

**AGREEMENT FOR
PROFESSIONAL SERVICES**

THIS AGREEMENT for Engineering Design and Environmental Studies for Phase 4 Levee Repairs- Upper Yuba River, Continuation of Phase 2 Construction Management (2006), and FEMA Certification of Contract Work ("Agreement") is made as of the Agreement Date set forth below by and between the Three Rivers Levee Improvement Authority ("TRLIA"), a California Joint Powers Authority, and

HDR Engineering, Inc.
"CONSULTANT"

In consideration of the Services to be rendered, the sums to be paid, and each and every covenant and condition contained herein, the parties hereto agree as follows:

OPERATIVE PROVISIONS

1. SERVICES.

The CONSULTANT shall provide those services described in Attachment "A", Provision A-1. CONSULTANT shall provide said services at the time, place and in the manner specified in Attachment "A", Provisions A-2 through A-3.

2. TERM.

Commencement Date: Date of this Agreement

Termination Date: March 1, 2008

Notwithstanding the term set forth above, and unless this contract is terminated by either party prior to its termination date, the term of this Agreement shall be automatically extended from the termination date for ninety days. The purpose of this automatic extension is to allow for continuation of services, and to allow TRLIA time in which to complete a novation or renewal contract for CONSULTANT and TRLIA approval.

CONSULTANT understands and agrees that there is no representation, implication, or understanding that the services provided by CONSULTANT pursuant to this Agreement will be purchased by TRLIA under a new agreement following expiration or termination of this Agreement, and CONSULTANT waives all rights or claims to notice or hearing respecting any failure to continue purchase of all or any such services from CONSULTANT.

3. PAYMENT.

TRLIA shall pay CONSULTANT for services rendered pursuant to this Agreement at the time and in the amount set forth in Attachment "B". The payment specified in Attachment "B" shall be the only payment made to CONSULTANT for services rendered pursuant to this Agreement. CONSULTANT shall submit all billings for said services to TRLIA in the manner specified in Attachment "B".

4. FACILITIES, EQUIPMENT AND OTHER MATERIALS AND OBLIGATIONS OF TRLIA.

CONSULTANT shall, at its sole cost and expense, furnish all facilities, equipment, and other materials which may be required for furnishing services pursuant to this Agreement, unless an exception to this requirement is provided in Attachment "A", Provision A-4.

5. ADDITIONAL PROVISIONS.

Those additional provisions unique to this Agreement are set forth in Attachment "C".

6. GENERAL PROVISIONS.

The general provisions set forth in Attachment "D" are part of this Agreement. Any inconsistency between said general provisions and any other terms or conditions of this Agreement shall be controlled by the other term or condition insofar as it is inconsistent with the general provisions.

7. DESIGNATED REPRESENTATIVES.

Kent McClain is the representative of the TRLIA and will administer this Agreement for the TRLIA. Kenneth R Myers is the authorized representative for CONSULTANT. Changes in designated representatives shall occur only by advance written notice to the other party.

8. ATTACHMENTS.

All attachments referred to herein are attached hereto and by this reference incorporated herein. Attachments include:

- Attachment A - Services
- Attachment B - Payment
- Attachment C - Additional Provisions
- Attachment D - General Provisions
- Attachment E - Consultant's Proposal (dated November 29, 2005)

9. **TERMINATION.** TRLIA and CONSULTANT shall each have the right to terminate this Agreement upon ten (10) days written notice to the other party.

IN WITNESS WHEREOF, the parties hereto have executed this

Agreement on December 13, 2005.

"TRLIA"

"CONSULTANT"


Chair, Board of Supervisors


Brent R. Felker, P.E.
Senior Vice President

ATTEST:
DONNA STOTTLEMEYER, CLERK OF
THE BOARD OF SUPERVISORS

APPROVED AS TO FORM:
DANIEL G. MONTGOMERY
TRLIA COUNSEL





ATTACHMENT A

A.1 SCOPE OF SERVICES AND DUTIES.

The services to be provided by CONSULTANT and the scope of CONSULTANT's duties are detailed in the "Scope of Services" section within Attachment E.

A.2 TIME SERVICES RENDERED.

Commencing from the date of this agreement until March 1, 2008.

A.3 MANNER SERVICES ARE TO BE PERFORMED.

As an independent CONSULTANT, CONSULTANT shall be responsible for providing services and fulfilling obligations hereunder in a professional manner. TRLIA shall not control the manner of performance.

A.4 FACILITIES FURNISHED BY TRLIA.

CONSULTANT shall, at his/her sole cost and expense, furnish all facilities, equipment, and other materials which may be required for furnishing services pursuant to this Agreement.

ATTACHMENT B

PAYMENT

TRLIA shall pay CONSULTANT as follows:

B.1 CONTRACT FEE. TRLIA shall reimburse CONSULTANT on a time-and-expenses basis, based on the CONSULTANT'S Fee Spreadsheet and 2005 Fee Schedule included within Attachment E, to a maximum not to exceed **Two million five hundred eighty thousand and thirty eight dollars (\$2,580,038)** without the approval, by TRLIA, of a formal written amendment to this Agreement. CONSULTANT shall submit requests for payment after completion of services or no later than the tenth (10th) day of the month following rendering of services.

B.2 TRAVEL COSTS. TRLIA shall not pay CONSULTANT for meals, lodging or other travel costs not included in this Agreement unless said costs are approved in advance by the TRLIA representative in which case TRLIA shall pay its per diem rates in effect on the date of invoice upon presentation of invoices.

B.3 AUTHORIZATION REQUIRED. Services performed by CONSULTANT and not authorized in this Agreement shall not be paid for by TRLIA. Payment for additional services shall be made to CONSULTANT by TRLIA if, and only if, this Agreement is amended by both parties in advance of performing additional services.

ATTACHMENT C

OTHER TERMS

There are no applicable provisions under this Attachment C for this Agreement.

ATTACHMENT D

GENERAL PROVISIONS

D.1 INDEPENDENT CONSULTANT STATUS. At all times during the term of this Agreement, the following apply:

D.1.1 All acts of CONSULTANT shall be performed as an independent CONSULTANT and not as an agent, officer or employee of TRLIA. It is understood by both CONSULTANT and TRLIA that this Agreement is by and between two independent consultants and is not intended to and shall not be construed to create the relationship of agent, servant, employee, partnership, joint venture or association.

D.1.2 CONSULTANT shall have no claim against TRLIA for employee rights or benefits, including, but not limited to, seniority, vacation time, vacation pay, sick leave, personal time off, overtime, medical, dental or hospital benefits, civil service protection, disability retirement benefits, paid holidays or other paid leaves of absence.

D.1.3 CONSULTANT is solely obligated to pay all applicable taxes, deductions and other obligations, including, but not limited to, federal and state income taxes, withholding and Social Security taxes, unemployment and disability insurance and Workers' Compensation and Medi-Care payments.

D.1.4 As an independent CONSULTANT, CONSULTANT is not subject to the direction and control of TRLIA except as to the final result contracted for under this Agreement. TRLIA may not require CONSULTANT to change its manner of doing business, but may require it to redirect its efforts to accomplish what it has agreed to do.

D.1.5 CONSULTANT may provide services to others during the same period service is provided to TRLIA under this Agreement.

D.1.6 If in the performance of this Agreement any third persons are employed by CONSULTANT, such persons shall be entirely and exclusively under the direction, supervision and control of CONSULTANT. All terms of employment including hours, wages, working conditions, discipline, hiring and discharging or any other term of employment or requirements of law shall be determined by the CONSULTANT.

D.1.7 As an independent CONSULTANT, CONSULTANT hereby indemnifies

and holds TRLIA harmless from any and all claims that may be made against TRLIA based on any contention by any third party that an employer-employee relationship exists by reason of this Agreement.

D.2 LICENSES, PERMITS, ETC. CONSULTANT represents and warrants to TRLIA that it has all licenses, permits, qualifications, and approvals of whatsoever nature which are legally required for CONSULTANT to practice its profession. CONSULTANT represents and warrants to TRLIA that CONSULTANT shall, at its sole cost and expense, keep in effect or obtain at all times during the term of this Agreement, any licenses, permits, and approvals which are legally required for CONSULTANT to practice its profession at the time the services are performed. Failure of the CONSULTANT to comply with this provision shall authorize the TRLIA to immediately terminate this agreement notwithstanding Operative Provision No. 9.

D.3 TIME. CONSULTANT shall devote such time to the performance of services pursuant to this Agreement as may be reasonably necessary for the satisfactory performance of CONSULTANT's obligations pursuant to this Agreement. Neither party shall be considered in default of this Agreement to the extent performance is prevented or delayed by any cause, present or future, which is beyond the reasonable control of the party.

D.4 INSURANCE. Prior to rendering services provided by the terms and conditions of this Agreement, CONSULTANT or its subconsultants shall acquire and maintain during the term of this Agreement, insurance coverage, through and with an insurer acceptable to TRLIA, naming the TRLIA and any related agency governed by the Board of Supervisors which is letting the contract or for whom the services under the contract are being provided, and TRLIA's, or related agency's, officials, employees, and volunteers as additional insured, (hereinafter referred to as "the insurance"), with the exception of Professional Errors and Omissions Liability Insurance. The limits of insurance herein shall not limit the liability of the CONSULTANT hereunder.

D.4.1 TERM. Policies of insurance shall be in effect during the term of this Agreement and shall provide that they may not be canceled without first providing TRLIA with thirty (30) days written notice of such intended cancellation. If CONSULTANT fails to maintain the insurance provided herein, TRLIA may secure such insurance and deduct the cost thereof from any funds owing to CONSULTANT.

D.4.2 MINIMUM SCOPE OF INSURANCE. CONSULTANT shall procure insurance covering general liability, automobile liability, and workers' compensation. Coverage shall be at least as broad as:

(a) Insurance Services Office (ISO) Commercial General Liability Occurrence form number CG 0001 or equivalent ISO form. A non-ISO form must be reviewed and approved by the TRLIA Risk Manager prior to acceptance of the Agreement.

(b) Insurance Services Office Business Auto Coverage form

number CA 0001 0187 covering Automobile Liability, code 1 "any auto" and Endorsement CA 0029.

(c) Workers' Compensation insurance as required by the Labor Code of the State of California and Employers Liability insurance.

(d) If this Agreement is for the provision of professional services, Professional Errors and Omissions Liability Insurance, with a standard insurance industry coverage form subject to TRLIA approval.

D.4.3 OTHER INSURANCE PROVISIONS. The policies are to contain, or be endorsed to contain the following provisions:

(a) General Liability and Automobile Liability Coverages.

(i) The TRLIA and the public entity awarding the contract if other than the TRLIA, and their officials, employees and volunteers are to be covered as insureds as respects: liability arising out of activities performed by or on behalf of the CONSULTANT; products and completed operations of the CONSULTANT; premises owned, leased, occupied, or used by the CONSULTANT; or automobiles owned, leased, hired, or borrowed by the CONSULTANT. The coverage shall contain no special limitations on the scope of protection afforded to the TRLIA, its officials, employees or volunteers.

(ii) The CONSULTANT's insurance coverage shall be primary insurance as respects the TRLIA, its officials, employees and volunteers and any other insureds under this Agreement. Any insurance or self-insurance maintained by the TRLIA, its officials, employees and volunteers or other insureds shall be excess of the CONSULTANT's insurance and shall not contribute with it.

(iii) Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the TRLIA, its officials, employees and volunteers or other insureds under this Agreement.

(iv) The insurance policy required by this clause shall be endorsed to state that the CONSULTANT's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

(b) Worker's Compensation and Employers Liability Coverage. The insurer shall agree to waive all rights of subrogation against the TRLIA, its officials, employees and volunteers or other insureds under this Agreement.

(c) All Coverages. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the TRLIA.

D.4.4 ACCEPTABILITY OF INSURERS. Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:VII.

D.4.5 MINIMUM LIMITS OF INSURANCE. CONSULTANT shall maintain limits no less than:

(a) Commercial General Liability: One Million Dollars (\$1,000,000) combined single limit per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with general aggregate limit is used, either the general aggregate limit shall apply separately to this Agreement or the general aggregate limit shall be twice the required occurrence limit.

(b) Automobile Liability: \$1,000,000 combined single limit per accident for bodily injury or property damage.

(c) Workers' Compensation and Employers Liability: Workers' Compensation limits as required by the Labor Code of the State of California and Employers Liability limits of One Million Dollars (\$1,000,000) per accident.

(d) Professional Errors and Omissions Liability (if required): Policy limits of not less than One Million Dollars (\$1,000,000) per incident and One Million Dollars (\$1,000,000) annual aggregate, with deductible or self-insured portion not to exceed Two Thousand Five Hundred Dollars (\$2,500). Coverage may be made on a claims-made basis with a "Retro Date" either prior to the date of the Agreement or the beginning of the Agreement services. If claims-made, coverage must extend to a minimum of twelve-months beyond completion of the services. If coverage is canceled or non-renewed and not replaced with another claims-made policy form with a "Retro Date" prior to the Agreement effective date, the CONSULTANT must purchase "extended reporting" coverage for a minimum of twelve (12) months after completion of services.

