

AMENDMENT NO. 8

AGREEMENT FOR PROFESSIONAL SERVICES
FOR
PHASE 4 FEATHER RIVER LEVEE REPAIRS
BETWEEN
THREE RIVERS LEVEE IMPROVEMENT AUTHORITY AND
BOOKMAN-EDMONSTON/GEI CONSULTANTS

THIS AMENDMENT TO AGREEMENT is made effective June 10, 2008, by and between Three Rivers Levee Improvement Authority ("TRLIA") and Bookman-Edmonston/GEI Consultants, a division of GEI Consultants, Inc. ("Contractor"), who agree as follows:

1. **Recitals.** This Amendment is made with reference to the following background recitals:
 - 1.1. Effective December 13, 2005, the parties entered into the Agreement for Professional Services relating to TRLIA's Phase 4 Feather River Levee project with a contract value of \$1,439,400.
 - 1.2. Effective April 25, 2006, the parties entered into Amendment No. 1 to the Agreement for Professional Services relating to TRLIA's Phase 4 Feather River Levee Repair design in the amount of \$3,082,240 for a total contract value of \$4,521,640.
 - 1.3. Effective June 27, 2006, the parties entered into Amendment No. 2 to the Agreement for Professional Services relating to TRLIA's Phase 4 Feather River Levee Repair design in the amount of \$32,700 for a total contract value of \$4,554,340.
 - 1.4. Effective October 30, 2006, the parties entered into Amendment No. 3 to the Agreement for Professional Services relating to TRLIA's Phase 4 Feather River Levee Repair design in the amount of \$262,500 for a total contract value of \$4,816,840.
 - 1.5. Effective January 16, 2007, the parties entered into Amendment No. 4 to the Agreement for Professional Services relating to TRLIA's Phase 4 Feather River Levee Repair design in the amount of \$115,000 for a total contract value of \$4,931,840.
 - 1.6. Effective April 3, 2007, the parties entered into Amendment No. 5 to the Agreement for Professional Services relating to TRLIA's Phase 4 Feather River Setback Levee design in the amount of \$5,860,244 for a total contract value of \$10,792,084.
 - 1.7. Effective September 18, 2007, the parties entered into Amendment No. 6 to the Agreement for Professional Services relating to TRLIA's Phase 4 Feather

River Setback Levee design in the amount of \$1,963,660 for a total contract value of \$12,755,744.

1.8. Effective April 15, 2008, the parties entered into Amendment No. 7 to the Agreement for Professional Services relating to TRLIA's Phase 4 Feather River Setback Levee design in the amount of \$636,300 for a total contract value of \$13,392,044.

1.9. The parties now desire to amend the Professional Services Agreement to expand scope of services and base contract fee.

2. **Eighth Amendment to Agreement.** The Professional Services Agreement is hereby amended as follows:

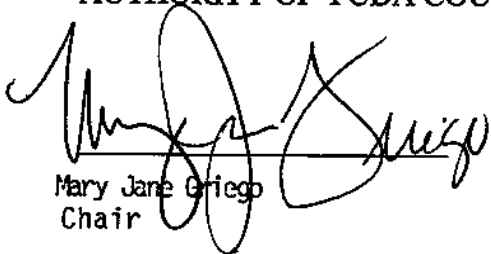
2.1. The scope of services (Attachment A to the Agreement for Professional Services between TRLIA and B-E/GEI, dated December 13, 2005) is amended to expand the scope of work as described by letter dated May 21, 2008 (Exhibit A) to include construction management services for the Setback Levee in Segment 2 of the Feather River Levee Repair Project.

2.2. The payment, budget, and not-to-exceed amounts (Professional Services Agreement Attachment B) are amended by the attached Exhibit B to include the additional amount of \$5,671,000 for a total contract of \$19,063,044.

3. **No Effect on Other Provisions.** Except for the amendments in Section 2, the remaining provisions of the Professional Services Agreement shall be unaffected and remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on
June 17, 2008.

THREE RIVERS LEVEE IMPROVEMENT
AUTHORITY OF YUBA COUNTY



Mary Jane Griego
Chair

BOOKMAN-EDMONSTON, A
DIVISION OF GEI
CONSULTANTS, INC.

