partner	0	$70.59	$0.00
Bunse	Partner	0	$65.45	$0.00
McMorris	Partner	56	$61.58	$3,448.59
Larson, B.	Senior Historian II	0	$48.77	$0.00
Webb	Architectural Historian III	0	$39.40	$0.00
Miltenberger	Senior Historian I	0	$36.40	$0.00
Melvin	Historian II	80	$28.56	$2,284.80
Freeman	Historian II	0	$27.87	$0.00
Norby	Historian II	0	$27.73	$0.00
Brookshear	Architectural Historian II	0	$27.70	$0.00
Larson, K.	Office Manager	4	$25.00	$100.00
Miller, C.	Historian I	0	$23.68	$0.00
Trew	Historian I	0	$21.99	$0.00
Flores	Graphics/GIS Technician I	12	$21.90	$262.85
Miller, H.	Research Assistant II	52	$19.69	$1,023.89
Koontz	Administrative Assistant I	7	$18.03	$126.18
		211		
			Subtotal Direct Labor Costs	$7,246.31
			Anticipated Salary Increases	$144.93
			TOTAL - Direct Labor	$7,391.24

INDIRECT COSTS	Rate	Total
Overhead	30.58%	$2,260.24
Fringe Benefit	49.91%	$3,688.97
General & Administrative	40.42%	$2,987.54
	120.91%	
	TOTAL - Indirect Costs	$8,936.74

FEE	(10.00%)	TOTAL - Fee	$1,632.80

OTHER DIRECT COSTS			Total	
Travel Costs	475 @	$0.56	$ 266.00	
Photocopies	140 @	$0.15	$ 21.00	
Report Production	16 @	$40.00	$ 640.00	
Postage / Shipping	4 @	$10.00	$ 40.00	
				$967.00
		TOTAL COST		$18,927.78

Subcontractor Costs	$	-
Total Contract	$	18,927.78

County of Lake
Three Bridges Project
St. Helena Creek at Wardlaw Street, 14C-0035 (Bridge Replacement)

Taber Consultants

CONTRACT No. BRLO-5914(088)
SUB CONSULTANT: Taber Consultants

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
Eric Nichols	Principal	14	$56.48	$790.72
Ron Loutzenhiser	Project Manager	71	$43.04	$3,055.84
Amand Kahn	Staff Engineer/Geologist	110	$30.93	$3,402.30
Xor Vang	CAD Technician	24	$29.59	$710.16
Ray Downes	Laboratory Technician	50	$29.59	$1,479.50
Alex Taber	Staff Technician	8	$25.55	$204.40
Rosina Florez	Admistrative Assistant	10	$20.18	$201.80
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
		287		
		Subtotal Direct Labor Costs		$9,844.72
		Anticipated Salary Increases		$0.00
			TOTAL - Direct Labor	$9,844.72

INDIRECT COSTS	Rate	Total	
Overhead	38.00%	$3,740.99	
Fringe Benefit	90.00%	$8,860.25	
General & Administrative	110.00%	$10,829.19	
	238.00%		
		TOTAL - Indirect Costs	$23,430.43

FEE	(10.00%)		
		TOTAL - Fee	$3,327.52

OTHER DIRECT COSTS			Total	
Seismic Timer	1 @	$500.00	$ 500.00	
County Encroachment Permit (Fees Waived)	1 @	$0.00	$ -	
County Environmental Health Permit and Inspection Fees	2 @	$500.00	$ 1,000.00	
California Department of Fish and Wildlife Permit Fee	1 @	$800.00	$ 800.00	
Drill Rig and Crew (mob/demob, borings, moves, set-ups, cleanup)	1 @	$20,900.00	$ 20,900.00	
Traffic Control (signs and cones for shoulder closure)	1 @	$500.00	$ 500.00	
Professional Expenses (Field Engineer/Geologist)	4.5 @	$150.00	$ 675.00	
				$24,375.00
			TOTAL COST	$60,977.67

Subcontractor Costs	$	-
Total Contract	$	60,977.67

County of Lake
Three Bridges Project
St. Helena Creek at Wardlaw Street, 14C-0035 (Bridge Replacement)

Taber Consultants

CONTRACT No BRLO-5914(088)
SUB CONSULTANT: Taber Consultants
NESHAP Compliance

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
Eric Nichols	Principal	2	$56.48	$112.96
Ron Loutzenhiser	Project Manager	5	$43.04	$215.20
Amand Kahn	Staff Engineer/Geologist	0	$30.93	$0.00
Xor Vang	CAD Technician	0	$29.59	$0.00
Ray Downes	Laboratory Technician	0	$29.59	$0.00
Rosina Florez	Admistrative Assistant	1	$20.18	$20.18
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
		8		
		Subtotal Direct Labor Costs		$348.34
		Anticipated Salary Increases		$0.00
			TOTAL - Direct Labor	$348.34

INDIRECT COSTS	Rate	Total	
Overhead	38.00%	$132.37	
Fringe Benefit	90.00%	$313.51	
General & Administrative	110.00%	$383.17	
	238.00%		
		TOTAL - Indirect Costs	$829.05

FEE	(10.00%)			TOTAL - Fee	$117.74

OTHER DIRECT COSTS			Total	
Environmental Data Report	0 @	$275.00	$ -	
Analytical Testing (8 Total Lead, 4 diWET Lead Tests)	0 @	$800.00	$ -	
N.A.L. Certified Asbestos Consultant	1 @	$800.00	$ 800.00	
Professional Expenses (Field Engineer/Geologist)	0 @	$150.00	$ -	
				$800.00
			TOTAL COST	$2,095.13

Subcontractor Costs	$	-
Total Contract	$	2,095.13

County of Lake
Three Bridges Project
St. Helena Creek at Wardlaw Street, 14C-0035 (Bridge Replacement)

WRECO

CONTRACT No. BRLO-5914(088)
SUB CONSULTANT: WRECO

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
Han-Bin Liang	Principal Engineer	7	$89.44	$626.08
Analette Ochoa	Supervising Engineer	16	$73.93	$1,182.88
David Mueller	Senior Engineer	28	$50.73	$1,420.44
Kazuya Tsurushita	Associate Engineer	48	$35.43	$1,700.64
PatrickYim	Staff Engineer	62	$27.04	$1,676.48
MeiDu	Technician	2	$28.00	$56.00
Kathryn Stelljes	Clerical/Tech Editor	5	$26.00	$130.00
		168		
			Subtotal Direct Labor Costs	$6,792.52
			Anticipated Salary Increases	$0.00
			TOTAL - Direct Labor	$6,792.52

INDIRECT COSTS	Rate	Total
Overhead	43.97%	$2,986.67
Fringe Benefit	51.20%	$3,477.77
General & Administrative	33.32%	$2,263.27
	128.49%	
	TOTAL - Indirect Costs	$8,727.71

