



# THREE RIVERS LEVEE IMPROVEMENT AUTHORITY AGENDA

**OCTOBER 11, 2005**

**Yuba County Government Center  
Board of Supervisors' Chambers  
915 Eighth Street, Suite 109A  
Marysville, California**

**Unless otherwise indicated**

2:00 P.M. I

**CALL TO ORDER**

II **ROLL CALL** – Directors Rick Brown, Mary Jane Griego, Dan Logue, Richard Webb

III **ACTION ITEMS**

A. Approve Amendment No. 3 with Bookman Edmonston/GEI Consultants for professional services in an amount of \$2,484,900 for Bear River Levee Setback Design and authorize Chairman to execute same.

B. Receive status update on Phase 4 levee improvements and take action as appropriate.

IV **BOARD AND STAFF MEMBERS' REPORTS**

V **PUBLIC COMMUNICATIONS:** Any person may speak about any subject of concern provided it is within the jurisdiction of the Levee Improvement Authority and is not already on today's agenda. The total amount of time allotted for receiving such public communication shall be limited to a total of 15 minutes and each individual or group will be limited to no more than 5 minutes.

VI **ADJOURN**



# THREE RIVERS LEVEE IMPROVEMENT AUTHORITY

GOVERNMENT CENTER – 915 8<sup>TH</sup> STREET, SUITE 115  
MARYSVILLE, CA 95901-5273  
(530 749-7575 (530) 749-7312 Fax

October 11, 2005

**TO:** Three Rivers Levee Improvement Authority Board  
**FROM:** Ani Bhattacharyya, Project Manager  
**SUBJECT:** BE/GEI Change Order Request No. 3 to amend the existing Agreement between  
TRLIA and BE/GEI to include Construction Management and Environmental  
Monitoring Services during construction of the Bear River Setback Levee

## **Recommended Action**

Approve BE/GEI Change Order Request No. 3 to amend the existing agreement between TRLIA and BE/GEI to include Construction Management and Environmental Monitoring services during construction of the Bear River Setback Levee.

## **Reason for Recommended Action/Discussion**

The contract amendment is necessary to add to the existing scope of work and budget, construction management and environmental monitoring services to be provided by BE/GEI through the construction of the Bear River Setback Levee.

## **Fiscal Impact**

This total cost for BE/GEI's construction management and environmental monitoring services for the Bear River Setback Levee is estimated at \$2,484,900. On May 25, 2005, the TRLIA Board approved Change Order 2 to BE/GEI's contract, thereby increasing the total estimated design costs to \$3,716,005. Adding the estimated costs for construction management and environmental monitoring, the total contract amount comes to \$6,200,905.

AMENDMENT NO. 3

AGREEMENT FOR PROFESSIONAL SERVICES  
FOR  
BEAR RIVER LEVEE SETBACK DESIGN  
BETWEEN  
THREE RIVERS LEVEE IMPROVEMENT AUTHORITY AND  
BOOKMAN-EDMONSTON/GEI CONSULTANTS

THIS AMENDMENT TO AGREEMENT is made effective October 5, 2005, by and between Three Rivers Levee Improvement Authority ("TRLIA") and Bookman-Edmonston/GEI Consultants ("Consultant"), who agree as follows:

1. **Recitals.** This Amendment is made with reference to the following background recitals:
  - 1.1. Effective January 18, 2005, the parties entered into the Agreement for Professional Services relating to TRLIA's Bear River Levee Setback design.
  - 1.2. Effective February 23, 2005, the parties entered into Amendment No. 1 to the Agreement for Professional Services relating to TRLIA's Bear River Levee Setback design for a total of \$2,893,160.
  - 1.3. Effective May 25, 2005, the parties entered into Amendment No. 2 to the Agreement for Professional Services relating to TRLIA's Bear River Levee Setback design for a total of \$3,716,005.
  - 1.4. The parties now desire to amend the Professional Services Agreement to expand scope of services and contract fee.
2. **Third 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 January 18, 2005) is amended to expand and supplement the scope of work as described by letter dated October 5, 2005 (Exhibit A) to include the following:

Task	Total
Setback Levee Project – Construction Management Services	\$2,320,300
Environmental Monitoring and Cultural Resource Investigation	\$164,600
<b>Total</b>	<b>\$2,484,900</b>

- 2.2. The payment, budget, and not-to-exceed amounts (Professional Services Agreement Attachment B) are amended to include the additional amounts of \$2,484,900 for a total contract of \$6,200,905.

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 \_\_\_\_\_, 2005.