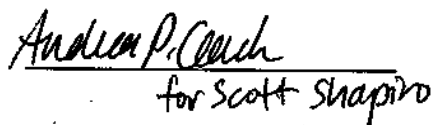


Raymond D. Hart
Senior Vice President

ATTEST:
DONNA STOTTEMEYER
SECRETARY, THREE RIVERS



APPROVED AS TO FORM:
SCOTT L. SHAPIRO
GENERAL COUNSEL, TRLIA



Andrew P. Couch
for Scott Shapiro



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Oakland, California 94612
510-835-9838
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May 21, 2008
050115

Mr. Paul Brunner, Executive Director
Three Rivers Levee Improvement Authority
1114 Yuba Street, Suite 218
Marysville, CA 95901

Dear Mr. Brunner:

**Re: Phase 4 Feather River Levee Repair Project -
Segment 2 (Feather River Setback Levee) Construction Management**

This letter is a follow up to your request to prepare a scope of work and budget for performing construction management (CM) services for TRLIA's Phase 4 -Feather River Levee Repair Project, Levee Segment 2 (project). This scope does not address CM services for levee Segments 1 & 3, which are covered under a separate amendment already approved by TRLIA.

GEI will act as the CM agent for TRLIA, and will coordinate closely with TRLIA as the project owner. TRLIA will execute a separate agreement with a Construction Contractor. It is understood that TRLIA will review and approve the Construction Contractor's monthly pay estimates, change orders, and schedule changes.

The basis for the proposed scope and budget is described below. A detailed breakdown of the estimated CM budget is presented in Table 1, including costs for conducting environmental and cultural resource monitoring and worker awareness training programs. The CM estimate is our best estimate at this time for the costs required to conduct construction management services for levee Segment 2 of the Feather River Levee Repair project. We recognize TRLIA's difficult funding situation and have reduced the proposed staffing to the minimum needed to properly manage the construction contract based on the assumed project schedule. We have also assumed some efficiency with shared staffing for the 2008 season based on the understanding that GEI will be performing similar CM duties for the Segment 1 and 3 construction contract.

Actual costs may be impacted by factors outside GEI control, such as by the Construction Contractor's schedule (hours worked, number of shifts), duration of construction, weather, environmental issues, and other factors. We understand that TRLIA is cost

Exhibit A

conscious, and we will conduct our work efficiently, adjusting our staffing level as appropriate for the work being conducted at the time. Our estimated cost is considered a budget and not a target, and we will manage our efforts and strive to keep actual costs under the approved budget.

The estimated budget required for the Phase 4 -Feather River Levee Repair Project, Levee Segment 2 CM services, including costs for environmental and archeological monitoring, is \$5,671,000 (Table 1). The total proposed revised contract amount is \$19,063,044. GEI's standard fee schedule and payment terms is attached as Table 2.

SUMMARY OF CONSTRUCTION MANAGEMENT SERVICES

The GEI team will act as TRLIA's onsite representative through utilization of skilled staff, close coordination with the Construction Contractor, and document control. Contract documents will be read, understood, and kept convenient for reference. Before construction, our team will review the project in detail with the Construction Contractor and become acquainted with proposed means and methods, the equipment to be used, staging areas, and sequence of construction operations. Discrepancies found in the documents will be identified and field changes will be reviewed and approved by GEI. GEI understands that the team has no authority to change the contract or obligate TRLIA to any costs outside the contract amount prior to TRLIA's approval.

GEI's CM scope includes the field and home office services described below.

- **Contract Administration** - Construction Contractor work plans, schedules, budgets, and cash flow projections will be reviewed. A main goal of the review will be to detect potential deficiencies early, minimizing delays and cost impacts. Value engineering proposals submitted by the Construction Contractor will be evaluated. Construction Contractor claims, changes, extra work, and change orders will be identified, documented, evaluated, monitored, and negotiated if justified and approved. Independent cost estimates and change order justifications will be prepared. Work completed for progress payments and Construction Contractor invoices for progress payment will be evaluated. Monthly cash flow projections will be submitted to TRLIA for the construction contract and CM's services based on the project schedule and actual progress.
- **Meetings** - A preconstruction meeting with the Construction Contractor and TRLIA will be conducted. The meeting will cover the overall project objectives, responsibilities of key personnel and agencies, schedules, pricing schedule (bid breakdown), procedures for handling submittals, correspondence, utility relocations, permit requirements, requests for information, progress payments, change orders, and other pertinent project information.

A weekly construction progress meeting with the Construction Contractor, the CM team and TRLIA will be conducted to discuss and resolve issues related to the work.

The meetings typically will cover progress, schedules, submittals, Requests for Information (RFIs), Field Instructions, Change Orders, field coordination, Quality Control/Quality Assurance, environmental compliance, and other relevant topics.