FEE	(10.00%)		TOTAL - Fee	$1,552.02

OTHER DIRECT COSTS			Total
Travel Costs	715 @	$0.56	$ 400.00
Photocopies	16 @	$25.00	$ 400.00
Overnight Service	4 @	$50.00	$ 200.00
			$1,000.00
		TOTAL COST	$18,072.25

Subcontractor Costs	$ -
Total Contract	$ 18,072.25

County of Lake
Three Bridges Project
St. Helena Creek at Wardlaw Street, 14C-0035 (Bridge Replacement)

CONSER LAND SURVEYING

CONTRACT No. BRLO-5914(088)
SUB CONSULTANT: Conser Land Surveying

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
Michael Conser	Principal Admin _ QA/QC	24	$80.00	$1,920.00
Stephen Bellah	Project Surveyor TOPO	34	$35.00	$1,190.00
Stephen Bellah	Project Surveyor ROW	48	$35.00	$1,680.00
Ryan D. (Party Chief)	Field Crew CONTROL	24	$20.00	$480.00
Dustin W. (Party Chief)	Field Crew CONTROL	24	$20.00	$480.00
Blake B. (Rod Person)	Field Crew CONTROL	24	$13.00	$312.00
Ryan D. (Party Chief)	Field Crew TOPO	32	$20.00	$640.00
Dustin W. (Party Chief)	Field Crew TOPO	32	$20.00	$640.00
Blake B. (Rod Person)	Field Crew TOPO	32	$13.00	$416.00
Ryan D. (Party Chief)	Field Crew ROW	40	$20.00	$800.00
Dustin W. (Party Chief)	Field Crew ROW	20	$20.00	$400.00
Blake B. (Rod Person)	Field Crew ROW	40	$13.00	$520.00
Ryan D. (Party Chief)	Field Crew ADDITIONAL	12	$20.00	$240.00
Dustin W. (Party Chief)	Field Crew ADDITIONAL	12	$20.00	$240.00
Dustin Williams	Survey Technician RESEARCH	24	$20.00	$480.00
Hilary Klassen	Office Administrator	12	$20.00	$240.00
		434		
			Subtotal Direct Labor Costs	$10,678.00
			Anticipated Salary Increases	$0.00
			TOTAL - Direct Labor	$10,678.00

INDIRECT COSTS	Rate	Total	
Overhead	125.00%	$13,347.50	
Fringe Benefit	30.00%	$3,203.40	
General & Administrative	54.00%	$5,766.12	
	209.00%		
		TOTAL - Indirect Costs	$22,317.02

FEE	(10.00%)	TOTAL - Fee	$3,299.50

OTHER (ALTERNATIVE) DIRECT COSTS			Total	
Centerline Well Monuments if needed	4 @	$2,000.00	$ 8,000.00	NAP
Benchmark RM-128 Preservation/Perpetuation Field	16 @	$95.00	$ 1,520.00	NAP
Benchmark RM-128 Preservation/Perpetuation Office	6	$50.00	$300.00	NAP
			TOTAL COST	$36,294.52

Subcontractor Costs	$	-
Total Contract	$	36,294.52

County of Lake
Three Bridges Project
St. Helena Creek at Wardlaw Street, 14C-0035 (Bridge Replacement)

Bender Rosenthal Inc.

CONTRACT No. BRLO-5914(088)
SUB CONSULTANT: Bender Rosenthal Inc.

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
0	0	0	$0.00	$0.00
Mike Lahodny	Senior Appraiser	16	$60.00	$960.00
Tom Ganyon	Senior Right of Way Specialist	124	$65.00	$8,060.00
TBD	Researcher	14	$25.00	$350.00
Alyssa Aldal	Project Coordinator	20	$25.00	$500.00
TBD	Appraiser	100	$50.00	$5,000.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
Staff	Admin	0	$0.00	$0.00
		274		
		Subtotal Direct Labor Costs		$14,870.00
		Anticipated Salary Increases		$0.00
			TOTAL - Direct Labor	$14,870.00

INDIRECT COSTS	Rate	Total	
Overhead	110.00%	$16,357.00	
Fringe Benefit (Included in OH)	0.00%		
General & Administrative (Included in OH)	0.00%		
	110.00%	TOTAL - Indirect Costs	$16,357.00

FEE	(10.00%)	TOTAL - Fee	$3,122.70

OTHER DIRECT COSTS			Total	
Independent Review Appraisal	4 @	$1,500	$ 6,000.00	
Travel Costs	600 @	$0.56	$ 336.00	
Photocopies			$ -	
Overnight Service	0 @	$15.00	$ -	
Preliminary Title Reports	0 @	750	$ -	
				$6,336.00
			TOTAL COST	$40,685.70

Subcontractor Costs	$	-
Total Contract	$	40,685.70

Cost Proposal - Cooper Creek at Witter Springs Road (14C-0102) - PHASE 1

Lake County - Cooper Creek at Witter Springs Road Project (14C-0102) - PHASE 1

PHASE 1

Date: 4/20/2015

	Quincy Engineering, Inc.				
	Direct Labor:				$18,472.02
	Escalation for Multi-Year Project (3.0%):				$554.16
	Subtotal				$19,026.18
	Overhead (1.639):				$31,182.01
A.	Labor Subtotal				$50,208.19
	Subconsultant Costs:				
	NSR				$10,151.75
	Taber				$5,520.42
	WRECO				$13,529.52
	Conser				$22,396.01
	Bender Roenthal, Inc				$0.00
B.	Subconsultant Subtotal				$51,597.70
	Other Direct Costs:				
	Travel	1800	miles @	$0.575	$1,035.00
	Pier Diem/ Hotel		days @	$150.00	$0.00
	Delivery and Printing				$200.00
	Delivery				
	Printing: Mylars				
	Vellum				
	81/2 X 11 Reproduction				
	11 X 17 Reproduction				
	Lab Testing				
	Database Report				
	Title Report				
	Survey Prevailing Wage Differential				$0.00
	Mailings (6x)				
C.	Direct Cost Subtotal:				$1,235.00
	Labor Subtotal A. =				$50,208.19
	Fixed Fee (10.0%):				$5,020.82
	Subconsultant Subtotal B. =				$51,597.70
	Fixed Fee (0.0%):				$0.00
	Direct Cost Subtotal: C. =				$1,235.00
	Fixed Fee (0.0%):				$0.00
	TOTAL =				**$108,061.71**
				SAY	**$108,070.00**

Note: Invoices will be based upon actual QEI hourly rates plus overhead at 163.89% plus prorated portion of fixed fee. Subconsultant and Direct Costs will be billed at actual cost.