THREE RIVERS LEVEE IMPROVEMENT  
AUTHORITY OF YUBA COUNTY

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

\_\_\_\_\_  
Charles K. McClain  
Executive Director

\_\_\_\_\_  
Raymond D. Hart  
Senior Vice President

ATTEST:  
DONNA STOTTEMAYER  
SECRETARY, THREE RIVERS

APPROVED AS TO FORM:  
DANIEL G. MONTGOMERY  
COUNTY COUNSEL

\_\_\_\_\_

\_\_\_\_\_



2201 Broadway, Suite 321  
Oakland, California 94612  
510-835-9838  
FAX 510-835-9842

October 5, 2005  
050110

Mr. Charles K. McClain, Executive Director  
Three Rivers Levee Improvement Authority  
915 Eighth Street, Suite 115  
Marysville, CA 95901

Dear Mr. McClain:

**Re:** Change Order Request No. 3, Agreement between TRLIA and B-E/GEI dated  
January 8, 2005

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 3 -Bear River Setback Levee project (project). The scope proposed herein covers two seasons of construction for the project, i.e., the foundation contract in 2005 and the main levee contract in 2006. B-E/GEI will act as the CM agent for TRLIA, and we will coordinate closely with TRLIA as the project owner. TRLIA will execute a separate agreement with a construction contractor (Contractor). It is understood that TRLIA will review and approve the Contractor's monthly pay estimates, change orders, and schedule changes.

The basis for the requested change in scope and budget is described below. A detailed breakdown of the estimated CM budget is presented in Table 1. This estimate has been revised from the estimate originally submitted on September 7, 2005 to incorporate comments received from Neil Retelsdorf on September 28. The CM estimate is our best estimate at this time for the costs required to conduct construction management services for the Bear River Setback Levee project. Actual costs will be impacted by the contractors schedule (hours worked, number of shifts), duration of construction, weather, environmental issues, and other factors. We understand that TRLIA is cost 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.

As requested by Ani Bhattacharyya, we have also included costs for increased environmental monitoring and archeological investigation requirements. Conditions set

forth in the final permits and regulatory negotiations have increased the requirements for environmental monitoring of giant garter snake and cultural resources. In addition, a cultural resource discovery has been made at approximate setback levee Sta. 22. As required under the permit conditions, this finding will need to be researched, tested, catalogued and documented. A technical report will be prepared after completing the studies. A summary of the estimated cost is presented in Table 2.

The estimated budget increase required for the Phase 3 CM services is \$2,320,300 (Table 1) and the increased costs for environmental monitoring and archeological investigations is estimated to be \$164,600 (Table 2). The total proposed revised contract amount is \$6,200,905.

### **SUMMARY OF CONSTRUCTION MANAGEMENT SERVICES**

The B-E/GEI team will have familiarity with the project through utilization of expert staff, close coordination with 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 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 reported immediately and no field changes will be made without prior approval of the B-E/GEI. B-E/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.

B-E/GEI's CM scope includes the field and home office services described below.

- **Contract Administration** - Contractor work plans, schedules, budgets, and cash flow projections will be reviewed. A main goal of our review will be to detect potential deficiencies early, minimizing delays and cost impacts. Value engineering proposals submitted by the construction Contractor will be evaluated. 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 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 Contractor and TRLIA will be conducted. It 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 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 Corps Staff** – It is understood that the Corps intends on maintaining a presence at the site to provide independent inspections and QA testing. The CM team will work with Corps staff, communicating 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 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 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.
- **Contractor Submittals** – 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 Contractor for correction.
- **Requests for Information** - 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 ensure that 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

- Verifying depth and alignment of the foundation.
  - Logging of trench wall installation.
  - 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 Contractor generated progress reports
  - The slurry trench excavation and backfilling will be observed and QA tests performed as described under QA Testing below.
  - Verifying the proper placement and compaction of levee embankment materials in conformance with the contract documents.
- **Designer Field Visits** – Regular visits to the site by design personnel will be conducted to ensure the following:
    - Design assumptions and principles are consistent with site conditions observed during construction.
    - Project personnel are given assistance in adapting project designs to actual site conditions as they are revealed during construction.
    - Engineering issues, not fully assessed in original design are observed, evaluated, and appropriate actions taken.
- **Quality Assurance Testing** – The CM team will conduct QA testing to ensure compliance with the requirements of contract documents. QA testing will be conducted for the slurry mix, embankment material, and other project features. The CM team will also check the effectiveness and adequacy of the Contractors 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 each 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 Contractor and TRLIA.
- **Construction Summary Report** - After completion of the main levee contract, 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.



- Time lapse photographs and/or videos depicting construction work in progress.
- Project record drawings to document changes from the bid or construction drawings.