- **Coordination with Department of Water Resources and Corps of Engineers Staff** – It is understood that the DWR, and possibly the Corps, intend to maintain a presence at the site to provide independent oversight. The CM team will work with DWR and Corps staff, communicating progress, addressing issues of concern, providing required information, and responding to questions.
- **Monthly Progress Reports** – A monthly construction progress report including the following elements will be prepared:
 - Summary of the prior month's main accomplishments and current construction activities.
 - Updated construction schedule and Construction Contractors' conformance to schedule and quality requirements.
 - Identification of key problems, action items, and issues. Make recommendations for solutions. Summarize resolution of issues.
 - Summary of progress payments, change orders, disputes, submittals, RFI's, and Notices of Noncompliance.
 - Minutes of Construction Contractor progress meetings.
 - Critical Action Item Report.
 - Photographs of representative project activities, including progress photos.
 - Summary of regulatory agency visits and issues.
 - Construction cost information to date.
- **Construction Contractor Submittals** – Construction Contractor submittals will be reviewed for the purpose of determining whether information contained in the submittal conforms to the requirements of the contract documents. Submittals that do not conform to the requirements will be returned to the Construction Contractor for correction.
- **Requests for Information** - Construction Contractor Requests for Information (RFIs) will be reviewed and written responses will be provided. Responses to RFI's that require changes to the design will be coordinated with TRLIA and the pertinent regulatory agencies.
- **Construction Inspections** - Construction activities will be observed and oversight services will be provided to check that Construction Contractors' work is performed in accordance with construction plans and specifications, and is consistent with the intent of the design. Field staff will interface with the home office design staff on technical issues and concerns. The Construction Inspector's activities will include:
 - Inspecting materials and quality of work for conformance to the plans and specifications.

- Recording quantities of materials received or used during specified periods.
 - Inspecting material delivered for conformance with the contract documents.
 - Maintaining a daily log of construction and inspection activities and comparing the log with the Construction Contractor generated progress reports.
 - Logging the inspection trench excavation.
 - Verifying depth and alignment of cutoff walls.
 - Observing slurry trench excavation and backfilling.
 - Verifying the proper placement and compaction of levee embankment materials in conformance with the contract documents.
 - Monitoring and logging relief well drilling and installation.
 - Monitoring construction and providing startup assistance for Pump Station No. 3
 - QA tests performed as described under QA Testing below.
- **Designer Field Visits** – Regular visits to the site by design personnel will be conducted for the following purposes:
 - Verify that design assumptions and principles are consistent with site conditions observed during construction.
 - Give assistance to project field personnel in adapting project designs to actual site conditions as they are revealed during construction.
 - Observe and evaluate engineering issues that were not foreseen or not fully assessed in original design and develop and implement appropriate actions.
 - **Quality Assurance Testing** – The CM team will conduct QA testing to monitor compliance with the requirements of contract documents. QA testing will be conducted for the slurry wall backfill, embankment material, and other project features. The CM team will also check the effectiveness and adequacy of the Construction Contractor's quality control (QC) program and take action to have deficiencies corrected.
 - **Board of Senior Consultants (BOSC)** – A meeting with the project's BOSC will be conducted once during the 2008 construction season and once during the 2009 construction season to overview construction progress and site conditions revealed during construction.
 - **Start-Up, Closeout and Acceptance** – The CM team will implement procedures for the systematic, orderly and timely completion, acceptance, and transfer of facilities constructed, as well as the closeout of contracts. A detailed project punch list will be prepared at closeout of the project. Upon correction of deficiencies, and prior to acceptance of work, a final walk-through will be scheduled and conducted with the Construction Contractor and TRILIA.

- **Construction Summary Report** – After completion of Segment 2 construction, a Construction Summary Report will be prepared. The report will include the following:
 - Summary of the project history and overview of the contracts.
 - Problems encountered and resolutions made.
 - Summary of major changes (including costs), reasons for the changes.
 - Summary of bid and final project costs.
 - Summary of QC and QA data
 - Photographs depicting construction work in progress.
 - Project record drawings.
- **Operation and Maintenance Addendum** – Upon completion of Segment 2 construction, an Operation and Maintenance Addendum will be prepared containing the proposed revisions to the Corps of Engineers' Supplement to Standard Operation and Maintenance Manual, Sacramento River Flood Control Project, Unit 145, Part 1, and the associated record drawings for system alterations that are to be incorporated into the federal Sacramento River Flood Control Project.
- **Preconstruction Biological Surveys, Training, and Construction Monitoring** – The environmental team consisting of primarily EDAW biologists will conduct the training, survey, monitoring, and coordination activities described below for biological resources before and during the planned construction activities. The team will conduct surveys for giant garter snake, valley elderberry longhorn beetle, Swainson's hawk nests, nests of other raptors including burrowing owls, special status plants, and conduct training, monitoring and coordination as described below. This scope of services includes coordination with resource agency staff regarding the results of the surveys and additional efforts that may be required to adapt avoidance and minimization measures based on survey results or unanticipated project needs.