D.4.6 SUBCONSULTANTS. In addition to the above policies, if CONSULTANT hires a subconsultant under this Agreement CONSULTANT shall include all subconsultants as insureds under its policies or shall furnish separate certificates and endorsements for each subconsultant. All coverages for subconsultants shall be subject to all applicable requirements stated herein. If CONSULTANT requires subconsultants to provide insurance coverage, then CONSULTANT shall be named as an additional insured under such policy or policies.

D.4.7 DEDUCTIBLES AND SELF-INSURED RETENTIONS. Except as otherwise provided in this Agreement, any deductibles or self-insured retentions must be declared to and approved by the TRLIA. At the option of the TRLIA either the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the TRLIA, its officials, employees and volunteers; or, the CONSULTANT shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

D.4.8 VERIFICATION OF COVERAGE.

(a) CONSULTANT shall furnish TRLIA with Certificates of Insurance and with original endorsements effecting coverage required by this clause. The certificate(s) and endorsement(s) for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificate(s) and endorsement(s) are to be on forms provided by the TRLIA or on forms received and approved by the TRLIA before work commences. TRLIA reserves the right to require complete, certified copies of all required insurance policies at any time.

(b) CONSULTANT shall not render services under the terms and conditions of this Agreement unless each type of insurance coverage and endorsement is in effect and CONSULTANT has delivered the certificate(s) of insurance and endorsement(s) to TRLIA as previously described. If CONSULTANT shall fail to procure and maintain said insurance, TRLIA may, but shall not be required to, procure and maintain the same, and the premiums of such insurance shall be paid by CONSULTANT to TRLIA upon demand. The policies of insurance provided herein which are to be provided by CONSULTANT shall be for a period of time sufficient to cover the term of the Agreement, including TRLIA's acceptance of CONSULTANT's work. It is understood and agreed that thirty (30) days prior to the expiration of any policy of insurance, CONSULTANT will deliver to TRLIA certificate(s) and endorsement(s) evidencing a renewal or new policy to take the place of the policy expiring.

D.5 INDEMNITY. CONSULTANT shall defend, indemnify, and hold harmless TRLIA, its elected and appointed councils, boards, commissions, officers, agents, and employees from any liability for damage or claims for damage for personal injury, including death, as well as for property damage, to the extent damages arise from the intentional or negligent acts or omissions of CONSULTANT in the performance of services rendered under this Agreement by CONSULTANT, or any of CONSULTANT's officers, agents, employees, Consultants, or subconsultants.

D.6 CONSULTANT NOT AGENT. Except as TRLIA may specify in writing, CONSULTANT shall have no authority, express or implied, to act on behalf of TRLIA in any capacity whatsoever as an agent. CONSULTANT shall have no authority, express or implied, pursuant to this Agreement to bind TRLIA to any obligation whatsoever.

D.7 ASSIGNMENT PROHIBITED. CONSULTANT may not assign any right or obligation pursuant to this Agreement. Any attempted or purported assignment of any right or obligation pursuant to this Agreement shall be void and of no legal effect.

D.8 PERSONNEL. CONSULTANT shall assign only competent personnel to perform services pursuant to this Agreement. In the event that TRLIA, in its sole discretion, at any time during the term of this Agreement, desires the removal of any person or persons assigned by CONSULTANT to perform services pursuant to this Agreement, CONSULTANT shall remove any such person immediately upon receiving written notice from TRLIA of its desire for removal of such person or persons.

D.9 STANDARD OF PERFORMANCE. CONSULTANT shall perform all services required pursuant to this Agreement in the manner and according to the standards observed by a competent practitioner of the profession in which CONSULTANT is engaged. All products of whatsoever nature which CONSULTANT delivers to TRLIA pursuant to this Agreement shall be prepared in a first class and workmanlike manner and shall conform to the standards or quality normally observed by a person practicing in CONSULTANT's profession.

D.10 POSSESSORY INTEREST. The parties to this Agreement recognize that certain rights to property may create a "possessory interest", as those words are used in the California Revenue and Taxation Code, §107. For all purposes of compliance by TRLIA with Section 107.6 of the California Revenue and Taxation Code, this recital shall be deemed full compliance by the TRLIA. All questions of initial determination of possessory interest and valuation of such interest, if any, shall be the responsibility of the TRLIA Assessor and the contracting parties hereto. A taxable possessory interest may be created by this contract; and if created, the party in whom such an interest is vested will be subject to the payment of property taxes levied on such an interest.

D.11 TAXES. CONSULTANT hereby grants to the TRLIA the authority to deduct from any payments to CONSULTANT any TRLIA imposed taxes, fines, penalties and related charges which are delinquent at the time such payments under this Agreement are due to CONSULTANT.

D.12 TERMINATION. Upon termination of this Agreement as otherwise provided herein, CONSULTANT shall immediately cease rendering service upon the termination date and the following shall apply:

D.12.1 CONSULTANT shall deliver copies of all writings prepared by it pursuant to this Agreement. The term "writings" shall be construed to mean and include: handwriting, typewriting, printing, photostating, photographing, and every other means of recording upon any tangible thing and form of communication or representation, including letters, words, pictures, sounds, or symbols, or combinations thereof.

D.12.2 TRLIA shall have full ownership and control of all such writings or other communications delivered by CONSULTANT pursuant to this Agreement.

D.12.3 TRLIA shall pay CONSULTANT the reasonable value of services rendered by CONSULTANT to the date of termination pursuant to this Agreement not to exceed the amount documented by CONSULTANT and approved by TRLIA as work accomplished to date; provided, however, TRLIA shall not in any manner be liable for lost profits which might have been made by CONSULTANT had CONSULTANT completed the services required by this Agreement. In this regard, CONSULTANT shall furnish to TRLIA such financial information as in the judgment of the TRLIA is necessary to determine the reasonable value of the services rendered by CONSULTANT. In the event of a dispute as to the reasonable value of the services rendered by CONSULTANT, the decision of the TRLIA shall be final. The foregoing is cumulative and does not affect any right or remedy which TRLIA may have in law or equity.

CONSULTANT may terminate its services under this Agreement upon thirty (30) days written notice to the TRLIA, without liability for damages, if CONSULTANT is not compensated according to the provisions of the Agreement or upon any other material breach of the Agreement by TRLIA.

D.13 NON-DISCRIMINATION. Throughout the duration of this Agreement, CONSULTANT shall not unlawfully discriminate against any employee of the CONSULTANT or of the TRLIA or applicant for employment or for services or any member of the public because of race, religion, color, national origin, ancestry, physical or mental disability, medical condition, marital status, age, sex or sexual orientation. CONSULTANT shall ensure that in the provision of services under this Agreement, its employees and applicants for employment and any member of the public are free from such discrimination. CONSULTANT shall comply with the provisions of the Fair Employment and Housing Act (Government Code Section 12900, et seq.). The applicable regulations of the Fair Employment Housing Commission implementing Government Code Section 12900, set forth in Chapter 5, Division 4 of Title 2 of the California Code of Regulations are incorporated into this Agreement by reference and made a part hereof as if set forth in full. CONSULTANT shall also abide by the Federal Civil Rights Act of 1964 and all amendments thereto, and all administrative rules and regulations issued pursuant to said Act. CONSULTANT shall give written notice of its obligations under this clause to any labor agreement. CONSULTANT shall include the non-discrimination and compliance provision of this paragraph in all subcontracts to perform work under this Agreement.

D.14 REHABILITATION ACT OF 1973/AMERICANS WITH DISABILITIES ACT OF 1990. In addition to application of the non-discrimination provision of this Agreement, above,

CONSULTANT agrees to comply with all provisions of section 504 et seq. of the Rehabilitation Act of 1973, and with all provisions of the Americans with Disabilities Act of 1990, and all amendments thereto, and all administrative rules and regulations issued pursuant to said Acts, pertaining to the prohibition of discrimination against qualified handicapped and disabled persons, in all programs or activities, as to employees or recipients of services.

D.15 OWNERSHIP OF INFORMATION. All professional and technical information developed under this Agreement and all work sheets, reports, and related data shall become the property of TRLIA, and CONSULTANT agrees to deliver reproducible copies of such documents to TRLIA on completion of the services hereunder. The TRLIA agrees to indemnify and hold CONSULTANT harmless from any claim arising out of reuse of the information for other than this project.

D.16 WAIVER. A waiver by any party of any breach of any term, covenant or condition herein contained or a waiver of any right or remedy of such party available hereunder at law or in equity shall not be deemed to be a waiver of any subsequent breach of the same or any other term, covenant or condition herein contained or of any continued or subsequent right to the same right or remedy. No party shall be deemed to have made any such waiver unless it is in writing and signed by the party so waiving.

D.17 COMPLETENESS OF INSTRUMENT. This Agreement, together with its specific references and attachments, constitutes all of the agreements, understandings, representations, conditions, warranties and covenants made by and between the parties hereto. Unless set forth herein, neither party shall be liable for any representations made express or implied.

D.18 SUPERSEDES PRIOR AGREEMENTS. It is the intention of the parties hereto that this Agreement shall supersede any prior agreements, discussions, commitments, representations, or agreements, written or oral, between the parties hereto.

D.19 ATTORNEY'S FEES. If any action at law or in equity, including an action for declaratory relief, is brought to enforce or interpret provisions of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fee, which may be set by the Court in the same action or in a separate action brought for that purpose, in addition to any other relief to which such party may be entitled.

D.20 CAPTIONS. The captions of this Agreement are for convenience in reference only and the words contained therein shall in no way be held to explain, modify, amplify or aid in the interpretation, construction or meaning of the provisions of this Agreement.

D.21 DEFINITIONS. Unless otherwise provided in this Agreement, or unless the context otherwise requires, the following definitions and rules of construction shall apply herein.

D.21.1 NUMBER AND GENDER. In this Agreement, the neuter gender includes the

feminine and masculine, and the singular includes the plural, the word "person" includes corporations, partnerships, firms or associations, wherever the context so requires.

D.21.2 MANDATORY AND PERMISSIVE. "Shall" and "will" and "agrees" are mandatory. "May" is permissive.

D.22 TERM INCLUDES EXTENSIONS. All references to the term of this Agreement or the Agreement Term shall include any extensions of such term.

D.23 SUCCESSORS AND ASSIGNS. All representations, covenants and warranties specifically set forth in this Agreement, by or on behalf of, or for the benefit of any or all of the parties hereto, shall be binding upon and inure to the benefit of such party, its successors and assigns.

D.24 MODIFICATION. No modification or waiver of any provision of this Agreement or its attachments shall be effective unless such waiver or modification shall be in writing, signed by all parties, and then shall be effective only for the period and on the condition, and for the specific instance for which given.

D.25 COUNTERPARTS. This Agreement may be executed simultaneously and in several counterparts, each of which shall be deemed an original, but which together shall constitute one and the same instrument.

D.26 OTHER DOCUMENTS. The parties agree that they shall cooperate in good faith to accomplish the object of this Agreement and to that end, agree to execute and deliver such other and further instruments and documents as may be necessary and convenient to the fulfillment of these purposes.

D.27 PARTIAL INVALIDITY. If any term, covenant, condition or provision of this Agreement is held by a Court of competent jurisdiction to be invalid, void or unenforceable, the remainder of the provision and/or provisions shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

D.28 JURISDICTION. It is agreed by the parties hereto that unless otherwise expressly waived by them, any action brought to enforce any of the provisions hereof or for declaratory relief hereunder shall be filed and remain in a Court of competent jurisdiction in the County of Yuba, State of California.

D.29 CONTROLLING LAW. The validity, interpretation and performance of this Agreement shall be controlled by and construed under the laws of the State of California.

D.30 TIME IS OF THE ESSENCE. Time is of the essence of this Agreement and each covenant and term a condition herein.

D.31 AUTHORITY. All parties to this Agreement warrant and represent that they have the

power and authority to enter into this Agreement in the names, titles and capacities herein stated and on behalf of any entities, persons, estates or firms represented or purported to be represented by such entity(s), person(s), estate(s) or firm(s) and that all formal requirements necessary or required by any state and/or federal law in order to enter into this Agreement have been fully complied with. Further, by entering into this Agreement, neither party hereto shall have breached the terms or conditions of any other contract or agreement to which such party is obligated, which such breach would have a material effect hereon.

D.32 CONFLICT OF INTEREST. Neither a TRLIA employee whose position in TRLIA enables such employee to influence the award of this Agreement or any competing Agreement, nor a spouse or economic dependent of such employee, shall be employed in any capacity by CONSULTANT herein, or have any other direct or indirect financial interest in this Agreement.

CONSULTANT may be subject to the disclosure requirements of the TRLIA conflict of interest code if in a position to make decisions or influence decisions that could have an effect on the CONSULTANT's financial interest. The TRLIA Administrator shall determine in writing if CONSULTANT has been hired to perform a range of duties that is limited in scope and thus is not required to fully comply with the disclosure requirements described in the Yuba TRLIA Conflict of Interest Code.