Cost Proposal - Cooper Creek at Witter Springs Road (14C-0102) - PHASE 1

Project Name: Lake County - Cooper Creek at Witter Springs Road Project (14C-0102) - PHASE 1

	No.	TASKS		Project Manager	Project Engineer (Bridge)	Project Engineer (Road)	Senior Engineer - QA/QC/Const Review	Design Engineer (Bridge)	Design Engineer (Bridge)	Design Engineer (Bridge)	Design Engineer (Road)	Senior Engineer - SSPa	Design Engineer (Road)	Design Engineer (Road)	Quincy Total Hours	Quincy Total Labor Dollars	Quincy Total Labor Dollars	Quincy Labor	Quincy Profit	Quincy NLF Budget	NSR	Tabler	WRECO	Contser	Bender Rosenthal, Inc	Subconsultant Subtotal
				MR	DM	JJ	GY	Mka	RF	SMc	Rga	KG	CP	ME		Direct Labor	Escalation Multiplier	Labor+OH Multiplier	Profit Multiplier	Actual Labor Multiplier						
		Initial Hourly Rate		$74.37	$51.87	$66.00	$58.06	$49.85	$45.88	$48.81	$48.34	$61.44	$40.38	$39.81			3.0%	2.639	10%	2.903						
TASK 1 - Project Initiation	1.1	Kick-Off Meeting		4	4	4									12	$769	$792	$2,090	$209.01	$2,299			$743			$743
	1.2	Field Review		4	4	4									12	$769	$792	$2,090	$209.01	$2,299			$866			$866
	1.3	Scope Verification		4	4										8	$505	$520	$1,373	$137.25	$1,510						$0
	1.4	Establish Project Schedule		8	24										32	$1,840	$1,895	$5,001	$500.08	$5,501						$0
TASK 2 - Project Management	2.1	Project Management		4											4	$297	$306	$809	$80.86	$889	$5,918					$5,918
	2.2	Progress Meetings													0	$0	$0	$0	$0.00	$0						$0
	2.3	Assist the County with State Administration Requirements		8	24										32	$1,840	$1,895	$5,001	$500.08	$5,501						$0
TASK 3 - Preliminary Engineering	3.1	Surveys and Mapping			4	8									12	$735	$758	$1,999	$199.91	$2,199				$22,396		$22,396
	3.2	Geotechnical Investigations			4										4	$207	$214	$564	$56.39	$620		$5,520				$5,520
	3.3	Hydrologic/Hydraulic Studies			8	2									10	$547	$563	$1,487	$148.67	$1,635			$10,920			$10,920
	3.4	Advance Planning Studies			16				24				16		56	$2,577	$2,654	$7,005	$700.48	$7,705						$0
	3.5	Preliminary Plans				16							24	24	64	$2,981	$3,070	$8,101	$810.14	$8,911						$0
	3.6	Project Report/Type Selection Report			16	8		36			24				84	$4,313	$4,442	$11,722	$1,172.22	$12,894						$0
TASK 4 - Environmental Studies	4.1	Prepare Project Description and APE Map		2	8	8									18	$1,092	$1,124	$2,967	$296.73	$3,264	$4,026					$4,026
	4.2	NEPA/CEQA Technical Studies													0	$0	$0	$0	$0.00	$0						$0
	4.3	NESHAP Compliance													0	$0	$0	$0	$0.00	$0						$0
TASK 5 - Final Design Engineering	5.1	Bridge Design													0	$0	$0	$0	$0.00	$0						$0
		Roadway Design													0	$0	$0	$0	$0.00	$0						$0
	5.2	Prepare Design Exception Fact Sheets													0	$0	$0	$0	$0.00	$0						$0
		Plan Preparation													0	$0	$0	$0	$0.00	$0						$0
		Submittal of 65% Plans													0	$0	$0	$0	$0.00	$0						$0
		Independent Design Checks													0	$0	$0	$0	$0.00	$0						$0
	5.3	Technical Specifications													0	$0	$0	$0	$0.00	$0						$0
		Final Construction Quantities & Estimate													0	$0	$0	$0	$0.00	$0						$0
		QA/QC													0	$0	$0	$0	$0.00	$0						$0
		Submittal of 90% PS&E													0	$0	$0	$0	$0.00	$0						$0
		Submittal of 100% PS&E													0	$0	$0	$0	$0.00	$0						$0
TASK 6 - Permits	6.1	Environmental Permits													0	$0	$0	$0	$0.00	$0						$0
	6.2	Caltrans Encroachment Permit Application													0	$0	$0	$0	$0.00	$0						$0
TASK 7 - Right of Way Services	7.1	Surveying													0	$0	$0	$0	$0.00	$0						$0
	7.2	Right of Way Appraisals													0	$0	$0	$0	$0.00	$0						$0
	7.3	Right of Way Acquisition													0	$0	$0	$0	$0.00	$0						$0
	7.4	Right of Way Certification													0	$0	$0	$0	$0.00	$0						$0
TASK 8 - Utilities	8	Utility Relocation													0	$0	$0	$0	$0.00	$0						$0
TASK 9 - Bidding Assistance	9	Bidding Assistance													0	$0	$0	$0	$0.00	$0						$0
TASK 10 - Construction Support	10	Construction Support													0	$0	$0	$0	$0.00	$0						$0
TASK 11 - As-builts	11	Prepare Record (As-Built) Drawings													0	$0	$0	$0	$0.00	$0						$0
		Subtotal- Hours		34	116	50	0	36	24	0	24	0	40	24	348											0
		Other Direct Costs																		$1,235	$205	$0	$1,000	$0	$0	1,205
		Total Cost		$2,529	$6,017	$3,300	$0	$1,795	$1,101	$0	$1,160	$0	$1,615	$955	$18,472	$18,472	$19,026	$50,208	$5,021	$56,464	$10,152	$5,520	$13,530	$22,396	$0	$51,598

QUINCY ENGINEERING

Exhibit 10-H Cost Proposal

Cost Proposal

Contract No. Lake County - Cooper Creek at Witter Springs Road Project (14C-0102) - PHASE 1

Consultant **Quincy Engineering, Inc.**

Date 4/20/2015

DIRECT LABOR

Classification/Title	Name	Initials	Range	Hours	Actual Hourly	Total
Principal Eng.	Mark Reno	MR	$62-$84	34	$74.37	$ 2,528.58
Senior Eng.	Danny Mossman	DM	$46-$75	116	$51.87	$ 6,016.92
Senior Eng.	Jason Jurrens	JJ	$46-$75	50	$66.00	$ 3,300.00
Senior Eng.	Greg Young	GY	$46-$75	0	$58.06	$ -
Assoc Eng.	Maxwell Katt	Mka	$33-$60	36	$49.85	$ 1,794.60
Assoc Eng.	Robert Ferguson	RF	$33-$60	24	$45.88	$ 1,101.12
Assoc Eng.	Scott McCauley	SMc	$33-$60	0	$48.81	$ -
Assoc Eng.	Reimond Garcia	Rga	$33-$60	24	$48.34	$ 1,160.16
Senior Eng.	Kelly Gallagher	KG	$46-$75	0	$61.44	$ -
Senior Eng Tech	Craig Polglase	CP	$62-$84	40	$40.38	$ 1,615.20
Assoc Eng.	Meggie Elledge	ME	$33-$60	24	$39.81	$ 955.44