Construction Training, Coordination, and Monitoring. Biologists will conduct awareness training for construction personnel and other site workers, as required by the U.S. Fish and Wildlife Service for giant garter snake, valley elderberry longhorn beetle, and Swainson's hawk. It is assumed that up to four training sessions may be required. The biologists will coordinate with the CM team and the Construction Contractor regarding proper implementation of avoidance and minimization measures and conduct regular monitoring visits to verify such implementation throughout the construction period. Monitoring efforts will consist of regular "spot checks" on a weekly or bi-weekly basis depending on the level of construction activity and sensitivity of areas where construction is taking place. Monitoring visits will often occur concurrently with preconstruction survey activities described below.

Giant Garter Snake. Biologists will conduct surveys for giant garter snake immediately prior to (within 24 hours of) construction activity within 200 feet of suitable aquatic habitat. It is assumed that the only areas of suitable aquatic habitat adjacent to the project footprint along portions of Plumas Lake Canal. It is assumed

that multiple surveys will be required to accommodate initiation of various activities in different portions of the project area, at different times during the construction season, and in multiple years. This scope of services includes up to five surveys in 2008, three surveys in 2009, and *one survey in 2010*.

Valley Elderberry Longhorn Beetle. Surveys for elderberry shrubs have been completed in much of the project area. However, there are some locations, such as the floodplain drainage swale, where detailed shrub and stem counts have not been conducted. In previously unsurveyed areas surveys will be conducted of elderberry shrubs that may require removal during project construction to confirm the number and size of stems affected. It is assumed approximately 50 shrubs/clumps will be identified and recorded as part of this effort.

Northwestern Pond Turtle. Surveys will be conducted for northwestern pond turtles immediately following dewatering of aquatic habitat. If pond turtles are found during a survey, they will be moved to suitable habitat nearby. It is assumed that the only area subject to dewatering is Plumas Lakes Canal, including the portions to be filled and in the vicinity of the new Pump Station No. 3, and a minor ditch in the vicinity of Station 80+00 of the setback levee. It is also assumed that up to four surveys would be required.

Swainson's Hawk. Surveys will be conducted before beginning project activity in any given area. These surveys will be conducted to identify locations of active Swainson's hawk nests that could be disturbed by project activities. Methods will generally follow Swainson's Hawk Technical Advisory Committee recommendations. It is assumed that six days of pre-construction surveys and up to six days of nest monitoring will be required in each of the three construction seasons to determine the location of active nest sites and confirm that project activities do not result in nest disturbance.

Other Nesting Raptors, Including Burrowing Owl. Surveys will be conducted before beginning project activity in any given area. These surveys will be conducted to identify locations of active raptor nests that could be disturbed by project activities. This activity will be conducted concurrently with Swainson's hawk survey and monitoring.

Special-Status Plants. Surveys will be conducted for rose mallow and Wright's trichoronis in wetland areas impacted by project activities and not surveyed in 2007 due to land access restrictions. These surveys will be conducted between mid-June and mid-August 2008, when both target species will be in flower or otherwise clearly identifiable. Based on habitat conditions and results from the 2007 survey, it is assumed that these special-status plants will not be encountered.

Agency Reporting. The team will provide resource agency staff information regarding the progress and results of the survey efforts described above. Reporting will consist of phone calls and letter reports. The team will consult and coordinate

with USFWS, NMFS, DFG, RWQCB, and USACE staff regarding implementation of permit conditions, including regular monitoring updates.

- **Cultural Resources Monitoring Near Site CA-Yub-5** – Documentary research indicates that a prehistoric habitation/activity site was recorded at a site west of the levee alignment and north of Country Club Road and related archaeological remains may still exist within the area. This site is identified as CA-Yub-5. It is possible that intact sites, features, artifacts, and human interments may be present in areas nearby and/or outside the delineated bounds of the site.

To meet the requirements of the Memorandum of Agreement (MOA) between TRLIA, the Corps and the State Historic Preservation Office (SHPO), the GEI team will perform the following tasks:

- Provide training to construction personnel in identification of cultural deposits and human remains. It is assumed that up to four training sessions per year (2008, 2009, and 2010) will be conducted.
- Develop a Monitoring and Inadvertent Discovery Plan that will describe the purpose of the monitoring program; the roles, authority, and responsibilities of the monitors; and the procedural protocols for monitor responsibilities. The plan will also provide procedures for the discovery of previously undocumented cultural resources and human remains during construction.
- Complete Section 106 consultation with the SHPO and implement measures to protect site CA-YUB-5 from indirect erosional effects resulting from seasonal flooding. Tasks will include subsurface explorations, analysis of cultural and human remains recovered from CA-YUB-5 in 1953 and housed at UC Berkeley, and preparation of a technical report presenting the results of the investigations.
- Complete surveys of the Area of Potential Effects (APE) that were not previously surveyed due to land access restrictions.
- Provide a qualified archeologist as the cultural resources monitor accompanied by a Native American consultant/monitor, during all project-related ground-disturbing activities in the vicinity of prehistoric archeological site CA-Yub-5. It is assumed that no more than 12 days of ground disturbing activities will occur in the area requiring the archeological monitor and Native American monitor to be present.