D.33 NOTICES. All notices and demands of any kind which either party may require or desire to serve on the other in connection with this Agreement must be served in writing either by personal service or by registered or certified mail, return receipt requested, and shall be deposited in the United States Mail, with postage thereon fully prepaid, and addressed to the party so to be served as follows:

If to "TRLIA":

TRLIA
County of Yuba
Attn: Kent McClain
915 8th Street, Suite 119
Marysville, CA 95901

With a copy to:

TRLIA Counsel
County of Yuba
915 8th Street, Suite 111
Marysville, CA 95901

If to "CONSULTANT":

HDR Engineering, Inc.
Attn: Kenneth R. Myers
2365 Iron Point Road, Suite 300
Folsom, CA 95630

Scope of Work

**Phase 4 Levee Repairs – Upper Yuba River,
Continuation of Phase 2 Construction Management (2006),
and FEMA Certification of Contract Work**

November 29, 2005

**Three Rivers Levee Improvement Authority
Marysville, California**



HDR

**2365 Iron Point Road, Suite 300
Folsom, CA. 95630**

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PROJECT BACKGROUND AND OVERVIEW

PROJECT OVERVIEW

Engineering design and environmental services have been requested for a portion of the south Yuba River levee, which protects a portion of Reclamation District No. 784 (RD No. 784). This work has been identified as Phase 4 of the levee repair program for the Three Rivers Levee Improvement Authority (TRLIA). In addition, continued construction management services for the Phase 2 construction contract (in 2006) and FEMA certification of the contract work has been included. This work follows the levee repair work HDR (CONSULTANT) is completing for levee repairs to the Bear River, Western Pacific Interceptor Canal (WPIC) and Yuba River levees (the Phase 2 work).

The services to be provided to the TRLIA are: preliminary engineering including an alternatives analysis, preparation of a basis of design report, environmental documentation, permit application preparation and development of final construction documents (plans, specifications, design analysis and construction cost estimate). The objective of the project is to repair the project levees in order to achieve FEMA certification. This project in and of itself will not achieve FEMA certification, but is a portion of a greater scope of work required to achieve certification by others.

Services to be provided include:

Part A - Phase 4 Levee Repairs – Upper Yuba River

- ▶ An Alternatives Analysis technical memorandum for the project reach was completed as part of Phase 2, which is to be reviewed with the project team and agencies and the alternative that will be carried into design will be identified. Based on this preferred alternative, prepare a Basis of Design Report
- ▶ Prepare environmental compliance and permitting documents for the Yuba River levee repair project. Prepare permit applications and required supporting documents for regulatory agencies and utilities. Provide assistance to TRLIA staff in securing permits as required. Reclamation Board Encroachment permitting is also included.
- ▶ Prepare preliminary and final design plans for the Yuba River levee improvements. Develop contract technical specifications. Prepare construction cost estimates of project features at the preliminary and final design submittals.
- ▶ Provide construction services including pre-bid assistance, field reviews, response to contractor's request or information, and review of shop drawings. Provide as-built documentation at the end of construction.
- ▶ Coordinate with the USACE and other agencies during design and construction.

PROJECT BACKGROUND AND OVERVIEW

Part B - Continuation of Phase 2 Construction Management (2006)

- ▶ Provide Construction Management services for the remainder of the Phase 2 levee repairs (2006 construction season).

Part C - FEMA Certification of Contract Work

- ▶ As part of the FEMA certification process, prepare an application to FEMA for a Letter of Map Revision for project work components, which will include all pertinent analyses completed for the project.

Basis of Design Reports for each element of the project, 30 Percent, 90 Percent and Final PS&E are to be reviewed by TRLIA and their consultants, the California State Department of Water Resources (DWR), and USACE. Engineering consultant will be responsible for integrating review comments and providing record of responses.

The scope of work has been divided into eight tasks outlining the design and construction process, deliverables and assumptions. Note that where task descriptions are based on assumptions, a change in the quantity of scope of the assumption will constitute justification for additional fee and/or time. Major tasks are as follows:

Part A - Phase 4 Levee Repairs – Upper Yuba River

1. Project Management
2. Yuba River Levee Pre-design
3. Environmental Compliance and Permits
4. Plans, Specifications and Estimates (PS&E)
5. Rights-Of-Way, Easement Requirements And Utilities Coordination
6. Pre-Bid Assistance and Construction Support

Part B - Continuation of Phase 2 Construction Management (2006)

7. Construction Management (Phase 2 Bear River, WPIC and Yuba River Levee Repairs)

Part C - FEMA Certification of Contract Work

8. FEMA Certification for Contract Work



Part A - Phase 4 Levee Repairs - Upper Yuba River

Task 1. Project Management

1.1. Project Management

Project management is the application of knowledge, skills, tools, and techniques to project activities in order to meet or exceed stakeholder needs and expectations from a project. Meeting or exceeding stakeholder needs and expectations invariably involves balancing competing demands among:

- ▶ Scope, time, cost, and quality.
- ▶ Stakeholders with differing needs and expectations.
- ▶ Identified requirements and unidentified expectations.

HDR's project manager will manage the scope, schedule and budget for all project activities, including the design team and subconsultants. In addition, the project manager will coordinate with the client, program manager, agencies and other stakeholders throughout the duration of the project.

Assumptions:

- ▶ Assume duration from December 7, 2005 to December 31, 2006.

1.2. Project Guide

CONSULTANT will develop a Project Guide that includes objectives, organization, scope of services, schedule, budget, QA/QC program, design criteria, communications, document control, cost controls, invoicing and reporting.

Deliverables:

- ▶ Project Guide (2 copies).
- ▶ Project schedule (2 copies).

1.3. Project Kick-Off Meeting

CONSULTANT will attend a project kick off meeting with TRLIA and other interested agencies (e.g., USACE). At the meeting, the purpose, goals, timeline, design criteria, deliverables schedule and defined objectives of Scope of Services will be discussed. Consensus will be reached on the technical aspects of the project. Environmental documentation, permitting and public outreach issues will be discussed.



Deliverables:

- ▶ Meeting notes.

Comments/Assumptions:

- ▶ One four-hour meeting will be required.

1.4. Monthly Status Meetings

CONSULTANT will coordinate monthly meetings with TRLIA to discuss project progress and issues that may affect project design or schedule. Appropriate CONSULTANT team members will attend as needed.

Deliverables:

- ▶ Meeting notes.

Comments/Assumptions:

- ▶ One 2 hour meeting will be required each month.

1.5. Monthly Progress Reports

CONSULTANT will prepare monthly progress reports that document project activities and update the project schedule and budget.

Deliverables:

- ▶ Progress reports (2 copies).

1.6. Quality Control

CONSULTANT will prepare a Quality Control Plan (QCP), which will provide the policies and specific actions that will be taken to ensure that high quality products are on time and within the specified budget. The QCP will define CONSULTANT's management philosophy, approach and dedication for providing TRLIA with deliverables and supporting documents that are complete, conform to standards and meet or exceed the expectations of CONSULTANT and TRLIA. The Quality Control team will review technical approach as well as all deliverables submitted to TRLIA.

Deliverables:

- ▶ QC Plan (included in Project Guide).
- ▶ QC reviews on each deliverable.

Comments/Assumptions:

- ▶ QC reviews will be completed for all major deliverables.



1.7. Agency Coordination

CONSULTANT will facilitate coordination between TRLIA, USACE, Reclamation Board, DWR, and other involved agencies during the duration of the project.

Deliverables:

- ▶ Meeting notes, telephone conversation records and correspondence.

Comments/Assumptions:

- ▶ Files of external coordination will be provided.



Task 2. Yuba River Levee Pre-design

2.1. Basis of Design Report

Following the Alternative Analysis Check Point Meeting (part of the Phase 2 work), CONSULTANT will perform any additional analyses or assessments for the preferred alternative and develop a Basis of Design report (an expansion of the Alternatives Analysis TM). The Basis of Design Report will summarize the levee repairs that will be carried into the 30% design.

Deliverables:

- ▶ Draft Basis of Design Report (10 copies).

Comments/Assumptions:

- ▶ This element of the project will consist of levee improvements to the Yuba River levee, between the UPRR (upstream of SR 70) and the Gold Fields. For scoping purposes, the preferred alternative is assumed to be a cutoff wall between UPRR and Simpson Lane, minor levee shaping between SR 70 and the UPRR, and filling of a toe ditch near the Gold Fields.
- ▶ Basis of Design Report will be submitted for review. Comments will be incorporated a final draft Basis of Design and into the 30 percent PS&E package.

2.1.1. Geotechnical Effort for Basis of Design

CONSULTANT will prepare a geotechnical TM with final design recommendations for the preferred alternative (identified at the Alternatives Analysis Checkpoint Meeting). This geotechnical TM will be presented as an appendix to the Basis of Design Report.

Supplemental geotechnical analyses cover geotechnical aspects of the Basis of Design for improvements on the Yuba River south levee (left bank) from the confluence with the Feather River upstream to the levee terminus at the Gold Fields. The design water surface elevation will be the 200-year level described as 1/200 annual exceedence probability (AEP) as provided by MBK Engineers. The project has been assumed to consist of:

- ▶ Slope flattening on the water side of the levee near Highway 70,
- ▶ Raising the levee near the 1986 break,
- ▶ A berm to provide overlap just upstream of the Union Pacific Railroad,
- ▶ A slurry cutoff wall through the levee from Union Pacific Railroad to just upstream of Simpson Lane, and



- ▶ Filling of a waterside ditch upstream of the USACE slurry cutoff wall in Sections 11 and 12 as described in the Phase 4 PIR.

Deliverables:

- ▶ Geotechnical Design Recommendation Technical Memorandum (10 copies).

2.2. Submit Draft Basis of Design Report

2.3. TRLIA and Agency Review

TRLIA and outside agency review of Basis of Design Report.

Comments/Assumptions:

- ▶ Assume 14-calendar day review.

2.4. Check Point Meeting

CONSULTANT will conduct a meeting to review and verify with TRLIA, USACE and other agencies and stakeholders the final plan for repairs to the Yuba River levee.

Deliverables:

- ▶ Meeting Minutes.

Comments/Assumptions:

- ▶ One 4 hour meeting will be required.

2.5. Finalize Basis of Design Report

The draft Basis of Design Report will be finalized, incorporating reviewer's comments.

Deliverables:

- ▶ Basis of Design Technical Memorandum (10 copies).



Task 3. Environmental Compliance and Permits

This section describes CONSULTANT's approach for preparing the environmental compliance documentation for the Yuba River Levee Improvements Project. Scope and cost reflects the effort necessary to comply with the provisions of the California Environmental Quality Act (CEQA) and is based on previous experience with other levee improvement projects for TRLIA. Our current understanding is the project encompasses the segment of the Yuba River south levee from the Southern Pacific Railroad (SPRR) upstream to the levee extent at the Yuba Goldfields. For scoping purposes it was assumed that the primary treatments will be a conventional seepage cutoff wall installed through the crown of the levee, as well as a seepage berm to reinforce the landside of the levee for the subsegment near SPRR, and filling of the waterside borrow ditch downstream of the Goldfields.

Based on present understanding of the project treatments, this scope of work assumes the following regulatory points:

- ▶ TRLIA will provide all rights-of-entry to affected properties before CONSULTANT conducts environmental surveys.
- ▶ CONSULTANT will be provided with aerial photographs of the project site at a suitable scale and scale drawings of existing and proposed roadway conditions including existing and proposed right-of-way lines; construction-related areas associated with the three alternatives, including existing and proposed right-of-way, equipment and material staging areas, and temporary access roads; parcel lines; and topographic information, for conducting environmental surveys.
- ▶ Impacts on endangered species and their habitat would be limited to elderberry shrubs (host plant of the valley elderberry longhorn beetle, listed under the federal Endangered Species Act).
- ▶ Treatments may affect jurisdictional waters of the U.S.; therefore, this scope of work includes a wetland delineation and application for a 404 Nationwide Permit; however, it is not known if the project area includes jurisdictional features or the type of Nationwide Permit that would be applied.
- ▶ Levee degrading may affect vegetation in the riparian zone; therefore, an application for a streambed alternation agreement is included in this scope of work.
- ▶ Section 106 compliance (required for a 404 permit) has not been scoped at this time. The need for such work will be determined based on the findings of the CEQA process and determination of need for a 404 permit.

The nature of the project, combined with previous experience in preparing CEQA compliance documents, suggests that the environmental analysis be divided into an initial study phase (Phase I) and a negative declaration phase (Phase II). For purposes of developing a scope of work and cost estimate, it is assumed



that the initial study will identify significant impacts and that TRLIA will choose to prepare a mitigated negative declaration.

3.1. CEQA Phase I. Initial Study

3.1.1. Prepare Project Description

CONSULTANT will prepare a project description reflective of the level of detail typically found in an EIR project description.

3.1.2. Prepare Administrative Draft Initial Study

In addition to the project description, the initial study will include an introduction, environmental setting, and impacts and mitigation measures if significant impacts are identified. The initial study will address each of the topics indicated in the environmental checklist form in the State CEQA Guidelines. The impacts and mitigation chapter will include a discussion of the criteria for determining significance of an impact, impact mechanisms, and the impact assessment. As the analysis is being conducted, CONSULTANT will keep TRLIA informed regarding the status and the conclusions of the impact analysis.

The State CEQA Guidelines encourage lead agencies to avoid preparing a “naked” or unsubstantiated checklist. CONSULTANT will address each of the topics indicated in the checklist and clearly explain why the project would result in no impact, a less than significant impact, or a potentially significant impact. The analysis will be conducted as thoroughly as possible as a means to ensure the initial study/negative declaration is as legally defensible as possible. In addition, conducting a thorough analysis in the initial study will help to focus the analysis that may be conducted as part of an EIR. Although an EIR is presently not anticipated, a detailed analysis in an initial study will serve as the basis for eliminating some topics from consideration in an EIR to ensure streamlining.