LABOR COSTS

a)	Subtotal Direct Labor Costs	$18,472.02
b)	Escalation for Multi-Year Project (3.0%):	$554.16
c)	TOTAL DIRECT LABOR COSTS [(a) + (b)]	**$19,026.18**

FRINGE BENEFITS

d)	Fringe Benefits (Rate: 38.97%):	$7,414.50
e)	TOTAL FRINGE BENEFITS [(c) x (d)]	**$7,414.50**

INDIRECT COSTS

f)	Overhead (96.58%):	
g)	Overhead [(c) x (f)]	$18,375.49
h)	General Administration Rate (28.34%):	
i)	Gen & Admin [(c) x (h)]	$5,392.02
j)	TOTAL INDIRECT COSTS [(g) + (i)]	**$23,767.50**

FIXED FEE (Profit)

k)	Fixed Fee (10.0%):	
l)	TOTAL PROFIT [(c) + (e) + (j)] x (q)	**$5,020.82**

OTHER DIRECT COSTS (ODC)

m)	Travel/Mileage	$1,035.00
n)	Equipment Rental & Supplies	$200.00
o)	Permit Fees, Plan Sheets, etc	$0.00
p)	Subconsultant Costs (attach detailed cost proposal in same format as prime consultant estimate for each subconsultant)	$51,597.70
q)	**TOTAL OTHER DIRECT COSTS**	**$52,832.70**
r)	**TOTAL COST**	**$108,061.71**

County of Lake
Three Bridges Project
Cooper Creek at Witter Springs Road, 14C-0102 (Bridge Rehabilitation) - PHASE 1

North State Resources, Inc.

CONTRACT No. BRLO-5914(090)
SUB CONSULTANT: North State Resources, Inc.

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
0	0	0	$0.00	$0.00
W. Lanning	Program Manager 4	44	$53.56	$2,356.64
B. Ludwig	Cultural Resources Specialist 4	0	$42.80	$0.00
M. Roeder	Cultural Resources Specialist 2	0	$21.00	$0.00
H. Kelly	Biologist 4	0	$36.80	$0.00
M. Gorman	Biologist 3	0	$28.60	$0.00
P. Kirk	Biologist 3	0	$28.60	$0.00
C. Carpenter	Environmental Scientist 3	24	$32.00	$768.00
T. Mooney	GIS Analyst 2	0	$24.96	$0.00
S. Cantu	Admin Assistant 3	0	$26.08	$0.00
B. Weichman	Admin Manager 3	14	$30.68	$429.52
0	0	0	$0.00	$0.00
		82		
		Subtotal Direct Labor Costs		$3,554.16
		Anticipated Salary Increases (3%)		$106.62
			TOTAL - Direct Labor	$3,660.78

INDIRECT COSTS	Rate	Total
Overhead	89.00%	$3,258.10
Fringe Benefit	29.00%	$1,061.63
General & Administrative	29.00%	$1,061.63
	147.00%	
	TOTAL - Indirect Costs	$5,381.35

FEE	(10.00%)	TOTAL - Fee	$904.21

OTHER DIRECT COSTS			Total	
Travel Costs	340 @	$0.56	$ 190.40	
Photocopies			$ -	
Overnight Service	1 @	$15.00	$ 15.00	
Information Center	@	$300.00	$ -	
				$205.40
			TOTAL COST	$10,151.75
Subcontractor Costs			$ -	
Total Contract			$ 10,151.75	

County of Lake
Three Bridges Project
Cooper Creek at Witter Springs Road, 14C-0102 (Bridge Rehabilitation) - PHASE 1

Taber Consultants

CONTRACT No. BRLO-5914(090)
SUB CONSULTANT: Taber Consultants

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
Eric Nichols	Principal	8	$56.48	$451.84
Ron Loutzenhiser	Project Manager	16	$43.04	$688.64
Amand Kahn	Staff Engineer/Geologist	6	$30.93	$185.58
Xor Vang	CAD Technician	4	$29.59	$118.36
Ray Downes	Laboratory Technician	0	$29.59	$0.00
Rosina Florez	Admistrative Assistant	2	$20.18	$40.36
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
		36		
		Subtotal Direct Labor Costs		$1,484.78
		Anticipated Salary Increases		$0.00
			TOTAL - Direct Labor	$1,484.78

INDIRECT COSTS	Rate	Total	
Overhead	38.00%	$564.22	
Fringe Benefit	90.00%	$1,336.30	
General & Administrative	110.00%	$1,633.26	
	238.00%		
		TOTAL - Indirect Costs	$3,533.78

FEE	(10.00%)		$501.86

OTHER DIRECT COSTS			Total	
County Encroachment Permit (Fees Waived)	1 @	$0.00	$ -	
County Environmental Health Permit and Inspection Fees	0 @	$500.00	$ -	
DBE Drill Rig and Crew (mob/demob, borings, moves, set-ups, cleanup)	0 @	$10,872.00	$ -	
Traffic Control (signs and cones for road closure)	0 @	$800.00	$ -	
Professional Expenses (Field Engineer/Geologist)	0 @	$150.00	$ -	
				$0.00
			TOTAL COST	$5,520.42

Subcontractor Costs	$	-
Total Contract	$	5,520.42

County of Lake
Three Bridges Project
Cooper Creek at Witter Springs Road, 14C-0102 (Bridge Rehabilitation) - PHASE 1

WRECO

CONTRACT No. BRLO-5914(090)
SUB CONSULTANT: WRECO

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
Han-Bin Liang	Principal Engineer	5	$89.44	$447.20
Analette Ochoca	Supervising Engineer	12	$73.93	$887.16
David Mueller	Senior Engineer	19	$50.73	$963.87
Kazuya Tsurushita	Associate Engineer	40	$35.43	$1,417.20
PatrickYim	Staff Engineer	42	$27.04	$1,135.68
MeiDu	Technician	2	$28.00	$56.00
Kathryn Stelljes	Clerical/Tech Editor	3	$26.00	$78.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
		123		
		Subtotal Direct Labor Costs		$4,985.11
		Anticipated Salary Increases		$0.00
			TOTAL - Direct Labor	$4,985.11

INDIRECT COSTS	Rate	Total
Overhead	43.97%	$2,191.95
Fringe Benefit	51.20%	$2,552.38
General & Administrative	33.32%	$1,661.04
	128.49%	
	TOTAL - Indirect Costs	$6,405.37

FEE	(10.00%)	TOTAL - Fee	$1,139.05

OTHER DIRECT COSTS			Total
Travel Costs	715 @	$0.56	$ 400.00
Photocopies	16 @	$25.00	$ 400.00
Overnight Service	4 @	$50.00	$ 200.00
			$1,000.00
		TOTAL COST	$13,529.53

Subcontractor Costs	$ -
Total Contract	$ 13,529.53

County of Lake
Three Bridges Project
Cooper Creek at Witter Springs Road, 14C-0102 (Bridge Rehabilitation) - PHASE 1