ASSUMPTIONS

Our attached labor and direct cost estimate is based upon the following assumptions. Deviations caused by the contract's work schedule or the requirements of the project may be beyond our control and necessitate budget adjustment.

Schedule Assumption:

At setback levee bid time TRLIA anticipated awarding the foundation work (Schedule B) on March 3, 2008 and setback levee construction (Schedule C) on April 14, 2008, with the goal of completing the Setback levee by the end of 2008 and Segment 2 existing levee degradation in 2009. Project delays related to DWR funding, land acquisition, and federal permitting have prevented award of the setback levee construction contract. The TRLIA Board approved award of a modified schedule B on May 20, 2008. Although TRLIA intends to initiate construction along a portion of the setback levee alignment on or about June 1, the resolution of these delays continues to prevent a complete award of schedules B and C at this time. Currently the issue that is most impacting the construction schedule is Corps of Engineers' completion of the Federal permitting process. The current Corps schedule assumes completion of the federal permitting process on October 27, 2008. In order to have any chances of completing setback levee construction in 2008, the federal permitting process would need to be completed no later than August 2008 so that the existing levee tie-ins could be constructed prior to the onset of the flood season. We understand that TRLIA is working with the Corps to accelerate the permitting process with the hope that the goal of completing setback levee construction in 2008 can be achieved. However, as has been the case for SAFCA, and based on the laborious progress to date of the Corps' NEPA compliance and Section 404/408 permitting processes for the project, there is a significant likelihood that the Corps will not complete these processes until late fall 2008 or winter 2009.

In order to develop a budget authorization, we have assumed a construction schedule for the Feather River Setback Levee that incorporates the delays already experienced due to permitting, funding, and land acquisition, plus a likely additional permitting delay. Accordingly, for budgeting purposes, the following schedule assumptions have been made in developing the cost estimate for CM services:

- Begin construction - June 1, 2008
- 2008 construction (June - November 2008) - completion of 70% of foundation, 50% of embankment, and 80% of pump station
- 2009 construction (March - June 2009) - completion of remainder of setback levee, including foundation, embankment, and pump station
- Degradation of the existing levee assumed to last eight months beginning upon receipt of regulatory approvals in the second half of 2009 or early 2010. Levee degradation is assumed to be completed in summer or fall 2010.

In summary, a total construction period of ten months for setback levee construction plus eight months for levee degradation (not including two 3-month winter breaks) has been assumed for budgeting purposes. This schedule is considered to be reasonably

achievable based on our understanding of funding (begin receiving funds in May 2008), land acquisition (significant portion of alignment available on June 1), and assumed permitting process (Corps 404/408 complete in late fall 2008 or winter 2009).

Other Assumptions:

- Construction operations are assumed to be one ten-hour shift per day, five days per week.
- GEI field staff will utilize the field offices, furniture, computers, copiers, phones and fax machines provided by the Construction Contractor.
- GEI will perform CM duties for Segments 1 and 3 in 2008. Therefore, efficiencies with shared staff and equipment have been assumed.
- GEI will not provide health and safety oversight except for its own employees. Construction Contractor's health and safety is considered to be exclusive responsibility of the Construction Contractor.
- The scope of work does not include additional time for the environmental team resulting from any violations of species-protection requirements committed by construction personnel.
- Other than at site CA-Yub-5, the scope of work does not include actions to address potentially significant cultural resources if they are encountered during construction. If evidence of potentially significant cultural resources is found, an appropriate course of action will be developed to address the resources (e.g., research, field investigations) and a contract amendment will be required to implement the measures.
- The CM budget does not include potential costs associated with implementation of environmental restoration activities other than those included in the current contract with the Construction Contractor.

We are pleased with the opportunity to work with you and your staff during the construction phase of this vitally important project. Please call me or Dan Wanket if you have any questions.

Sincerely,

GEI Consultants, Inc.