If significant impacts are identified, CONSULTANT will propose mitigation to reduce those impacts to a less-than-significant level. CONSULTANT will develop mitigation that can be readily incorporated into a mitigation reporting and monitoring plan.

3.1.3. Prepare Initial Study

Under this task, CONSULTANT will incorporate TRLIA (and TRLIA’s designees’) comments into a final version of the initial study. If necessary, CONSULTANT will meet with TRLIA and their designees to review the draft initial study and discuss comments.

3.2. CEQA Phase II. Negative Declaration

Under Phase II, CONSULTANT will prepare (on behalf of TRLIA) the negative declaration, review comments, and mitigation reporting and monitoring plan.



3.2.1. Prepare Administrative Draft Mitigated Negative Declaration

It is assumed that a mitigated negative declaration will be prepared for the project. The draft negative declaration will include a brief description of the project and proposed findings that the project will not result in a significant impact on the environment.

3.2.2. Prepare Mitigated Negative Declaration

CONSULTANT will incorporate comments into a mitigated negative declaration. CONSULTANT will prepare and distribute (on behalf of TRLIA) a notice of intent to adopt the negative declaration.

3.2.3. Review Comments

CONSULTANT will assist TRLIA in reviewing and considering agency and public comments on the Negative Declaration. CONSULTANT will assist in preparing the administrative record on how agency and public comments were considered by TRLIA.

3.2.4. Prepare Mitigation Reporting and Monitoring Plan

TRLIA must prepare and adopt a mitigation reporting and monitoring plan within two months of adopting the negative declaration. The mitigation reporting and monitoring plan will describe the mitigation measures, how the measures will be implemented, who will be responsible for implementing the measures, and performance standards. It is assumed that the mitigation reporting and monitoring plan would be prepared based on final mitigation adopted in the negative declaration; however, the proposed plan could be included in the review draft of the initial study at TRLIA's discretion.

3.2.5. Attend Public Hearing

For an initial study and negative declaration, there is no requirement for a formal public hearing. However, CONSULTANT will attend a public hearing on the project at TRLIA's discretion. At the hearing, CONSULTANT will explain the CEQA process, present the findings of the Initial Study/Negative Declaration, and answer questions on the environmental document.

3.3. Public Outreach

CONSULTANT will conduct public outreach with adjacent residents and other stakeholders at the discretion of TRLIA as part of the environmental compliance documentation. For the compliance efforts in this scope, public outreach must include the Notice of Intent to Adopt a Mitigated Negative Declaration. At TRLIA's direction, CONSULTANT will also conduct group or one-on-one meetings with neighbors, develop informational materials, and manage media relations. The scope will be defined up to the level of effort provided in the cost estimate.



3.2.1. Prepare Administrative Draft Mitigated Negative Declaration

It is assumed that a mitigated negative declaration will be prepared for the project. The draft negative declaration will include a brief description of the project and proposed findings that the project will not result in a significant impact on the environment.

3.2.2. Prepare Mitigated Negative Declaration

CONSULTANT will incorporate comments into a mitigated negative declaration. CONSULTANT will prepare and distribute (on behalf of TRLIA) a notice of intent to adopt the negative declaration.

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TRLIA must prepare and adopt a mitigation reporting and monitoring plan within two months of adopting the negative declaration. The mitigation reporting and monitoring plan will describe the mitigation measures, how the measures will be implemented, who will be responsible for implementing the measures, and performance standards. It is assumed that the mitigation reporting and monitoring plan would be prepared based on final mitigation adopted in the negative declaration; however, the proposed plan could be included in the review draft of the initial study at TRLIA's discretion.

3.2.5. Attend Public Hearing

For an initial study and negative declaration, there is no requirement for a formal public hearing. However, CONSULTANT will attend a public hearing on the project at TRLIA's discretion. At the hearing, CONSULTANT will explain the CEQA process, present the findings of the Initial Study/Negative Declaration, and answer questions on the environmental document.

3.3. Public Outreach

CONSULTANT will conduct public outreach with adjacent residents and other stakeholders at the discretion of TRLIA as part of the environmental compliance documentation. For the compliance efforts in this scope, public outreach must include the Notice of Intent to Adopt a Mitigated Negative Declaration. At TRLIA's direction, CONSULTANT will also conduct group or one-on-one meetings with neighbors, develop informational materials, and manage media relations. The scope will be defined up to the level of effort provided in the cost estimate.



3.4. Permitting

3.4.1. Conduct Biological Field Studies

CONSULTANT will conduct biological field studies to support preparation of the biological assessment (BA), wetland delineation report, and CEQA document. Field surveys will be conducted by resource specialists who have previous experience in the project area according to resource agency standards. The field surveys will be conducted to document the following resources:

- ▶ **Special-Status Plants.** CONSULTANT will conduct a floristic inventory in the project area according to the California Native Plant Society's (CNPS) guidelines for rare and endangered plant surveys.
- ▶ **Special-Status Wildlife.** CONSULTANT will conduct reconnaissance-level surveys of the project site for wildlife species, including special-status species.
- ▶ **Special-Status Fish.** CONSULTANT will carry out a reconnaissance-level survey to qualitatively evaluate the fish habitat present at the project site and downstream of the site. CONSULTANT will not conduct any fish sampling because of the potential presence of special-status fish species that might require a special permit. CONSULTANT will incorporate an essential fish habitat assessment, required by NOAA-Fisheries, into the BA. This assessment covers protective measurements for commercially valuable species, regardless of endangered species status.
- ▶ **Waters of the United States (Including Wetlands).** Wetlands will be delineated using the routine on-site methods described in the USACE 1987 Wetland Delineation Manual. Other waters of the United States will be identified based on observable ordinary high-water mark.
- ▶ **Noxious Weeds.** A list of noxious weed species will be obtained from the County Agricultural Commissioner. The field survey will document the presence and extent of noxious weed infestations.
- ▶ **Plant Communities and Associated Wildlife Habitats.** Plant communities and associated wildlife habitats will be characterized and mapped during the field surveys. The plant communities will be classified according to the list of California terrestrial natural communities recognized by the NDDDB.
- ▶ **Native Trees.** CONSULTANT will document all individual native trees that occur in sensitive habitats and native trees in upland habitats that are greater than 6 inches diameter breast height. The purpose of this field task is to document native trees that would be directly removed or indirectly affected during construction. CDFG and NOAA-Fisheries will most likely require compensatory mitigation if willows or other riparian trees are removed during construction. The number of individual trees or shrubs removed during construction may be used to calculate mitigation plantings.

Resources located during field surveys will be mapped on aerial photographs and documented on field data forms. The survey corridor will include the existing and proposed right-of-way, equipment and material staging areas, and temporary access roads.



3.4.2. Prepare Wetland Delineation Report

CONSULTANT will prepare a report and map that document the methods used to delineate waters of the United States (including wetlands) and the results of this delineation. The report will be submitted to USACE for verification. CONSULTANT will attend the site verification visit with USACE to address questions and receive feedback on the delineation. After the USACE verification, a final report and map will be prepared.

3.4.3. Attend Informal Consultation Meetings with CDFG, USFWS and NOAA-Fisheries

CONSULTANT will attend up to two informal consultation meetings with CDFG, USFWS, and NOAA-Fisheries biologists to discuss impacts to listed species and potential mitigation measures.

3.4.4. Prepare BA and Attend 2 Formal Consultation Meetings with CDFG, USFWS, and NOAA-Fisheries

CONSULTANT will prepare an administrative draft BA for TRLIA review and a draft BA for resource agency review. The scope assumes that the CDFG, USFWS, and NOAA-Fisheries will not require additional field studies to support analysis of potential growth-inducing impacts on endangered species. CONSULTANT will attend up to 2 formal consultation meetings with CDFG, USFWS, and NOAA-Fisheries.

3.4.5. Prepare CWA 404 Permit Application

Under Section 404 of the CWA, a permit is required from USACE for the placement of dredged or fill material into waters of the United States, including wetlands. Projects may be authorized under existing general permits (Nationwide Permits) or may require an individual permit. A Nationwide Permit is assumed due to the anticipated extent of fill in waters of the United States.

CONSULTANT will submit an application to USACE to request a Nationwide Permit under CWA Section 404 for impacts affecting waters of the United States, including wetlands. A pre-application meeting may be held with USACE to obtain guidance in addressing impact minimization and mitigation issues.

3.4.6. Prepare CWA 401 Certification Application

CWA Section 401 requires that the discharge of dredged or fill material into waters of the United States, including wetlands, does not violate state water quality standards. As required by Section 404 of the CWA, water quality certification from Regional Water Quality Control Board (RWQCB) must be obtained for permit compliance. CONSULTANT will compile the necessary information and submit a complete certification package to RWQCB. A certification fee to be provided by TRLIA must be included in the package. Completion of the CEQA process is required before certification may be granted.



3.4.7. Prepare Streambed Alteration Agreement Application

A streambed alteration agreement, in compliance with Section 1600 of the California Fish and Game Code, is required when projects will substantially divert, obstruct, or change the natural flow of a river, stream or lake; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed. A formal application package will be prepared, describing the project features; construction period; construction methods; impacts to vegetation, fish, and wildlife; and the proposed monitoring plan. TRLIA will be required to pay an application fee to CDFG. Completion of the CEQA process is required before the agreement can be issued.

3.5. Reclamation Board Encroachment Permit for Yuba River Levee Repairs

CONSULTANT will prepare a Reclamation Board encroachment permit application and supporting documentation for approximately 1.3 miles of left bank levee repair/improvements on the Yuba River between the former Union Pacific Railroad (UPRR) to the Gold Fields. An encroachment permit from the Board will be required for the levee embankment repairs and improvements. A project-specific encroachment permit application can be adapted from the two former Yuba River permits utilized for the slurry wall and seepage berm improvements recently obtained in 2004 and 2005. Team coordination efforts will be needed before and subsequent to submitting an updated, project-specific encroachment permit application. The project-specific encroachment permit application for TRLIA's levee repairs/improvements on the Yuba River between the former SPRR and Simpson Lane will require an endorsement from USACE, RD 784 and possibly from the neighboring Reclamation District (the Levee Commission of Marysville).

CONSULTANT services will include: (1) preparation and submittal of the subject Reclamation Board Encroachment Permit Application; (2) follow-up meetings and informational submittals, on an as-needed basis to the Reclamation Board staff prior to the anticipated issuance during the spring of 2006; (3) review and recommendation of draft permit conditions and milestones on an as-needed basis; and (4) assist with pre-construction design submittals to the Reclamation Board staff on an as-needed basis.

3.6. Other Permits

CONSULTANT will work with other agencies and affected parties to help secure needed encroachment and other permits. It is anticipated that encroachment permits may be required from Caltrans and the Union Pacific Railroad for levee improvement work near their facilities.



Task 4. Plans, Specifications and Estimates (PS&E)

CONSULTANT will prepare finished construction drawings, specifications, and estimate of probable construction costs suitable for bidding and construction. PS&E will be prepared for levee improvements to the Yuba River levee, between the UPRR (upstream of SR 70) and the Gold Fields. For scoping purposes, the repair design is assumed to be a cutoff wall between UPRR and Simpson Lane, minor levee shaping between SR 70 and the UPRR, and filling of a toe ditch near the Gold Fields. PS&E will be an iterative process involving three levels of design (30 percent, 90 percent, and 100 percent).

PS&E will be reviewed by TRLIA and other agencies (including USACE) at the 30 percent and 90 percent levels. CONSULTANT will revise PS&E incorporating the comments from each review. The preparation of PS&E will include plans, details, cross sections, technical specifications, quantity calculations, and preliminary and estimate of probable construction costs. CONSULTANT will complete utility coordination related to the construction documents that are required for construction.

4.1. 30 Percent PS&E

30 Percent PS&E will include analyses, design, preliminary plans, preliminary technical specifications, preliminary quantities and a preliminary budget level cost estimate. The design will be submitted following internal QC review.

4.1.1. Drawings

Drawings will be prepared using AutoCad LDD software. A complete sheet listing table will be provided. These plans will include general layouts, preliminary topographic survey and mapping data, limited cross-sections, and a levee profile. The drawings will be developed in accordance with USACE formats (Tri-Service A/E/C CADD Standards).

4.1.2. Technical Specifications

Technical specifications will include preliminary specifications for major design features. Technical specifications will be prepared using Specs-Intact (the USACE standard).

4.1.3. Engineer's Report

CONSULTANT will prepare written documentation of engineering design. Documentation will consist of a binder containing additional field investigations (if any), analyses, design calculations, quantity take-offs and geometric calculations, utility information, quality control reviews and meeting notes. The Engineer's report will focus on materials prepared following completion of the Basis of Design report.



4.1.4. Cost Estimate

CONSULTANT will prepare a budget level cost estimate. Quantity take-off calculations and cost estimates will be prepared in a Microsoft Excel™ spreadsheet.

4.1.5. Quality Control

The 30 Percent submittal will undergo an internal quality assurance/quality control review per the project Quality Control Plan (QCP) prior to submittal.

4.1.6. Submit 30 Percent PS&E

Deliverables:

- ▶ 30 Percent PS&E Package (10 copies).