CONSER LAND SURVEYING

CONTRACT No. BRLO-5914(090)
SUB CONSULTANT: Conser Land Surveying

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
Michael Conser	Principal Admin _ QA/QC	20	$80.00	$1,600.00
Stephen Bellah	Project Surveyor TOPO	16	$35.00	$560.00
Stephen Bellah	Project Surveyor ROW	36	$35.00	$1,260.00
Ryan D. (Party Chief)	Field Crew CONTROL	12	$20.00	$240.00
Dustin W. (Party Chief)	Field Crew CONTROL	12	$20.00	$240.00
Blake B.. (Rod person)	Field Crew CONTROL	12	$13.00	$156.00
Ryan D. (Party Chief)	Field Crew X-SECT / TOPO	16	$20.00	$320.00
Dustin W. (Party Chief)	Field Crew X-SECT / TOPO	16	$20.00	$320.00
Blake B. (Rod Person)	Field Crew X-SECT / TOPO	16	$13.00	$208.00
Ryan D. (Party Chief)	Field Crew ROW	20	$20.00	$400.00
Dustin W. (Party Chief)	Field Crew ROW	20	$20.00	$400.00
Blake B. (Rod Person)	Field Crew ROW	20	$13.00	$260.00
Ryan D. (Party Chief)	Field Crew ADDITIONAL	5	$20.00	$100.00
Dustin W. (Party Chief)	Field Crew ADDITIONAL	5	$20.00	$100.00
Blake B. (Rod Person)	Field Crew ADDITIONAL	5	$13.00	$65.00
Dustin Williams	Survey Technician RESEARCH	10	$20.00	$200.00
Hilary Klassen	Office Administrator	8	$20.00	$160.00
		249		
			Subtotal Direct Labor Costs	$6,589.00
			Anticipated Salary Increases	$0.00
			TOTAL - Direct Labor	$6,589.00

INDIRECT COSTS	Rate	Total	
Overhead	125.00%	$8,236.25	
Fringe Benefit	30.00%	$1,976.70	
General & Administrative	54.00%	$3,558.06	
	209.00%		
		TOTAL - Indirect Costs	$13,771.01

FEE	(10.00%)	TOTAL - Fee	$2,036.00

OTHER (ALTERNATIVE) DIRECT COSTS			Total	
Centerline Well Monuments if needed	2 @	$2,000.00	$ 4,000.00	NAP
		TOTAL COST		$22,396.01

Subcontractor Costs	$ -
Total Contract	$ 22,396.01

Cost Proposal - Cooper Creek at Witter Springs Road (14C-0102)

Lake County - Cooper Creek at Witter Springs Road Project (14C-0102)

				Date:	4/20/2015
	Quincy Engineering, Inc.				
	Direct Labor:				$60,475.48
	Escalation for Multi-Year Project (3.0%):				$1,814.26
	Subtotal				$62,289.74
	Overhead (1.639):				$102,086.66
A.	Labor Subtotal				$164,376.41
	Subconsultant Costs:				
	NSR				$70,797.23
	Taber				$43,214.59
	WRECO				$18,072.25
	Conser				$22,396.01
	Bender Roenthal, Inc				$40,685.70
B.	Subconsultant Subtotal				$195,165.78
	Other Direct Costs:				
	Travel	1800	miles @	$0.575	$1,035.00
	Pier Diem/ Hotel		days @	$150.00	$0.00
	Delivery and Printing				$200.00
	Delivery				
	Printing: Mylars				
	Vellum				
	81/2 X 11 Reproduction				
	11 X 17 Reproduction				
	Lab Testing				
	Database Report				
	Title Report				
	Survey Prevailing Wage Differential				$0.00
	Mailings (6x)				
C.	Direct Cost Subtotal:				$1,235.00
	Labor Subtotal A. =				$164,376.41
	Fixed Fee (10.0%):				$16,437.64
	Subconsultant Subtotal B. =				$195,165.78
	Fixed Fee (0.0%):				$0.00
	Direct Cost Subtotal: C. =				$1,235.00
	Fixed Fee (0.0%):				$0.00
	TOTAL =				**$377,214.83**
				USE	**$377,220.00**

Note: Invoices will be based upon actual QEI hourly rates plus overhead at 163.89% plus prorated portion of fixed fee. Subconsultant and Direct Costs will be billed at actual cost.

QUINCY ENGINEERING

Cost Proposal - Cooper Creek at Witter Springs Road (14C-0102)

Project Name: Lake County - Cooper Creek at Witter Springs Road Project (14C-0102)