Alberto Pujol, P.E., G.E.
Project Manager

Enclosures: Table 1 – Cost Estimate for Construction Management, Levee Segment 2
Table 2 – GEI's Fee Schedule and Payment Terms

C: Dan Wanket
Ray Hart
John Dahl

TABLE 1
PHASE 4 FEATHER RIVER LEVEE REPAIR PROJECT
COST ESTIMATE FOR CONSTRUCTION MANAGEMENT - LEVEE SEGMENT 2 - SETBACK LEVEE
 Revised May 12, 2008

FIELD SERVICES						
Season 1 (2008) - Segment 2 Setback Levee Construction						
Assumptions: - 6 Months construction (June - November) - 70% completion of foundation work - 50% completion of embankment - Substantial completion of pump station - Single shift - 2 story wall headings						
Labor						
Description	Grade	No. of Months	Hours per Month	Total Hours	Unit Rate	Cost
Construction Manager / Resident Engineer	Grade 7	5	37	435	\$199	\$86,265
Construction Manager / Resident Engineer	Grade 7	2	130	260	\$188	\$48,880
Cost Control / Scheduling	Grade 7	7	173	1,211	\$188	\$227,668
Office Engineer	Grade 3	6	125	750	\$108	\$81,000
Lead Field Inspector	Grade 3	7	230	1,610	\$118	\$190,000
Field Inspector 1	Grade 4	6	125	750	\$118	\$88,500
Field Inspector 2	Grade 3	4	220	880	\$118	\$103,840
Field Inspector 3	Grade 3	2	220	440	\$108	\$47,520
Field Inspector 4	Grade 3	2	220	440	\$108	\$47,520
Field Inspector 5	Grade 3	2	220	440	\$108	\$47,520
Field Inspector 6	Grade 3	2	220	440	\$108	\$47,520
Inspection Trench Inspector / Logger	Grade 5	2	220	440	\$140	\$61,600
Lab Tech	Grade 2	9	230	2,070	\$66	\$136,602
Administrative Assistant	Admin	6	90	540	\$75	\$40,500
Subtotal Field Services				12,951		\$1,527,664
Direct Costs						
Item Description	Unit	Quantity	Unit Rate	Total	Remarks	
Vehicles	Months	62	\$1,200	\$74,400	Pickups for CM and Inspectors 1,200 Amh	
Fuel	Months	62	\$888	\$55,056	Assume 50 gal / week / vehicle @ \$4.00/gal	
Airfare	Trips	14	\$4,000	\$56,000	Assume 1 flight every other week	
Geotechnical Sampling and Testing	LS	1	\$24,000	\$24,000	Outside CA testing for slurry mix, specialty testing	
Services	LS	1	\$25,000	\$25,000	allowance	
Reproduction and Counter	LS	1	\$25,000	\$25,000	allowance	
Field Supplies and Misc.	LS	1	\$40,000	\$40,000	allowance	
Per Diem	Months	58	\$3,210	\$186,180	SSA per diem rate	
Subtotal				\$660,246		
Direct Cost Markup @ 15%						\$99,037
Subtotal Direct Costs						\$759,283
Subtotal - 2008 Season Field Services						
						\$2,166,400
Season 2 (2009) - Segment 2 Setback Levee Construction						
Assumptions: - Maintain site over winter (Jan - Feb 2009) - 4 Months construction (March - June) - 30% completion of foundation work - 30% completion of embankment - Single shift - 2 story wall headings						
Labor						
Description	Grade	No. of Months	Hours per Month	Total Hours	Unit Rate	Cost
Construction Manager / Resident Engineer	Grade 7	4	130	520	\$189	\$98,280
Cost Control / Scheduling	Grade 7	4	173	692	\$189	\$130,872
Office Engineer	Grade 3	4	220	880	\$108	\$95,040
Lead Field Inspector	Grade 3	4	220	880	\$118	\$103,840
Field Inspector 1	Grade 3	2	220	440	\$108	\$47,520
Field Inspector 2	Grade 3	2	220	440	\$108	\$47,520
Field Inspector 3	Grade 3	2	220	440	\$108	\$47,520
Field Inspector 4	Grade 3	2	220	440	\$108	\$47,520
Field Inspector 5	Grade 3	2	220	440	\$108	\$47,520
Lab Tech	Grade 2	4	230	920	\$66	\$60,752
Administrative Assistant	Admin	4	90	360	\$75	\$27,000
Subtotal Field Services				7,456		\$907,615
Direct Costs						
Item Description	Unit	Quantity	Unit Rate	Total	Remarks	
Vehicles	Months	34	\$1,200	\$40,800	Pickups for CM and Inspectors 1,200 Amh	
Fuel	Months	34	\$888	\$30,192	Assume 50 gal / week / vehicle @ \$4.00/gal	
Airfare	Trips	8	\$4,000	\$32,000	Assume 1 flight every other week	
Geotechnical Sampling and Testing	LS	1	\$24,000	\$24,000	Outside CA testing for slurry mix, specialty testing	
Services	LS	1	\$25,000	\$25,000	allowance	
Reproduction and Counter	LS	1	\$25,000	\$25,000	allowance	
Field Supplies and Misc.	LS	1	\$20,000	\$20,000	allowance	
Per Diem	Months	34	\$3,210	\$109,140	SSA per diem rate	
Subtotal				\$330,952		
Direct Cost Markup @ 15%						\$49,593
Subtotal Direct Costs						\$380,545
Subtotal - 2009 Season Field Services						
						\$1,287,400
Segment 2 Levee Degradation						
Assumptions: - Maintain site over winter - 8 Months construction - Degrade existing levee - Single shift						
Labor						
Description	Grade	No. of Months	Hours per Month	Total Hours	Unit Rate	Cost
Construction Manager / Resident Engineer	Grade 7	8	57	456	\$189	\$86,265
Office Engineer	Grade 3	8	130	1,040	\$108	\$112,320
Lead Field Inspector	Grade 4	8	230	1,840	\$118	\$217,120
Field Inspector 1	Grade 3	8	220	1,760	\$108	\$189,840
Subtotal Field Services				5,473		\$605,545
Direct Costs						
Item Description	Unit	Quantity	Unit Rate	Total	Remarks	
Vehicles	Months	34	\$1,200	\$40,800	Pickups for CM and Inspectors 1,200 Amh	
Fuel	Months	34	\$888	\$30,192	Assume 50 gal / week / vehicle @ \$4.00/gal	
Airfare	Trips	16	\$4,000	\$64,000	Assume 1 flight every other week	
Geotechnical Sampling and Testing	LS	1	\$24,000	\$24,000	Outside CA testing for JT-301 filler borrow area backfill	
Services	LS	1	\$25,000	\$25,000	allowance	
Reproduction and Counter	LS	1	\$25,000	\$25,000	allowance	
Field Supplies and Misc.	LS	1	\$7,000	\$7,000	allowance	
Per Diem	Months	28	\$3,210	\$90,000	SSA per diem rate	
Subtotal				\$288,992		
Direct Cost Markup @ 15%						\$43,349
Subtotal Direct Costs						\$332,341
Subtotal - Degradation Field Services						
						\$937,886
Subtotal - Field Services						
						\$4,352,006