Comments/Assumptions:

- ▶ All required survey information for the project levee and surrounding work area will be performed by others and provided to CONSULTANT. Topographic information will be provided to CONSULTANT in AutoCAD format, with a minimum 1-foot contour interval. Field surveys will be completed to verify surface topography in areas to receive levee improvements, with levee cross sections completed every 200 feet on average. Land ownership information (including owner name and APN) will be included with survey information. Aerial images of the work area (taken within the last five years) will be obtained by others and provided to the CONSULTANT for use in the drawings. This information will be provided to the CONSULTANT by the start date of this task, as indicated on the project schedule.
- ▶ All required hydraulic and hydrology, including the determination of the 100-year and 200-year water surface elevations, will be performed by others and provided to CONSULTANT. This information will be provided to the CONSULTANT by the start date of this task, as indicated on the project schedule.

4.1.7. 30 Percent TRLIA and Agency Review

A 14-day review of 30 Percent PS&E will be conducted by TRLIA and other agencies. At the end of the review period, a design review meeting will be held with the reviewers to discuss comments.

Deliverables:

- ▶ Meeting Notes.

Comments/Assumptions:

- ▶ One 4-hour design review meeting will be required.



4.2. 90 Percent PS&E

Design will proceed to the 90 Percent level; during which comments received on the 30 Percent design will be incorporated. The 90 Percent submittal will include a full set of drawings, draft specifications, quantities, and an MCACES cost estimate. Final detailed survey topography and survey control will be included. 90 Percent PS&E will be submitted following internal QC.

4.2.1. Drawings

It is anticipated that plans will include the sheets listed below. The drawings will be developed in accordance with USACE formats (Tri-Service A/E/C CADD Standards). Anticipated sheets are listed below:

Table 1. Yuba River South Levee Preliminary Drawing List

Type of Drawings	Number of Sheets
<i>General</i>	
Location Maps	1 Sheet
Levee Alignment Tabulation	1 Sheet
<i>Civil Plans, Cross Sections and Details</i>	
Cross Sections (1 in = 10 ft)	5 Sheets
Earthwork and Other Details	3 Sheets
Other USACE standard details	1 Sheet
Curve and Tangent Tables	2 Sheets
Utility Location Reference Table	1 Sheet
<i>Soil Borings and Profiles</i>	
Cone Penetration Test Results	10 Sheets
TOTAL	20 Sheets



4.2.2. Specifications

Technical specifications will include all required applicable sections. The technical specifications will be developed in accordance with USACE formats. Specifications will be prepared utilizing SpecsIntact. General conditions from Sacramento County will be used. General conditions will be prepared using MS Word.

4.2.3. Engineer's Report

CONSULTANT will update the written documentation of engineering design, adding information developed since the 30 Percent design submittal. Documentation will consist of a binder containing additional field investigations (if any), analyses, design calculations, quantity take-offs and geometric calculations, utility information, quality control reviews and meeting notes.

4.2.4. Estimate of Probable Construction Costs

CONSULTANT will prepare a detailed estimate of probable construction costs using MCACES.

4.2.5. Quality Control

The 90 Percent submittal will undergo an internal quality assurance/quality control review per the project Quality Control Plan (QCP) prior to submittal.

4.2.6. Submit 90 Percent PS&E

Deliverables:

- ▶ 90 Percent PS&E (10 copies).

4.2.7. 90 Percent TRLIA and Agency Review

A 14 day review of 90 Percent PS&E will be conducted by TRLIA and other agencies. At the end of the review period, a design review meeting will be held with the reviewers to discuss comments.

Deliverables:

- ▶ Meeting Notes.

Comments/Assumptions:

- ▶ One 4-hour design review meeting will be required.

4.3. Final PS&E

Design will proceed during which comments received on the 90 Percent PS&E will be incorporated. A final round of internal QC will be conducted. The Final Plans and Specifications will include bid-ready



construction drawings and specifications. A final MCACES cost estimate will be prepared and submitted under separate cover.

4.3.1. Final Drawings

A set of final bid ready construction drawings will be prepared, which will incorporate appropriate comments received.

4.3.2. Final Specifications

A set of final bid ready specifications will be prepared, that will incorporate comments received.

4.3.3. Engineer's Report

CONSULTANT will prepare final documentation of engineering design, updating the report with items completed since the 90 Percent design submittal.

4.3.4. Estimate of Probable Construction Costs

Based on the final design, CONSULTANT will prepare a final estimate of probable construction costs using MCACES. The estimate will be submitted to TRLIA under a separate cover.

4.3.5. Quality Control

The final submittal will undergo an internal quality assurance/quality control review per the project Quality Control Plan (QCP) before submittal.

Deliverables:

- ▶ 10 full-size and 20 half-size sets of construction plans. One master copy of the Construction Drawings will also be included as ink on mylar.
- ▶ 20 bound sets of specifications. One unbound reproducible set will also be included.
- ▶ Final Estimate of Probable Construction Cost.

Comments/Assumptions:

- ▶ The Yuba River levee improvements that will be part of this project are assumed to consist of:
 - ▶ A slurry cutoff wall through the levee from Union Pacific Railroad to just upstream of Simpson Lane
 - ▶ Slope flattening on the water side of the levee near SR 70
 - ▶ Raising the levee near the 1986 break



- ▶ A berm to provide overlap just upstream of the Union Pacific Railroad
- ▶ Filling of a waterside ditch upstream of the USACE slurry cutoff wall in Sections 11 and 12 as described in the Phase 4 PIR
- ▶ TRRIA will distribute bid ready Construction Drawings and Specifications to potential bidders.
- ▶ Any opinions of probable project costs or probable construction cost provided by CONSULTANT are made on the basis of information available to CONSULTANT and on the basis of CONSULTANT's experience and qualifications, and represents its judgment as an experienced and qualified engineer. However, since CONSULTANT has no control over the cost of labor, materials, equipment or services furnished by others, or over the contractor methods of determining prices, or over competitive bidding or marked conditions, CONSULTANT does not guarantee that proposals, bids or actual project or construction cost will not vary from opinions of probable costs CONSULTANT prepares.



Task 5. Rights-Of-Way (ROW), Easement Requirements and Utilities Coordination

5.1. Real Estate Requirements

CONSULTANT will identify temporary construction and permanent easements based on 90 Percent PS&E (including requirements for drainage, levee, temporary construction staging, etc). CONSULTANT will coordinate with the Yuba County, UPRR and Caltrans during design to discuss real estate and access requirements during construction.

Deliverables:

- ▶ Land use map delineating all temporary construction and permanent easements required for the project. (10 copies)

Comments/Assumptions:

- ▶ Preparation of plat and legal descriptions will be performed by others. Field surveys to identify project boundaries will be performed by others.
- ▶ Real estate acquisitions will be performed by others.

5.2. Utility Identification Coordination

5.2.1. Conflict Identification

CONSULTANT will provide coordination with TRLIA and relevant utility companies regarding the potential impact of the proposed project on existing and planned future utilities. CONSULTANT will collect information and identify conflicts.

Deliverables:

- ▶ Utility Inventory (will be included in the Engineer's Report submittal).

Comments/Assumptions:

- ▶ Applicable information in Yuba County files, including utility location and utility company contact information, will be provided to the CONSULTANT.



5.2.2. Utility Relocation Coordination

CONSULTANT will coordinate with the appropriate agencies for the relocation of identified utility conflicts.

Deliverables:

- ▶ Meeting Notes, telephone conversation records and correspondence (will be included in the Engineer's Report submittal).



Task 6. Pre-Bid Assistance and Construction Support

After the Final PS&E are submitted, CONSULTANT will assist TRLIA during the pre-construction and construction phases of the project. CONSULTANT bidding and construction services will consist of the following:

6.1. Bidding Support (Addenda and Clarifications)

CONSULTANT will assist TRLIA with the bidding process for the Phase 4 project, including responding to provide addenda clarifying or technical questions related to the construction drawings from potential bidders.

Deliverables:

- ▶ One addendum to bid documents.

Comments/Assumptions:

- ▶ One addendum will be required.

6.2. Pre-Bid Meetings

CONSULTANT will attend a pre-bid meeting as requested by TRLIA. In addition, one meeting is assumed for coordination with TRLIA.

Deliverables:

- ▶ Meeting notes.

Comments/Assumptions:

- ▶ One pre-bid meeting and one coordination meeting are assumed.

6.3. Pre-Construction Meeting

CONSULTANT will attend a pre-construction meeting as requested by TRLIA.

Deliverables:

- ▶ Meeting Notes.

Assumptions:

- ▶ One meeting will be required.

6.4. Construction-Phase Services

CONSULTANT will assist TRLIA and TRLIA's Construction Manager as directed by TRLIA. Continuing construction support will be provided for the remainder of the Phase 2 project (Bear River,



WPIC and Yuba River levee repairs), and construction support will be provided for the Yuba River Phase 4 project. It is assumed that the Phase 4 construction will occur between May 15 and November 1, 2007. This support may include the following:

6.4.1. Request for Information Support

CONSULTANT will assist TRLIA with Requests for Information (RFIs) submitted by TRLIA's Contractor and will respond to RFIs related to CONSULTANT's scope of services.

Deliverables:

- ▶ Responses to RFIs.

Assumptions:

- ▶ Ten (10) RFIs will be submitted.

6.4.2. Shop Drawings and Submittal Clarification

CONSULTANT will review submittals from the Contractor as required by the technical specifications for clarification on behalf of TRLIA. CONSULTANT will review shop drawings submitted by Contractor for work related to CONSULTANT's scope of services as requested by TRLIA. CONSULTANT will review and accept Contractor submittals, such as shop drawings, product data, samples and other data, as required by CONSULTANT, but only for the limited purpose of checking for conformance with the design concept and the information expressed in the contract documents. This review will not include review of the accuracy or completeness of details, such as quantities, dimensions, weights or gauges, fabrication process, construction means or methods, coordination of the work with other trades or construction safety precautions, all of which are the sole responsibility of the Contractor. CONSULTANT's review will be conducted with reasonable promptness while allowing sufficient time in CONSULTANT's judgment to permit adequate review. Review of a specific item will not indicate that CONSULTANT has reviewed the entire assembly of which the item is a component. CONSULTANT will not be responsible for any deviations from the contract documents not brought to the attention of CONSULTANT in writing by the Contractor. CONSULTANT will not be required to review partial submissions nor those for which submissions of correlated items have not been received.

Deliverables:

- ▶ Reviews of submittals and shop drawings.

Assumptions:

- ▶ Twelve (12) submittal reviews.

6.4.3. Change Order Support

Should there be a change of conditions, claim, or other basis for a Change Order, CONSULTANT, as directed by TRLIA, will review the validity of the request and will assist TRLIA in its response.



Assumptions:

- ▶ Three (3) change orders will be submitted.

6.4.4. Field Visits and Site Meetings

CONSULTANT will conduct periodic field visits to observe progress and as requested by TRLIA. CONSULTANT will also attend bi-weekly site meetings between TRLIA and the Contractor. CONSULTANT's observation or monitoring portions of the work performed under construction contracts will not relieve the contractor from its responsibility for performing work in accordance with applicable contract documents. CONSULTANT will not control or have charge of, and will not be responsible for, construction means, methods, techniques, sequences, procedures of construction, health or safety programs or precautions connected with the work and will not manage, supervise, control or have charge of construction. CONSULTANT will not be responsible for the acts or omissions of the contractor or other parties on the project. CONSULTANT will be entitled to review all construction contract documents and to require that no provisions extend the duties or liabilities of CONSULTANT beyond those set forth in the CONSULTANT's Agreement with TRLIA.

Deliverables:

- ▶ Meeting and field notes.

Comments/Assumptions:

- ▶ Twelve (12) field visits and Twelve (12) construction meetings will be required.

6.4.5. Record Documents

Based on change orders and field revisions to the construction drawings, CONSULTANT will compile record drawings of the constructed improvements for each bid package. Upon completion of the construction contract, CONSULTANT will compile for and deliver to TRLIA, a set of Record Documents conforming to the marked-up prints, drawings and other data furnished to CONSULTANT by the Contractor. This set of Record Documents will show the reported location of the work and significant changes made during the construction process. Because these Record Documents are based on unverified information provided by other parties that will be assumed reliable, CONSULTANT cannot and does not warrant their accuracy. It is assumed that no changes will be made to title sheets, standard details, demolition/staging, traffic control plans, boring logs, and the horizontal control plan.

Deliverables:

- ▶ Record Drawings.

Assumptions:

- ▶ As-built information including changes will be provided by TRLIA and/or Contractor.
- ▶ 40 hours of CAD operator time will be required to incorporate all changes.



Part B - Continuation of Phase 2 Construction Management

Task 7. - Construction Management (Phase 2 Bear River, WPIC and Yuba River Levee Repairs in 2006)

CONSULTANT will provide Construction Management services during the construction phase of the Bear River, WPIC, Yuba River and Olivehurst Detention Basin improvements. The construction management team will administer the construction contract established between TRLIA and the Contractor and will provide Quality Assurance services. It is assumed that all levee improvements will be completed under one construction contract.

Included herein are anticipated construction management services for the 2006 segment of the construction project. It is assumed that the 2006 construction period will be May 15 through November 1.

7.1. Communications and Correspondence

CONSULTANT will be the communication hub for the project. All communication and correspondence from and to the Contractor, TRLIA and CONSULTANT's subconsultants will go through CONSULTANT's construction management team. This duty involves processing and controlling large volumes of paperwork.

Deliverables:

- ▶ Correspondence, RFI and Submittal Logs.