	No.	TASKS		Project Manager MR	Project Engineer (Bridge) DM	Project Engineer (Road) JJ	Senior Engineer QA/QC/Const Review GY	Design Engineer (Bridge) Mka	Design Engineer (Bridge) RF	Design Engineer (Bridge) SMc	Design Engineer (Road) Rga	Senior Engineer - SSPs KG	Design Engineer (Road) CP	Design Engineer (Road) ME	Quincy Total Hours	Quincy Total Labor Dollars Direct Labor	Quincy Total Labor Dollars Escalation Multiplier	Quincy Labor Labor+OH Multiplier	Quincy Profit Profit Multiplier	Quincy NLF Budget Actual Labor Multiplier	NSR	Taber	WRECO	Cornerstone	Bender Rosenthal, Inc	Subconsultant Subtotal
		Initial Hourly Rate		$74.37	$51.67	$66.00	$58.06	$49.85	$45.88	$46.61	$48.34	$61.44	$40.38	$39.81			3.0%	2.639	10%	2.903						
TASK 1 - Project Initiation	1.1	Kick-Off Meeting		4	4	4									12	$769	$792	$2,090	$209.01	$2,299			$743			$743
	1.2	Field Review		4	4	4									12	$769	$792	$2,090	$209.01	$2,299			$866			$866
	1.3	Scope Verification		4	4										8	$505	$520	$1,373	$137.25	$1,510						$0
	1.4	Establish Project Schedule		8	24										32	$1,840	$1,895	$5,001	$500.08	$5,501						$0
TASK 2 - Project Management	2.1	Project Management		24	16										40	$2,615	$2,693	$7,107	$710.72	$7,818	$5,918					$5,918
	2.2	Progress Meetings		16	16				8						40	$2,387	$2,458	$6,488	$648.77	$7,136			$1,060			$1,060
	2.3	Assist the County with State Administration Requirements		8	24										32	$1,840	$1,895	$5,001	$500.08	$5,501						$0
TASK 3 - Preliminary Engineering	3.1	Surveys and Mapping			4	8									12	$735	$758	$1,999	$199.91	$2,199				$22,396		$22,396
	3.2	Geotechnical Investigations			4										4	$207	$214	$564	$56.39	$620		$28,572				$28,572
	3.3	Hydrologic/Hydraulic Studies			8	2									10	$547	$563	$1,487	$148.67	$1,635			$10,920			$10,920
	3.4	Advance Planning Studies			16				24				16		56	$2,577	$2,654	$7,005	$700.48	$7,705						$0
	3.5	Preliminary Plans				16							24	24	64	$2,981	$3,070	$8,101	$810.14	$8,911						$0
	3.5	Project Report/Type Selection Report			16	8		36			24				84	$4,313	$4,442	$11,722	$1,172.22	$12,894						$0
TASK 4 - Environmental Studies	4.1	Prepare Project Description and APE Map		2	8	8									18	$1,092	$1,124	$2,967	$296.73	$3,264	$4,028					$4,028
	4.2	NEPA/CEQA Technical Studies		4	16	16									36	$2,183	$2,249	$5,935	$593.46	$6,528	$45,904					$45,904
	4.3	NESHAP Compliance			2										2	$104	$107	$282	$28.20	$310		$1,295				$1,295
TASK 5 - Final Design Engineering	5.1	Bridge Design			8				80						88	$4,085	$4,208	$11,104	$1,110.43	$12,215			$3,483			$3,483
		Roadway Design				8								40	48	$2,120	$2,184	$5,763	$576.34	$6,340						$0
	5.2	Prepare Design Exception Fact Sheets													0	$0	$0	$0	$0.00	$0						$0
		Plan Preparation											120		120	$4,846	$4,991	$13,171	$1,317.07	$14,488						$0
		Submittal of 65% Plans		4	8	8			8					8	36	$1,926	$1,984	$5,235	$523.49	$5,758						$0
		Independent Design Checks			8	8				40	24				80	$4,056	$4,177	$11,023	$1,102.32	$12,125						$0
	5.3	Technical Specifications										40			40	$2,458	$2,531	$6,680	$667.99	$7,348						$0
		Final Construction Quantities & Estimate			8	4			16	16	8			8	60	$2,899	$2,986	$7,880	$788.02	$8,668						$0
		QA/QC					16								16	$929	$957	$2,525	$252.50	$2,777						$0
		Submittal of 90% PS&E		4	8	8			8					8	36	$1,926	$1,984	$5,235	$523.49	$5,758						$0
		Submittal of 100% PS&E		4	4	4			4					4	20	$1,112	$1,145	$3,022	$302.17	$3,324						$0
TASK 6 - Permits	6.1	Environmental Permits		8	8	16									32	$2,066	$2,128	$5,615	$561.53	$6,177	$11,297					$11,297
	6.2	Caltrans Encroachment Permit Application													0	$0	$0	$0	$0.00	$0						$0
TASK 7 - Right of Way Services	7.1	Surveying													0	$0	$0	$0	$0.00	$0						$0
	7.2	Right of Way Appraisals		2		4									6	$413	$425	$1,122	$112.19	$1,234					$14,230	$14,230
	7.3	Right of Way Acquisition		2		4									6	$413	$425	$1,122	$112.19	$1,234					$20,120	$20,120
	7.4	Right of Way Certification													0	$0	$0	$0	$0.00	$0						$0
TASK 8 - Utilities	8	Utility Relocation		4	2	8								16	30	$1,566	$1,613	$4,257	$425.70	$4,683						$0
TASK 9 - Bidding Assistance	9	Bidding Assistance		8	4	4									16	$1,066	$1,098	$2,899	$289.87	$3,189						$0
TASK 10 - Construction Support	10	Construction Support		4	8	8			24					8	52	$2,660	$2,740	$7,230	$723.02	$7,953						$0
TASK 11 - As-builts	11	Prepare Record (As-Built) Drawings		2									8		10	$472	$486	$1,282	$128.23	$1,411						$0
		Subtotal- Hours		116	232	150	16	36	172	56	56	40	168	116	1158											0
		Other Direct Costs																			$1,235	$3,650	$13,347	$1,000	$0	$6,336	24,333
		Total Cost		$8,627	$12,034	$9,900	$929	$1,795	$7,891	$2,733	$2,707	$2,458	$6,784	$4,618	$60,475	$60,475	$62,290	$164,376	$16,438	$182,049	$70,797	$43,215	$18,072	$22,396	$40,686	$195,166

QUINCY ENGINEERING

Exhibit 10-H Cost Proposal

Cost Proposal

Contract No. Lake County - Cooper Creek at Witter Springs Road Project (14C-0102)

Consultant Quincy Engineering, Inc.

Date 4/20/2015

DIRECT LABOR

Classification/Title	Name	Initials	Range	Hours	Actual Hourly	Total
Principal Eng.	Mark Reno	MR	$62-$84	116	$74.37	$ 8,626.92
Senior Eng.	Danny Mossman	DM	54.36	232	$51.87	$ 12,033.84
Senior Eng.	Jason Jurrens	JJ	$46-$75	150	$66.00	$ 9,900.00
Senior Eng.	Greg Young	GY	$46-$75	16	$58.06	$ 928.96
Assoc Eng.	Maxwell Katt	Mka	$33-$60	36	$49.85	$ 1,794.60
Assoc Eng.	Robert Ferguson	RF	$33-$60	172	$45.88	$ 7,891.36
Assoc Eng.	Scott McCauley	SMc	$33-$60	56	$48.81	$ 2,733.36
Assoc Eng.	Reimond Garcia	Rga	$33-$60	56	$48.34	$ 2,707.04
Senior Eng.	Kelly Gallagher	KG	$46-$75	40	$61.44	$ 2,457.60
Senior Eng Tech	Craig Polglase	CP	$62-$84	168	$40.38	$ 6,783.84
Assoc Eng.	Meggie Elledge	ME	$33-$60	116	$39.81	$ 4,617.96

LABOR COSTS

a)	Subtotal Direct Labor Costs	$60,475.48
b)	Escalation for Multi-Year Project (3.0%):	$1,814.26
c)	TOTAL DIRECT LABOR COSTS [(a) + (b)]	**$62,289.74**

FRINGE BENEFITS

d)	Fringe Benefits (Rate: 38.97%):	$24,274.31
e)	TOTAL FRINGE BENEFITS [(c) x (d)]	**$24,274.31**

INDIRECT COSTS

f)	Overhead (96.58%):	
g)	Overhead [(c) x (f)]	$60,159.44
h)	General Administration Rate (28.34%):	
i)	Gen & Admin [(c) x (h)]	$17,652.91
j)	TOTAL INDIRECT COSTS [(g) + (i)]	**$77,812.35**

FIXED FEE (Profit)

k)	Fixed Fee (10.0%):	
l)	TOTAL PROFIT [(c) + (e) + (j)] x (q)	**$16,437.64**

OTHER DIRECT COSTS (ODC)

m)	Travel/Mileage	$1,035.00
n)	Equipment Rental & Supplies	$200.00
o)	Permit Fees, Plan Sheets, etc	$0.00
p)	Subconsultant Costs (attach detailed cost proposal in same format as prime consultant estimate for each subconsultant)	$195,165.78
q)	**TOTAL OTHER DIRECT COSTS**	**$196,400.78**
r)	**TOTAL COST**	**$377,214.83**

County of Lake
Three Bridges Project
Cooper Creek at Witter Springs Road, 14C-0102 (Bridge Rehabilitation)

North State Resources, Inc.