TABLE 1
PHASE 4 FEATHER RIVER LEVEE REPAIR PROJECT
COST ESTIMATE FOR CONSTRUCTION MANAGEMENT - LEVEE SEGMENT 2 - SETBACK LEVEE
 Revised May 12, 2008

ENGINEERING SERVICES DURING CONSTRUCTION					
Labor					
Item Description	Estimated Hours	Unit rate	Total	Remarks	
Prepare and Attend Pre-construction meeting	40	185	\$7,400	Assume 3 people, 1-day meeting, prepare meeting notes	
Submittal Review	240	180	\$43,200	Assume 40 submittal reviews @ 6hrs each	
Assessors for Inspection Reviews and Responses	400	175	\$70,000	Assume 60 RFI's, 8 hrs per RFI	
Change modifications / Change orders	300	190	\$57,000	Assume 15 change orders, 24 hours per change order	
Pump Station No. 3 Instrumentation, Controls and Startup Support	600	140	\$84,000	Allowance	
Periodic Site Visits	754	165	\$124,410	Assume 1 trip per week, 18 months, PMS - weekly 1/2 day visits for 6 months	
Meetings	694	100	\$69,400	Weekly Meeting (1 person, 18 months, PMS - weekly for 6 months @ 2 hrs	
PM Coordination	654	212	\$138,288	8 hrs per week, 18 months	
Board of Senior Consultants Meetings (2)	180	188	\$33,840	Assume 90 minutes to prepare, hold mtg, prepare meeting notes	
Construction Report	400	185	\$74,000	Allowance	
Record Drawings	300	120	\$36,000	Assume 200 drawings, 2-hrs per drawing	
Operation and Maintenance Acknowledgment	200	188	\$37,600	Assume single report to address FFR RP project	
Total Estimated Home Office Labor	6062		\$907,328		
Direct Costs					
Item Description	Unit	Quantity	Unit Rate	Total	Remarks
Allowance	Time	200	\$120	\$24,000	Assume 1 trip per week + meetings
Board of Senior Consultants Meetings (2)	Meeting	2	\$10,000	\$20,000	Allowance for outside consultant time and expense
Reproduction and Courier	LS	1	\$50,000	\$50,000	Allowance
Subtotal				\$94,000	
Direct Cost Markup @ 15%				\$14,100	
Subtotal Direct Costs				\$108,100	
Subtotal - Engineering Services During Construction				\$915,908	
ENVIRONMENTAL/CULTURAL SURVEYS AND MONITORING					
Labor					
Item Description	Estimated Hours	Unit rate	Total	Remarks	
Pre-Construct Biological Surveys, Tracking, Monitoring	1800	120	\$216,000.00	Assume combined with weekly meeting	
Cultural Resource Monitoring	500	100	\$50,000.00	Assume combined with weekly meeting	
Direct Costs					
Item Description	Unit	Quantity	Unit Rate	Total	Remarks
Allowance	Time	300	\$100	\$30,000	Assume 3 trips per week for 22 months
Reproduction and Courier				\$3,000	
Specialized Cultural Resources Analysis				\$12,000	Allowance for evaluation of CA-YUB-6
Subtotal				\$45,000	
Direct Cost Markup @ 15%				\$6,750	
Subtotal - Environmental/Cultural Surveys and Monitoring				\$402,788	
TOTAL ESTIMATED COST				\$5,571,000	