Assumptions:

- ▶ One full time document controller will be needed for the 2006 duration of the project. CONSULTANT will use Project Tracker, CONSULTANT's in-house developed document tracking software program, to log and track project paperwork.

7.2. Contract Administration

CONSULTANT will provide a Construction Manager and Resident Engineer for the construction period. The Resident Engineer will be on site full time for the duration of the construction period. The Construction Manager and Resident Engineer will be responsible for contract administration, which includes the following:

- ▶ Serving as the coordinator and facilitator between the primary parties involved in the contract,
- ▶ Processing submittals,
- ▶ Reviewing the construction schedule and monitoring progress,



- ▶ Processing progress payments,
- ▶ Using proper procedures to help avoid and resolve disputes,
- ▶ Helping to resolve potential claims,
- ▶ Negotiating and processing contract changes.

Deliverables:

- ▶ Daily Reports
- ▶ Monthly Status Reports.

Assumptions:

- ▶ One full time resident engineer will be needed for day to day contract management for the 2006 duration of the construction period. One part time construction manager will be needed for claims mitigation and change order negotiations for the duration of the construction period.
- ▶ Phase 2 construction work for the Bear River east of SR 70, the slurry walls for the WPIC, the Yuba River levee sand seepage berm, partial excavation of the Olivehurst Detention Basin, and the inlet structure of the Olivehurst pump station was be completed by November 1, 2005.
- ▶ Phase 2 work for the Bear River west of SR 70, the tie-in levee, Pump Station 6, the levee extension to Pump Station 6, completion of the levee raise along the WPIC, the final excavation of the Olivehurst Detention Basin, and the Olivehurst Detention Basin Restoration Project will be constructed between May 15 through November 1, 2006.
- ▶ TRLIA (via Contractor) will provide trailer, computers, office furniture, fax machine, copier, trailer, maintenance, restrooms, janitorial service, and supplies and utilities.

7.3. Quality Assurance Inspection and Testing

CONSULTANT will inspect and test to verify that the project is constructed in accordance with the requirements of the Contract. CONSULTANT will strive for the highest quality attainable within Project limitations. CONSULTANT will check materials brought on site for compliance with the Contract and approved submittals. CONSULTANT will check construction for proper location, dimension, elevation, and proper construction techniques. CONSULTANT'S geotechnical subconsultant will provide quality assurance testing of construction activities related to slurry wall construction and levee earthwork.

Deliverables:

- ▶ Daily reports.
- ▶ Test results.



- ▶ Photodocumentation.

Assumptions:

- ▶ Two full time inspectors will be needed for the duration of the 2005 construction period. In addition, a mechanical inspector and an electrical inspector will be needed during this period (120 hours total).

7.4. Final Completion/Project Closeout

CONSULTANT will obtain warranties, guaranties, and record drawings; develop a punch list; verify lien releases; and process the last progress payment and final payment.

Deliverables:

Final Payment Forms Processed.

7.5. Other Geotechnical Quality Assurance Testing and Inspection

CONSULTANT will provide construction quality assurance for the 2006 season from May 15 to November 1. This task includes on-site observation and testing, laboratory testing, engineering oversight, and final QA report for the following:

- ▶ Waterside impervious fill and erosion protection on the Bear River,
- ▶ Relocation of the Algodon Canal pump station,
- ▶ Levee raising and widening on the WPIC,
- ▶ Landside ditch filling on the WPIC, and
- ▶ South Olivehurst Detention Basin ring levee construction.

Our budget assumes one technician can perform observation and testing. The following services will be provided:

- ▶ 150 technician days at 12 hours per day. (Note that hourly rate in fee proposal is based on average of 40 regular, 20 overtime, and 12 double time hours per week.)
- ▶ Project Engineer at 2 hours per day
- ▶ Senior engineer at 8 hours per week
- ▶ Principal engineer at 8 hours per month
- ▶ Laboratory testing:
 - ▶ 2 ASTM 1557 Compaction curves per week for 25 weeks



- ▶ 2 Plasticity Index per week for 25 weeks
- ▶ 2 Sieve analysis per week for 25 weeks
- ▶ 10 sets of 4 concrete cylinders

Deliverables:

- ▶ Daily reports.
- ▶ Test results.
- ▶ Final Summary Letter Report.

7.6. Environmental Monitoring During Construction

CONSULTANT will provide environmental monitoring during construction of the Feather-Bear-WPIC Levee Project (Phase 2), the Yuba River Project (Phase 2a) and the South Olivehurst Detention Basin Project (project) for TRLIA. The primary responsibility will be monitoring the implementation of the construction project and associated conservation and mitigation measures to ensure compliance with the conditions in the state and federal permits, as well as other tasks as described below. This scope of work is based on known and assumed conditions of the various permits and authorizations applicable to the project, including the mitigation monitoring plan required under the California Environmental Quality Act (CEQA) documents and the conditions outlined in permits issued by the California Department of Fish and Game (CDFG), the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and the U.S. Fish and Wildlife Service (USFWS). The following key assumptions govern this scope and associated fee.

- ▶ The construction season will extend from June 1 through October 31, 2006, totaling 132 working days with 6-day work weeks.
- ▶ Environmental monitoring requires a full-time, dedicated, on-site monitor during construction, as conditioned by the Biological Opinion from USFWS.
- ▶ CONSULTANT monitor(s) will possess the requisite skills and certifications in accordance with the permit and authorization conditions.
- ▶ Monitoring for other permits and authorizations is compatible with and can be coincident with the full-time dedicated monitor as conditioned by the Biological Opinion from USFWS.
- ▶ No cultural resource monitoring is required by the Stage 1 permits. Cultural resource monitoring for Stage 2 (restoration of the setback area) will be conducted by others outside of this scope of work.
- ▶ CONSULTANT assumes a protocol that all communication is to be through the construction manager.



7.6.1. On Site Construction Support Service

CONSULTANT will provide a monitor that will be onsite throughout the construction phase of the project. The monitor will be onsite whenever work is occurring on the project. Services to be provided under this task include the following subtasks.

7.6.1.1. Environmental Awareness Training

CONSULTANT will provide an environmental training program for all construction personnel prior to the start of construction activities and as new crews are introduced to the project. The monitor will implement and report the results of this program. The program will educate workers about special-status species and waters of the U.S. present on and adjacent to the site and also about the regulations and penalties for unmitigated impacts on these sensitive resources.

Construction personnel will be required to attend environmental awareness training before working on any construction related activities. The training will include preparing and providing training materials (e.g., printed pamphlets). The monitor will be available to provide training to construction crews working in sensitive resource areas, on an as-needed basis (such as tailgate sessions).

7.6.1.2. Identify and Stake the Location of Sensitive Resources

CONSULTANT will identify and monitor the location of wetlands, riparian habitat, SRA cover, and other sensitive resources to be preserved. Protective fencing will be installed around all sensitive resources. Erosion-control fencing will also be placed at the edges of construction where the construction activities are upslope of wetlands and stream channels to prevent washing of sediments offsite. The contractor will be responsible for installing and maintaining protective/erosion-control fencing. The boundaries of environmentally sensitive areas will be determined, and erosion-control fencing will be installed, before any construction activities begin and will be maintained throughout the construction period.

The monitor will ensure the avoidance of all sensitive habitat areas, including adjacent wetlands. The protective/erosion-control fencing will be surveyed by the monitor each day of the construction period. The monitor will notify the contractor if repairs are required.

7.6.1.3. Implement Elderberry Shrub Protection

The monitor will identify and monitor the location of elderberry shrubs prior to construction. The monitor will also identify the buffer zone around each elderberry shrub (i.e., 20-foot buffer, where feasible) using grade stakes. The construction contractor will be responsible installing orange construction barrier fencing around each elderberry shrub. The monitor will be responsible for monitoring the condition of the fencing and will notify the contractor if repairs are required.

7.6.1.4. Perform Daily Wildlife Surveys in the Construction Areas

A CONSULTANT monitor will be responsible for conducting daily wildlife surveys and monitoring construction in habitat for sensitive species. Daily surveys will include walking and/or driving the project alignment in which construction is occurring. Wildlife occurring within the construction zone will be relocated to an undisturbed area adjacent to the project. All work in the immediate area shall cease until the animals can be relocated.



7.6.1.5. Perform Giant Garter Snake and Western Pond Turtle Surveys

CONSULTANT will also conduct preconstruction clearance surveys for giant garter snakes and western pond turtles. Suitable aquatic habitat and adjacent upland habitat up to 200 feet from aquatic habitat will be surveyed for the presence of these species. If a giant garter snake or western pond turtle is located in the project area, the location will be recorded on field forms and a GPS location will be taken. If a giant garter snake is encountered at the project site and is in imminent danger, the monitor will contact the USFWS prior to any handling of the snake. In the unlikely event that western pond turtles are located in an area that prevents them from moving out of harm's way they will be relocated to an undisturbed area adjacent to the project.

7.6.1.6. Perform Raptor Surveys

CONSULTANT will conduct surveys for nesting Swainson's hawks and other raptors along the project alignment. Surveys will be conducted three times each year of construction during the nesting period for Swainson's hawk and other raptors (i.e., March through August) when most birds, would be exhibiting nesting behaviors. All suitable nest trees will be searched by walking the project alignment and using binoculars with a magnification greater than eight. The location of all nesting raptors located in the project area will be recorded on field forms and a GPS location will be taken. If Swainson's hawks (or other special-status birds) are identified along the project alignment and nesting is not confirmed, a return visit may be required to determine if the bird is nesting in the project area.

7.6.1.7. Perform Nesting-Bird Surveys

CONSULTANT will conduct nesting bird surveys for nesting birds (non-raptor species) along the project alignment. Surveys will be conducted throughout the nesting period (i.e., March 1 through August) when most birds would be exhibiting nesting behaviors. All suitable nesting habitat will be searched by walking the project alignment and using binoculars. The location of all nesting birds located in the project area will be recorded on field forms and a GPS location will be taken.

7.6.2. Attend Meetings and Coordinate with Project Team

CONSULTANT will attend meetings the contractor, TRLIA, and other parties as necessary in support of the compliance activities. The monitor will also provide daily assistance with various other resource/regulatory tasks and attend required meetings with, or on behalf of, TRLIA as a liaison with the resource and regulatory agencies. This task includes weekly progress meetings and monthly management meetings.

7.6.3. Prepare Construction Monitoring Reports

CONSULTANT will prepare field forms to record monitoring activities, field inspections, project changes, and non-compliance events. The monitor will maintain daily logs, prepare weekly monitoring reports, and compile monthly monitoring reports that summarize the monitoring efforts, including any special-status species encountered, areas monitored, types of construction activities monitored, any non compliance events, and corrective action taken, to be submitted to various resource agencies, as required by the environmental permits.



Part C - FEMA Certification of Contract Work

Task 8. FEMA Certification for Contract Work

8.1. FEMA Certification for Contract Work

CONSULTANT to package contract items and perform additional FEMA-required analyses and studies to achieve FEMA certification for the levee repairs completed as part of the contract work. Contract work includes levee repairs made during the Phase 1 (Yuba River levee), Phase 2 (Bear River, WPIC and Yuba river levees), and Phase 4 (Yuba River levee) projects.

8.1.1. FEMA Certification Objective

A key objective of this project is to design and construct levee improvements, in order to prevent mapping of the protected areas into a FEMA special flood hazard area. FEMA regulations for levees require review of designs to ensure that the project will "safely convey the base flood." This review can either be done by FEMA's contractor in Washington DC, or by another federal agency responsible for flood control. (Prudent practice is to secure this review on the design prior to construction.) FEMA will review designs, and once all concerns are addressed, will issue a Conditional Letter of Map Revision (CLOMR). Following construction, FEMA will then review changes during construction, as-built drawings, O&M manuals, hydrology, hydraulics, and the proposed floodplain maps. Once all concerns are addressed, FEMA will issue a Letter of Map Revision (LOMR).

The alternate process is to have a federal agency with responsibility for levee design, such as the Corps of Engineers or the NRCS, certify that the levee has been adequately designed and constructed to provide protection against the base flood. Once the project is built, the federal agency then prepares a Letter of Certification. This letter, plus as-built drawings, O&M Manuals, hydrology, hydraulics, and the proposed floodplain maps are then sent to FEMA for LOMR processing.

The request package will contain the FEMA application form along with information from previous analyses that address the following:

- ▶ **Freeboard:** Riverine levees must provide a minimum freeboard of three feet above the water-surface level of the base flood. An additional one foot above the minimum is required within 100 feet in either side of structures (such as bridges) riverward of the levee or wherever the flow is constricted. An additional one-half foot above the minimum at the upstream end of the levee, tapering to not less than the minimum at the downstream end of the levee, is also required.
- ▶ **Closures:** All openings must be provided with closure devices that are structural parts of the system during operation and design according to sound engineering practice.
- ▶ **Embankment protection:** Engineering analyses must be submitted that demonstrate that no appreciable erosion of the levee embankment can be expected during the base flood, as a result of either currents or waves, and that anticipated erosion will not result in failure of the levee



embankment or foundation directly or indirectly through reduction of the seepage path and subsequent instability.