CONTRACT No. BRLO-5914(090)
SUB CONSULTANT: North State Resources, Inc.

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
0	0	0	$0.00	$0.00
W. Lanning	Program Manager 4	80	$53.56	$4,284.80
B. Ludwig	Cultural Resources Specialist 4	16	$42.80	$684.80
M. Roeder	Cultural Resources Specialist 2	116	$21.00	$2,436.00
H. Kelly	Biologist 4	12	$36.80	$441.60
M. Gorman	Biologist 3	2	$28.60	$57.20
P. Kirk	Biologist 3	140	$28.60	$4,004.00
C. Carpenter	Environmental Scientist 3	192	$32.00	$6,144.00
T. Mooney	GIS Analyst 2	34	$24.96	$848.64
S. Cantu	Admin Assistant 3	36	$26.08	$938.88
B. Weichman	Admin Manager 3	14	$30.68	$429.52
0	0	0	$0.00	$0.00
		642		
		Subtotal Direct Labor Costs		$20,269.44
		Anticipated Salary Increases (3%)		$608.08
			TOTAL - Direct Labor	$20,877.52

INDIRECT COSTS	Rate	Total	
Overhead	89.00%	$18,581.00	
Fringe Benefit	29.00%	$6,054.48	
General & Administrative	29.00%	$6,054.48	
	147.00%		
		TOTAL - Indirect Costs	$30,689.96

FEE	(10.00%)		$5,156.75

OTHER DIRECT COSTS			Total	
Travel Costs	1770 @	$0.56	$ 991.20	
Photocopies			$ 1,750.00	
Overnight Service	4 @	$15.00	$ 60.00	
Information Center	1 @	$300.00	$ 300.00	
				$3,101.20
			TOTAL COST	$59,825.43

Subcontractor Costs	$	-
Total Contract	$	59,825.43

County of Lake
Three Bridges Project
Cooper Creek at Witter Springs Road, 14C-0102 (Bridge Rehabilitation)

JRP Historical Consulting, LLC

CONTRACT No. BRLO-5914(090)
SUB CONSULTANT: JRP Historical Consulting, LLC

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
Herbert	Principal/Partner	0	$70.59	$0.00
Wee	Principal/Partner	0	$70.59	$0.00
Bunse	Partner	0	$65.45	$0.00
McMorris	Partner	24	$61.58	$1,477.97
Larson, B.	Senior Historian II	0	$48.77	$0.00
Webb	Architectural Historian III	0	$39.40	$0.00
Miltenberger	Senior Historian I	0	$36.40	$0.00
Melvin	Historian II	56	$28.56	$1,599.36
Freeman	Historian II	0	$27.87	$0.00
Norby	Historian II	0	$27.73	$0.00
Brookshear	Architectural Historian II	0	$27.70	$0.00
Larson, K.	Office Manager	3	$25.00	$75.00
Miller, C.	Historian I	0	$23.68	$0.00
Trew	Historian I	0	$21.99	$0.00
Flores	Graphics/GIS Technician I	8	$21.90	$175.23
Miller, H.	Research Assistant II	40	$19.69	$787.61
Koontz	Administrative Assistant I	5	$18.03	$90.13
		136		
			Subtotal Direct Labor Costs	$4,205.30
			Anticipated Salary Increases	$84.11
			TOTAL - Direct Labor	$4,289.41

INDIRECT COSTS	Rate	Total	
Overhead	30.58%	$1,311.70	
Fringe Benefit	49.91%	$2,140.84	
General & Administrative	40.42%	$1,733.78	
	120.91%		
		TOTAL - Indirect Costs	$5,186.32

FEE	(10.00%)		$947.57

OTHER DIRECT COSTS			Total	
Travel Costs	325 @	$0.56	$ 182.00	
Photocopies	110 @	$0.15	$ 16.50	
Report Production	8 @	$40.00	$ 320.00	
Postage / Shipping	3 @	$10.00	$ 30.00	
				$548.50
			TOTAL COST	$10,971.80

Subcontractor Costs	$	-
Total Contract	$	10,971.80

County of Lake
Three Bridges Project
Cooper Creek at Witter Springs Road, 14C-0102 (Bridge Rehabilitation)

Taber Consultants

CONTRACT No. BRLO-5914(090) — CONSULTANT COST PROPOSAL
SUB CONSULTANT: Taber Consultants — April 13, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
Eric Nichols	Principal	14	$56.48	$790.72
Ron Loutzenhiser	Project Manager	75	$43.04	$3,228.00
Amand Kahn	Staff Engineer/Geologist	68	$30.93	$2,103.24
Xor Vang	CAD Technician	16	$29.59	$473.44
Ray Downes	Laboratory Technician	30	$29.59	$887.70
Rosina Florez	Admistrative Assistant	10	$20.18	$201.80
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
		213		
		Subtotal Direct Labor Costs		$7,684.90
		Anticipated Salary Increases		$0.00
			TOTAL - Direct Labor	$7,684.90

INDIRECT COSTS	Rate	Total
Overhead	38.00%	$2,920.26
Fringe Benefit (Included in OH)	90.00%	$6,916.41
General & Administrative (Included in OH)	110.00%	$8,453.39
	238.00%	
	TOTAL - Indirect Costs	$18,290.06

FEE	(10.00%)	TOTAL - Fee	$2,597.50

OTHER DIRECT COSTS			Total
County Encroachment Permit (Fees Waived)	1 @	$0.00	$ -
County Environmental Health Permit and Inspection Fees	1 @	$500.00	$ 500.00
DBE Drill Rig and Crew (mob/demob, borings, moves, set-ups, cleanup)	1 @	$10,872.00	$ 10,872.00
Traffic Control (signs and cones for road closure)	1 @	$800.00	$ 800.00
Professional Expenses (Field Engineer/Geologist)	2.5 @	$150.00	$ 375.00
			$12,547.00
		TOTAL COST	$41,119.46

Subcontractor Costs	$ -
Total Contract	$ 41,119.46

County of Lake
Three Bridges Project
Cooper Creek at Witter Springs Road, 14C-0102 (Bridge Rehabilitation)

Taber Consultants

CONTRACT No BRLO-5914(090)
SUB CONSULTANT: Taber Consultants
NESHAP Compliance

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
Eric Nichols	Principal	2	$56.48	$112.96
Ron Loutzenhiser	Project Manager	5	$43.04	$215.20
Amand Kahn	Staff Engineer/Geologist	0	$30.93	$0.00
Xor Vang	CAD Technician	0	$29.59	$0.00
Ray Downes	Laboratory Technician	0	$29.59	$0.00
Rosina Florez	Admistrative Assistant	1	$20.18	$20.18
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
		8		
		Subtotal Direct Labor Costs		$348.34
		Anticipated Salary Increases		$0.00
			TOTAL - Direct Labor	$348.34