Notes:

- Assumes duration for levee construction of 6 months in 2006, 4 months in 2008, and 8 months for degradation, with one month for close-out each season
- Field office, furniture, lab and field testing equipment, and office equipment (computers, copier, fax) assumed to be provided by construction contractor (Contractor)
- All safety supervision assumed by Contractor
- QC inspections and testing assumed by Contractor; Owner QA inspections and testing provided by CM
- Construction operations assumed to be one ten-hour shift per day, five days per week

FEE SCHEDULE

<u>Personnel Category</u>	<u>Hourly Billing Rate \$ per hour</u>
Staff Professional – Grade 1	\$ 86
Staff Professional – Grade 2	\$ 96
Project Professional – Grade 3	\$ 106
Project Professional – Grade 4	\$ 118
Senior Professional – Grade 5	\$ 140
Senior Professional – Grade 6	\$ 160
Senior Professional – Grade 7	\$ 189
Senior Consultant – Grade 8	\$ 212
Senior Consultant – Grade 9	\$ 261
Senior Principal	\$ 315

Senior CADD Drafter and Designer	\$ 106
CADD Drafter / Designer and Senior Technician	\$ 96
Technician, Word Processor, Administrative Staff	\$ 78
Office Aide	\$ 62

These rates are billed for both regular and overtime hours in all categories.

Rates will increase up to 5% annually, at GEI's option, for all contracts that extend beyond twelve (12) months after the date of the contract.

OTHER PROJECT COSTS

Subconsultants, Subcontractors and Other Project Expenses - All costs for subconsultants, subcontractors and other project expenses will be billed at cost plus a 15% service charge. Examples of such expenses ordinarily charged to projects are subcontractors; subconsultants; chemical laboratory charges; rented or leased field and laboratory equipment; outside printing and reproduction; communications and mailing charges; reproduction expenses; shipping costs for samples and equipment; disposal of samples; rental vehicles; fares for travel on public carriers; special fees for insurance certificates, permits, licenses, etc.; fees for restoration of paving or land due to field exploration, etc.; state sales and use taxes and state taxes on GEI fees.

Billing Rates for CADD and Specialized Technical Computer Programs – Computer usage for CADD and specialized technical programs will be billed at a flat rate of \$10.00 per hour in addition to the labor required to operate the computer.

Field and Laboratory Equipment Billing Rates – GEI-owned field and laboratory equipment such as pumps, sampling equipment, monitoring instrumentation, field density equipment, portable gas chromatographs, etc. will be billed at a daily, weekly, or monthly rate, as needed for the project. Expendable supplies are billed at a unit rate.

Transportation and Subsistence - Automobile expenses for GEI or employee owned cars will be charged at the rate per mile set by the Internal Revenue Service for tax purposes plus tolls and parking charges. When required for a project, four-wheel drive vehicles owned by GEI or the employees will be billed at a daily rate appropriate for those vehicles. Per diem living costs for personnel on assignment away from their home office will be negotiated for each project.

PAYMENT TERMS

Invoices will be submitted monthly or upon completion of a specified scope of service, as described in the accompanying contract (proposal, project, or agreement document that is signed and dated by GEI and CLIENT).

Payment is due upon receipt of the invoice. Interest will accrue at the rate of 1% of the invoice amount per month, for amounts that remain unpaid more than 30 days after the invoice date. All payments will be made by either check or electronic transfer to the address specified by GEI and will include reference to GEI's invoice number.