- ▶ **Embankment and foundation stability:** Engineering analyses that evaluate levee embankment stability must be submitted. The analyses provided must evaluate expected seepage during loading conditions associated with the base flood and demonstrate that seepage into or through the levee foundation and embankment will not jeopardize embankment or foundation stability.
- ▶ **Settlement:** Engineering analyses must be submitted that assess the potential and magnitude of future losses of freeboard as a result of levee settlement and demonstrate that freeboard will be maintained within the minimum standards
- ▶ **Interior drainage:** An analysis must be submitted that identifies the source(s) of such flooding, the extent of the flooded area, and, if the average depth is greater than one foot, the water-surface elevation(s) of the base flood. This analysis must be based on the joint probability of interior and exterior flooding and the capacity of facilities (such as drainage lines and pumps) for evacuating interior floodwaters.
- ▶ **Other design criteria:** In unique situations, such as those where the levee system has relatively high vulnerability, FEMA may require that other design criteria and analyses be submitted to show that the levees provide adequate protection. In such situations, sound engineering practice will be the standard on which FEMA will base its determinations. FEMA will also provide the rationale for requiring this additional information.
- ▶ **Operation plans and criteria:** The operational criteria must be as described. All closure devices or mechanical systems for internal drainage, whether manual or automatic, must be operated in accordance with an officially adopted operation manual. All operations must be under the jurisdiction of a Federal or State agency, an agency created by Federal or State law, or an agency of a community participating in the NFIP.
- ▶ **Maintenance plans and criteria:** The maintenance criteria must be as described. Levee systems must be maintained in accordance with an officially adopted maintenance plan, and a copy of this plan must be provided to FEMA. This plan must document the formal procedure that ensures that the stability, height, and overall integrity of the levee and its associated structures and systems are maintained.

8.1.2. Development of Request for LOMR Package

For this scope of work, the CONSULTANT assumes that USACE is unable to provide a Letter of Certification, and that the CONSULTANT will work directly with FEMA to provide certification. Such certification would consist of a statement from a registered professional engineer that the works are designed in accordance with sound engineering practices to provide protection from the base flood. Per FEMA regulations, certification does not constitute a warranty or guarantee of performance, expressed or implied.



CONSULTANT will prepare a request for a LOMR, which will be reviewed by FEMA's contractor in Washington D.C. (Michael Baker). The request package will contain the FEMA application form along with information from previous analyses that address the following:

- ▶ Freeboard
- ▶ Closures
- ▶ Embankment protection
- ▶ Embankment and foundation stability
- ▶ Settlement
- ▶ Interior drainage
- ▶ Other design criteria
- ▶ Operation plans and criteria
- ▶ Maintenance plans and criteria

Deliverables:

- ▶ A letter from a registered professional engineer that states the completed levee repairs that are part of the contract work have been designed in accordance with sound engineering practices to provide protection from the base flood.
- ▶ An application package to FEMA for a LOMR, including a completed application form along with supporting information from previous analyses. (2 copies).

Assumptions:

- ▶ Portions of RD No. 784 (i.e., the area protected by levees repaired as part of this project) have been remapped by FEMA as being within the 100-year floodplain, and a request for a LOMR from FEMA is appropriate.
- ▶ The application to FEMA for a LOMR will be only for the portions of RD No. 784 levees that are part of the CONSULTANT's project (including the Bear River north levee from the WPIC to the setback levee, the WPIC west levee, and the Yuba River south levee from SR 70 to the Gold Fields).
- ▶ The analyses needed for the FEMA application package have already been completed by the CONSULTANT and others. No additional analyses are required.
- ▶ TRLIA will provide reports and information prepared by others needed for the application package, including field explorations, engineering analyses and operations and maintenance plans.



- ▶ A draft application will be submitted to FEMA, for review. FEMA comments will be reviewed and a final application will be submitted.

8.1.3. Geotechnical Support for LOMR Package

Provide geotechnical support for preparation of LOMR application including copies of relevant geotechnical documents and an executive summary of CONSULTANT's investigation, design, and construction reports as needed.

Deliverables:

- ▶ A letter from a registered professional geotechnical engineer that states the geotechnical components of the completed levee repairs that are part of the contract work have been designed in accordance with sound engineering practices to provide protection from the base flood.
- ▶ Supporting geotechnical information from previous analyses for the application package to FEMA for a LOMR. (2 copies).

Assumptions:

- ▶ A draft application will be submitted to FEMA, for review. FEMA comments will be reviewed and a final application will be submitted.



SCHEDULE FOR PERFORMANCE

Table 2. Schedule of completion

Task Description	Duration
Part A - Phase 4 Levee Repairs, Upper Yuba River	
Task 2 - Yuba River Levee Pre-design	91 days after Kickoff Meeting
Task 4 - Plans, Specifications & Estimates	223 days after Check Point Meeting - Basis of Design
Task 6 - Pre-Bid Assistance and Construction Support (Phase 4)	Per bid and construction sched
Task 7 - Construction Management (Phase 2 Bear River, WPIC and Yuba River Levees Repairs in 2006)	Per bid and construction sched
Task 8 - FEMA Certification for Contract Work	120 days after completion of Phase 4 Construction

Notes:

- ▶ Survey mapping information by others to be supplied NLT April 1, 2006.

Services Provided By Others:

- ▶ Base mapping and field surveys (levee cross sections, property lines, utility locations). Mapping and survey data will be provided to CONSULTANT in hard copy and digital formats.
- ▶ Preparation of plats and legal descriptions.
- ▶ Appraisals, negotiations with property owners, and acquisitions.



FEES AND PAYMENTS

Payment for all engineering services performed by CONSULTANT shall be on a time and materials basis as described by the terms of this Scope of Services. Payments made by TRLIA to CONSULTANT for engineering services shall be full compensation for all personnel, materials, supplies, and equipment used by CONSULTANT to complete the work.

CONSULTANT has prepared a cost breakdown shown below. The not to exceed total (Tasks 1 through 8) is \$2,580,038.

Table 3. Not to Exceed Total

Task Description	Fee
Part A - Phase 4 Levee Repairs, Upper Yuba River	
Task 2 - Yuba River Levee Pre-design	\$137,608
Task 4 - Plans, Specifications & Estimates	\$316,107
Task 6 - Pre-Bid Assistance and Construction Support (Phase 4)	\$119,339
Task 7 - Construction Management (Phase 2 Bear River, WPIC and Yuba River Levees Repairs in 2006)	\$1,257,824
Task 8 - FEMA Certification for Contract Work	\$147,129
Total - Basic Services (Tasks 1 - 8)	\$2,580,038



HDR, INC.
2005 STANDARD RATE SCHEDULE

Classification	Rate
E7	\$ 195.00
E6	\$ 185.00
E5	\$ 155.00
E4	\$ 122.00
E3	\$ 100.00
E2	\$ 90.00
E1	\$ 80.00
T4	\$ 105.00
T3	\$ 91.50
T2	\$ 60.00
T1	\$ 48.00
Financial	\$ 95.00
Web Technician	\$ 81.00
Administrative/Clerical	\$ 61.00

Please Note: Rates include current overhead rate plus profit. Rules subject to change on an annual basis beginning January 1.

EXPENSES

In-House Expenses -

Technology Fee (per labor hour)	\$ 4.10
Vehicle Mileage (per mile)	\$ 0.485
Color Copy (per copy)	\$ 1.65
Photocopies (per copy)	\$ 0.10

Plotting (cost depends on size of plot)

	<i>Black and White</i>	<i>Color</i>
Bond	\$0.80 to \$3.50	\$10.50 to \$20.25
Vellum	\$1.60 to \$9.65	\$12.50 to \$24.75
Mylar	\$2.50 to \$14.85	\$15.00 to \$29.25

Other Expenses

Hired Services - Subconsultants, typing services, etc.

Miscellaneous Supplies - Publications, printing, equipment rental, etc.

Please Note: Outside expenses are charged with a 10 percent markup.

**Three Rivers Levee Improvement Authority
 PHASE 4 LEVEE REPAIR - YUBA RIVER
 FEMA CERTIFICATION OF CONTRACT WORK (2006)**

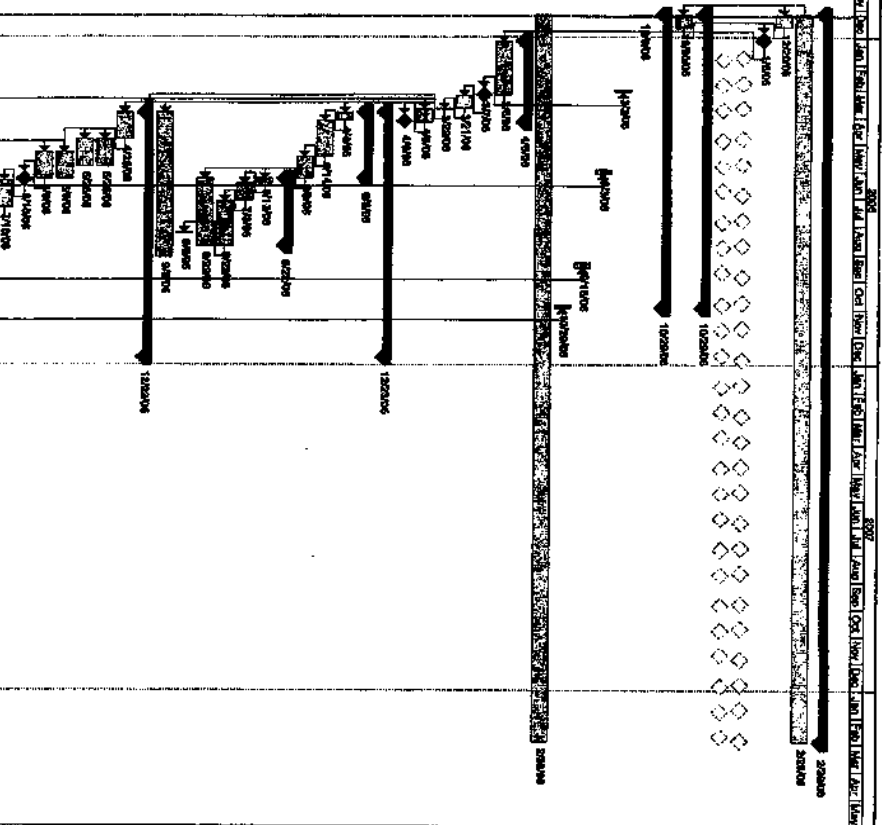
Row	Task	Task Name	Duration	Start	Finish
1	1	PART A - PHASE 4 LEVEE REPAIRS - UPPER YUBA RIVER			
2	1.1	PROJECT MANAGEMENT			
3	1.1.1	Project Management	818 days	1/27/06	9/28/08
4	1.1.2	Project Update	813 days	1/27/06	9/28/08
5	1.1.3	Plan Of Facility	14 days	1/27/06	1/30/06
6	1.1.4	Monthly Status Meetings	1 day	1/27/06	1/28/06
7	1.1.5	Monthly Progress Reports	448 days	1/28/06	9/27/08
8	1.1.6	Quality Control	441 days	1/27/06	9/27/08
9	1.1.7	Quality Control Plan	297 days	1/27/06	10/28/07
10	1.1.8	QC Review on Deliverables	14 days	1/27/06	1/30/06
11	1.1.9	QC Alternative Analysis TM	327 days	1/27/06	10/28/07
12	1.1.10	QC Status of Design TM	3 days	1/27/06	1/30/06
13	1.1.11	QC 90 Percent POSE	5 days	6/28/06	7/3/06
14	1.1.12	QC 90 Percent POSE	5 days	6/28/06	7/3/06
15	1.1.13	QC Final POSE	3 days	6/28/06	7/3/06
16	1.1.14	Agency Documentation	813 days	1/27/06	9/28/08
17	1.1.15	Agency Documentation	813 days	1/27/06	9/28/08
18	2	YUBA RIVER LEVEE PROTECTION			
19	2.1	Submittal Design Report	81 days	1/27/06	3/17/06
20	2.2	Submittal Design Report	81 days	1/27/06	3/17/06
21	2.3	Submittal Design Report	81 days	1/27/06	3/17/06
22	2.4	Submittal Design Report	81 days	1/27/06	3/17/06
23	2.5	Submittal Design Report	81 days	1/27/06	3/17/06
24	2.6	Final Basis of Design Report	1 day	3/17/06	3/17/06
25	2.7	Final Basis of Design Report	1 day	3/17/06	3/17/06
26	2.8	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
27	2.9	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
28	2.10	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
29	2.11	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
30	2.12	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
31	2.13	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
32	2.14	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
33	2.15	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
34	2.16	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
35	2.17	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
36	2.18	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
37	2.19	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
38	2.20	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
39	2.21	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
40	2.22	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
41	2.23	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
42	2.24	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
43	2.25	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
44	2.26	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
45	2.27	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
46	2.28	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
47	2.29	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
48	2.30	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
49	2.31	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
50	2.32	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
51	2.33	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
52	2.34	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
53	2.35	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
54	2.36	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
55	2.37	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
56	2.38	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
57	2.39	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
58	2.40	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
59	2.41	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
60	2.42	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
61	2.43	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
62	2.44	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
63	2.45	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
64	2.46	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
65	2.47	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
66	2.48	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
67	2.49	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
68	2.50	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
69	2.51	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
70	2.52	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
71	2.53	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
72	2.54	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
73	2.55	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
74	2.56	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
75	2.57	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
76	2.58	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
77	2.59	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
78	2.60	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
79	2.61	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
80	2.62	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
81	2.63	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
82	2.64	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
83	2.65	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
84	2.66	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
85	2.67	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
86	2.68	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
87	2.69	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
88	2.70	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
89	2.71	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
90	2.72	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
91	2.73	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
92	2.74	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
93	2.75	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
94	2.76	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
95	2.77	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
96	2.78	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
97	2.79	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
98	2.80	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
99	2.81	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06
100	2.82	Submittal Final Basis of Design Report	1 day	3/17/06	3/17/06