INDIRECT COSTS	Rate	Total	
Overhead	38.00%	$132.37	
Fringe Benefit	90.00%	$313.51	
General & Administrative	110.00%	$383.17	
	238.00%		
		TOTAL - Indirect Costs	$829.05

FEE	(10.00%)		$117.74

OTHER DIRECT COSTS			Total	
Environmental Data Report	0 @	$275.00	$ -	
Analytical Testing (8 Total Lead, 4 diWET Lead Tests)	0 @	$800.00	$ -	
N.A.L. Certified Asbestos Consultant	1 @	$800.00	$ 800.00	
Professional Expenses (Field Engineer/Geologist)	0 @	$150.00	$ -	
				$800.00
			TOTAL COST	$2,095.13

Subcontractor Costs	$	-
Total Contract	$	2,095.13

County of Lake
Three Bridges Project
Cooper Creek at Witter Springs Road, 14C-0102 (Bridge Rehabilitation)

WRECO

CONTRACT No. BRLO-5914(090)
SUB CONSULTANT: WRECO

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
Han-Bin Liang	Principal Engineer	7	$89.44	$626.08
Analette Ochoca	Supervising Engineer	16	$73.93	$1,182.88
David Mueller	Senior Engineer	28	$50.73	$1,420.44
Kazuya Tsurushita	Associate Engineer	48	$35.43	$1,700.64
PatrickYim	Staff Engineer	62	$27.04	$1,676.48
MeiDu	Technician	2	$28.00	$56.00
Kathryn Stelljes	Clerical/Tech Editor	5	$26.00	$130.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
		168		
		Subtotal Direct Labor Costs		$6,792.52
		Anticipated Salary Increases		$0.00
			TOTAL - Direct Labor	$6,792.52

INDIRECT COSTS	Rate	Total
Overhead	43.97%	$2,986.67
Fringe Benefit	51.20%	$3,477.77
General & Administrative	33.32%	$2,263.27
	128.49%	
	TOTAL - Indirect Costs	$8,727.71

FEE	(10.00%)	TOTAL - Fee	$1,552.02

OTHER DIRECT COSTS			Total	
Travel Costs	715 @	$0.56	$ 400.00	
Photocopies	16 @	$25.00	$ 400.00	
Overnight Service	4 @	$50.00	$ 200.00	
				$1,000.00
			TOTAL COST	$18,072.25

Subcontractor Costs	$ -
Total Contract	$ 18,072.25

County of Lake
Three Bridges Project
Cooper Creek at Witter Springs Road, 14C-0102 (Bridge Rehabilitation)

CONSER LAND SURVEYING

CONTRACT No. BRLO-5914(090)
SUB CONSULTANT: Conser Land Surveying

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
Michael Conser	Principal Admin _ QA/QC	20	$80.00	$1,600.00
Stephen Bellah	Project Surveyor TOPO	16	$35.00	$560.00
Stephen Bellah	Project Surveyor ROW	36	$35.00	$1,260.00
Ryan D. (Party Chief)	Field Crew CONTROL	12	$20.00	$240.00
Dustin W. (Party Chief)	Field Crew CONTROL	12	$20.00	$240.00
Blake B.. (Rod person)	Field Crew CONTROL	12	$13.00	$156.00
Ryan D. (Party Chief)	Field Crew X-SECT / TOPO	16	$20.00	$320.00
Dustin W. (Party Chief)	Field Crew X-SECT / TOPO	16	$20.00	$320.00
Blake B. (Rod Person)	Field Crew X-SECT / TOPO	16	$13.00	$208.00
Ryan D. (Party Chief)	Field Crew ROW	20	$20.00	$400.00
Dustin W. (Party Chief)	Field Crew ROW	20	$20.00	$400.00
Blake B. (Rod Person)	Field Crew ROW	20	$13.00	$260.00
Ryan D. (Party Chief)	Field Crew ADDITIONAL	5	$20.00	$100.00
Dustin W. (Party Chief)	Field Crew ADDITIONAL	5	$20.00	$100.00
Blake B. (Rod Person)	Field Crew ADDITIONAL	5	$13.00	$65.00
Dustin Williams	Survey Technician RESEARCH	10	$20.00	$200.00
Hilary Klassen	Office Administrator	8	$20.00	$160.00
		249		
			Subtotal Direct Labor Costs	$6,589.00
			Anticipated Salary Increases	$0.00
			TOTAL - Direct Labor	$6,589.00

INDIRECT COSTS	Rate	Total	
Overhead	125.00%	$8,236.25	
Fringe Benefit	30.00%	$1,976.70	
General & Administrative	54.00%	$3,558.06	
	209.00%		
		TOTAL - Indirect Costs	$13,771.01

FEE	(10.00%)	TOTAL - Fee	$2,036.00

OTHER (ALTERNATIVE) DIRECT COSTS			Total	
Centerline Well Monuments if needed	2 @	$2,000.00	$ 4,000.00	NAP
		TOTAL COST		$22,396.01

Subcontractor Costs	$ -
Total Contract	$ 22,396.01

County of Lake
Three Bridges Project
Cooper Creek at Witter Springs Road, 14C-0102 (Bridge Rehabilitation)

Bender Rosenthal Inc.

CONTRACT No. BRLO-5914(090)
SUB CONSULTANT: Bender Rosenthal Inc.

CONSULTANT COST PROPOSAL
April 20, 2015

DIRECT LABOR

Name	Classification	Hours	Initial Hourly Rate	Total
0	0	0	$0.00	$0.00
Mike Lahodny	Senior Appraiser	16	$60.00	$960.00
Tom Ganyon	Senior Right of Way Specialist	124	$65.00	$8,060.00
TBD	Researcher	14	$25.00	$350.00
Alyssa Aldal	Project Coordinator	20	$25.00	$500.00
TBD	Appraiser	100	$50.00	$5,000.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
0	0	0	$0.00	$0.00
Staff	Admin	0	$0.00	$0.00
		274		
		Subtotal Direct Labor Costs		$14,870.00
		Anticipated Salary Increases		$0.00
			TOTAL - Direct Labor	$14,870.00

INDIRECT COSTS	Rate	Total	
Overhead	110.00%	$16,357.00	
Fringe Benefit (Included in OH)	0.00%		
General & Administrative (Included in OH)	0.00%		
	110.00%	TOTAL - Indirect Costs	$16,357.00

FEE	(10.00%)	TOTAL - Fee	$3,122.70

OTHER DIRECT COSTS			Total	
Independent Review Appraisal	4 @	$1,500	$ 6,000.00	
Travel Costs	600 @	$0.56	$ 336.00	
Photocopies			$ -	
Overnight Service	0 @	$15.00	$ -	
Preliminary Title Reports	0 @	750	$ -	
				$6,336.00
			TOTAL COST	$40,685.70

Subcontractor Costs	$	-
Total Contract	$	40,685.70