Project: PHASE 4 LEVEE REPAIR - YUBA RIVER
 Submittal Number: 07/06

Task: Summary
 Status: Scheduled Up Start

Project Summary
 External Links



**Three Rivers Levee Improvement Authority
 PHASE 4 LEVEE REPAIR - YUBA RIVER
 CONTINUATION OF PHASE 2 CONSTRUCTION MANAGEMENT (2006)
 FEMA CERTIFICATION OF CONTRACT WORK**

Row	Task	Task Name	Duration	Start	Finish	Precedence
96		USACE Reviews RSI Construction and Forewarn RSI to USFWS	1 day	2/11/06	2/11/06	
97		USFWS Reviews RSI and Reviews Mitigation Option	1 day	2/11/06	2/11/06	
98		USACE Reviews Mitigation Option and Reviews RSI	1 day	2/11/06	2/11/06	
99	3.4.4	Finalize RSI Critical Activities	30 days	2/11/06	3/10/06	
100		PHOSF Review Application and Review Permit	30 days	2/11/06	3/10/06	
101	3.4.7	PHOSF Review Application and Review Permit	30 days	2/11/06	3/10/06	
102		PHOSF Review Application and Review Permit	30 days	2/11/06	3/10/06	
103	3.5	PHOSF Review Application and Review Permit	30 days	2/11/06	3/10/06	
104	3.5.1	PHOSF Review Application and Review Permit	30 days	2/11/06	3/10/06	
105	3.5.2	PHOSF Review Application and Review Permit	30 days	2/11/06	3/10/06	
106	4	PLANS, SPECIFICATIONS & ESTIMATE (P&S)	228 days	3/23/06	10/21/06	
107	4.1	Chief Engineer	1 day	3/23/06	3/23/06	
108	4.2	Chief Engineer	1 day	3/23/06	3/23/06	
109	4.3	Chief Engineer	1 day	3/23/06	3/23/06	
110	4.4	Chief Engineer	1 day	3/23/06	3/23/06	
111	4.5	Chief Engineer	1 day	3/23/06	3/23/06	
112	4.6	Chief Engineer	1 day	3/23/06	3/23/06	
113	4.7	Chief Engineer	1 day	3/23/06	3/23/06	
114	4.8	Chief Engineer	1 day	3/23/06	3/23/06	
115	4.9	Chief Engineer	1 day	3/23/06	3/23/06	
116	5	RIGHT-OF-WAY/ASSESSMENT AND UTILITY REQUIREMENTS	208 days	3/23/06	10/21/06	
117	5.1	Right-of-Way Assessment	208 days	3/23/06	10/21/06	
118	5.2	Right-of-Way Assessment	208 days	3/23/06	10/21/06	
119	5.3	Right-of-Way Assessment	208 days	3/23/06	10/21/06	
120	5.4	Right-of-Way Assessment	208 days	3/23/06	10/21/06	
121	5.5	Right-of-Way Assessment	208 days	3/23/06	10/21/06	
122	5.6	Right-of-Way Assessment	208 days	3/23/06	10/21/06	
123	5.7	Right-of-Way Assessment	208 days	3/23/06	10/21/06	
124	5.8	Right-of-Way Assessment	208 days	3/23/06	10/21/06	
125	5.9	Right-of-Way Assessment	208 days	3/23/06	10/21/06	
126	5.10	Right-of-Way Assessment	208 days	3/23/06	10/21/06	
127	6	PRE-BID ASSISTANCE AND CONSTRUCTION SUPPORT	251 days	1/11/06	1/11/07	
128	6.1	Pre-Bid Assistance	251 days	1/11/06	1/11/07	
129	6.2	Pre-Bid Assistance	251 days	1/11/06	1/11/07	
130	6.3	Pre-Bid Assistance	251 days	1/11/06	1/11/07	
131	6.4	Pre-Bid Assistance	251 days	1/11/06	1/11/07	
132	6.5	Pre-Bid Assistance	251 days	1/11/06	1/11/07	
133	6.6	Pre-Bid Assistance	251 days	1/11/06	1/11/07	
134	6.7	Pre-Bid Assistance	251 days	1/11/06	1/11/07	
135	6.8	Pre-Bid Assistance	251 days	1/11/06	1/11/07	
136	6.9	Pre-Bid Assistance	251 days	1/11/06	1/11/07	
137	6.10	Pre-Bid Assistance	251 days	1/11/06	1/11/07	
138	7	PART B - CONTINUATION OF PHASE 2 CONSTRUCTION MANAGEMENT	170 days	5/1/06	10/21/06	
139	7.1	Construction Management	170 days	5/1/06	10/21/06	
140	7.2	Construction Management	170 days	5/1/06	10/21/06	
141	7.3	Construction Management	170 days	5/1/06	10/21/06	
142	7.4	Construction Management	170 days	5/1/06	10/21/06	
143	7.5	Construction Management	170 days	5/1/06	10/21/06	
144	7.6	Construction Management	170 days	5/1/06	10/21/06	
145	7.7	Construction Management	170 days	5/1/06	10/21/06	
146	7.8	Construction Management	170 days	5/1/06	10/21/06	
147	7.9	Construction Management	170 days	5/1/06	10/21/06	
148	7.10	Construction Management	170 days	5/1/06	10/21/06	
149	7.11	Construction Management	170 days	5/1/06	10/21/06	
150	7.12	Construction Management	170 days	5/1/06	10/21/06	
151	7.13	Construction Management	170 days	5/1/06	10/21/06	
152	7.14	Construction Management	170 days	5/1/06	10/21/06	
153	7.15	Construction Management	170 days	5/1/06	10/21/06	
154	7.16	Construction Management	170 days	5/1/06	10/21/06	
155	7.17	Construction Management	170 days	5/1/06	10/21/06	
156	7.18	Construction Management	170 days	5/1/06	10/21/06	
157	7.19	Construction Management	170 days	5/1/06	10/21/06	
158	7.20	Construction Management	170 days	5/1/06	10/21/06	
159	7.21	Construction Management	170 days	5/1/06	10/21/06	
160	7.22	Construction Management	170 days	5/1/06	10/21/06	
161	7.23	Construction Management	170 days	5/1/06	10/21/06	
162	7.24	Construction Management	170 days	5/1/06	10/21/06	
163	7.25	Construction Management	170 days	5/1/06	10/21/06	
164	7.26	Construction Management	170 days	5/1/06	10/21/06	
165	7.27	Construction Management	170 days	5/1/06	10/21/06	
166	7.28	Construction Management	170 days	5/1/06	10/21/06	
167	7.29	Construction Management	170 days	5/1/06	10/21/06	
168	7.30	Construction Management	170 days	5/1/06	10/21/06	
169	7.31	Construction Management	170 days	5/1/06	10/21/06	
170	7.32	Construction Management	170 days	5/1/06	10/21/06	
171	7.33	Construction Management	170 days	5/1/06	10/21/06	
172	7.34	Construction Management	170 days	5/1/06	10/21/06	
173	7.35	Construction Management	170 days	5/1/06	10/21/06	
174	7.36	Construction Management	170 days	5/1/06	10/21/06	
175	7.37	Construction Management	170 days	5/1/06	10/21/06	
176	7.38	Construction Management	170 days	5/1/06	10/21/06	
177	7.39	Construction Management	170 days	5/1/06	10/21/06	
178	7.40	Construction Management	170 days	5/1/06	10/21/06	
179	7.41	Construction Management	170 days	5/1/06	10/21/06	
180	7.42	Construction Management	170 days	5/1/06	10/21/06	
181	7.43	Construction Management	170 days	5/1/06	10/21/06	
182	7.44	Construction Management	170 days	5/1/06	10/21/06	
183	7.45	Construction Management	170 days	5/1/06	10/21/06	
184	7.46	Construction Management	170 days	5/1/06	10/21/06	
185	7.47	Construction Management	170 days	5/1/06	10/21/06	
186	7.48	Construction Management	170 days	5/1/06	10/21/06	
187	7.49	Construction Management	170 days	5/1/06	10/21/06	
188	7.50	Construction Management	170 days	5/1/06	10/21/06	
189	7.51	Construction Management	170 days	5/1/06	10/21/06	
190	7.52	Construction Management	170 days	5/1/06	10/21/06	
191	7.53	Construction Management	170 days	5/1/06	10/21/06	
192	7.54	Construction Management	170 days	5/1/06	10/21/06	
193	7.55	Construction Management	170 days	5/1/06	10/21/06	
194	7.56	Construction Management	170 days	5/1/06	10/21/06	
195	7.57	Construction Management	170 days	5/1/06	10/21/06	
196	7.58	Construction Management	170 days	5/1/06	10/21/06	
197	7.59	Construction Management	170 days	5/1/06	10/21/06	
198	7.60	Construction Management	170 days	5/1/06	10/21/06	
199	7.61	Construction Management	170 days	5/1/06	10/21/06	
200	7.62	Construction Management	170 days	5/1/06	10/21/06	
201	7.63	Construction Management	170 days	5/1/06	10/21/06	
202	7.64	Construction Management	170 days	5/1/06	10/21/06	
203	7.65	Construction Management	170 days	5/1/06	10/21/06	
204	7.66	Construction Management	170 days	5/1/06	10/21/06	
205	7.67	Construction Management	170 days	5/1/06	10/21/06	
206	7.68	Construction Management	170 days	5/1/06	10/21/06	
207	7.69	Construction Management	170 days	5/1/06	10/21/06	
208	7.70	Construction Management	170 days	5/1/06	10/21/06	
209	7.71	Construction Management	170 days	5/1/06	10/21/06	
210	7.72	Construction Management	170 days	5/1/06	10/21/06	
211	7.73	Construction Management	170 days	5/1/06	10/21/06	
212	7.74	Construction Management	170 days	5/1/06	10/21/06	
213	7.75	Construction Management	170 days	5/1/06	10/21/06	
214	7.76	Construction Management	170 days	5/1/06	10/21/06	
215	7.77	Construction Management	170 days	5/1/06	10/21/06	
216	7.78	Construction Management	170 days	5/1/06	10/21/06	
217	7.79	Construction Management	170 days	5/1/06	10/21/06	
218	7.80	Construction Management	170 days	5/1/06	10/21/06	
219	7.81	Construction Management	170 days	5/1/06	10/21/06	
220	7.82	Construction Management	170 days	5/1/06	10/21/06	
221	7.83	Construction Management	170 days	5/1/06	10/21/06	
222	7.84	Construction Management	170 days	5/1/06	10/21/06	
223	7.85	Construction Management	170 days	5/1/06	10/21/06	
224	7.86	Construction Management	170 days	5/1/06	10/21/06	
225	7.87	Construction Management	170 days	5/1/06	10/21/06	
226	7.88	Construction Management	170 days	5/1/06	10/21/06	
227	7.89	Construction Management	170 days	5/1/06	10/21/06	
228	7.90	Construction Management	170 days	5/1/06	10/21/06	
229	7.91	Construction Management	170 days	5/1/06	10/21/06	
230	7.92	Construction Management	170 days	5/1/06	10/21/06	
231	7.93	Construction Management	170 days	5/1/06	10/21/06	
232	7.94	Construction Management	170 days	5/1/06	10/21/06	
233	7.95	Construction Management	170 days	5/1/06	10/21/06	
234	7.96	Construction Management	170 days	5/1/06	10/21/06	
235	7.97	Construction Management	170 days	5/1/06	10/21/06	
236	7.98	Construction Management	170 days	5/1/06	10/21/06	
237	7.99	Construction Management	170 days	5/1/06	10/21/06	
238	7.100	Construction Management	170 days	5/1/06	10/21/06	
239	7.101	Construction Management	170 days	5/1/06	10/21/06	
240	7.102	Construction Management	170 days	5/1/06	10/21/06	
241	7.103	Construction Management	170 days	5/1/06	10/21/06	
242	7.104	Construction Management	170 days	5/1/06	10/21/06	
243	7.105	Construction Management	170 days	5/1/06	10/21/06	
244	7.106	Construction Management	170 days	5/1/06	10/21/06	
245	7.107	Construction Management	170 days	5/1/06	10/21/06	
246	7.108	Construction Management	170 days	5/1/06	10/21/06	
247	7.109	Construction Management	170 days	5/1/06	10/21/06	
248	7.110	Construction Management	170 days	5/1/06	10/21/06	
249	7.111	Construction Management	170 days	5/1/06	10/21/06	
250	7.112	Construction Management	170 days	5/1/06	10/21/06	
251	7.113	Construction Management	170 days	5/1/06	10/21/06	
252	7.114	Construction Management	170 days	5/1/06	10/21/06	
253	7.115	Construction Management	170 days	5/1/06	10/21/06	
254	7.116	Construction Management	170 days	5/1/06	10/21/06	
255	7.117	Construction Management	170 days	5/1/06	10/21/06	
256	7.118	Construction Management	170 days	5/1/		