### 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.

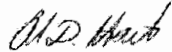
- The setback levee project will be implemented in two seasons, i.e. the foundation contract in 2005 and the main levee contract in 2006. A total combined construction period of 11.5 months has been assumed for budgeting purposes. Construction operations are assumed to be one ten-hour shift per day, five days per week.
- The estimated cost assumes that the existing levee will be degraded and used for embankment construction with the 2006 contract. If simultaneous levee degradation is not allowed by the permitting agencies, a third construction season would be necessary for degradation of the existing levee and additional CM costs would be required.
- The CM budget does not include potential costs associated with implementation of the environmental restoration plan.
- B-E/GEI field staff will utilize the field offices, furniture, computers, copiers, phones and fax machines provided by the Contractor.
- B-E/GEI will not provide health and safety oversight except for its own employees. Contractor's health and safety is considered to be exclusive responsibility of the Contractor.

In addition to the CM services summarized above, B-E/GEI has performed engineering and environmental services for out-of-scope items based on requests from TRLIA that we are continuing to track. These items include: a Phase 1 Environmental Site Assessment (ESA) for the setback levee project area; sampling and analysis of the borrow material in conformance with RWQCB requirements; additional geotechnical investigations required for the expanded detention basins; and potential additional acceleration costs that may be incurred in the preparation of separate sets of contract documents (foundation contract and main embankment contract) for the project. At this time it is unclear if we will need a budget adjustment for these additional out-of-scope items, so we will attempt to absorb the costs within our current approved budget. We will continue to manage the project to respond the TRLIA's needs, minimize cost increases to the extent practical, and communicate issues of concern to TRLIA as they occur.

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, Alberto Pujol, or Dan Wanket if you have any questions.

Sincerely,

B-E/GEI

A handwritten signature in cursive script, appearing to read "R.D. Hart".

Raymond D. Hart  
Senior Vice President

Enclosure

**TABLE 1**  
**BEAR RIVER SETBACK LEVEE PROJECT**  
**COST ESTIMATE FOR CONSTRUCTION MANAGEMENT**  
 revised 10/4/05

FIELD SERVICES							
2005 CONSTRUCTION SEASON - Foundation and Tie-In Contract (Assume 3.5 Month Construction Duration)							
Labor							
Description	Grade	No. of Months	Hours per Month	Total Hours	Unit Rate	Cost	Remarks
Construction Manager / Resident Engineer	Grade 6	3.5	220	770	\$145	\$111,650	
Office Engineer	Grade 4	3.5	220	770	\$110	\$84,700	
Inspection Trench Inspector/Logger	Grade 5	1	220	220	\$125	\$27,500	
Field Inspector	Grade 3	3.5	220	770	\$95	\$73,150	
Field Inspector	Grade 3	3.5	220	770	\$95	\$73,150	
Field Inspector	Grade 3	3.5	220	770	\$95	\$73,150	
Slurry Wall Inspection Lead	Grade 6	1	220	220	\$145	\$31,600	
Secretary	local	3	173	519	\$40	\$20,760	Local Hire
<b>Subtotal Field Services</b>				<b>4,809</b>		<b>\$485,960</b>	
Direct Costs							
Item Description	Unit	Quantity	Unit Rate	Total	Remarks		
Vehicles	Months	4	\$5,000	\$20,000	Five pickups @ 1,000 /mth		
Airline	Trips	8	\$400	\$3,200	Assume 1 flight every other week		
Geotechnical Sampling and Testing	LS	1	\$60,000	\$60,000	QA testing for slurry mix, backfill, compaction		
Geotechnical Investigations	LS	1	\$12,000	\$12,000	allowance		
Surveys	LS	1	\$12,000	\$12,000	allowance		
Reproduction and Courier	LS	1	\$10,000	\$10,000	allowance		
Communications	LS	1	\$10,000	\$10,000	allowance		
Field Supplies and Misc.	LS	1	\$10,000	\$10,000	allowance		
House Rental for Field Personnel	Months	4	\$3,000	\$12,000	allowance - fully furnished house		
CM Per Diem	Months	3.5	\$3,300	\$11,550	@ \$110/day		
Meals / Misc. Expenses	Months	3.5	\$6,000	\$21,000	Assume \$40/day for 5 people		
<b>Subtotal</b>				<b>\$117,750</b>			
Direct Cost Mark-up @ 15%						\$25,763	
<b>Subtotal Direct Costs</b>						<b>\$197,513</b>	
<b>Subtotal Field Services - 2005 Construction Season</b>						<b>\$683,500</b>	
2006 CONSTRUCTION SEASON - Main Embankment Contract (Assume 8 Month Construction Duration)							
Labor							
Description	Grade	No. of Months	Hours per Month	Total Hours	Unit Rate	Cost	Remarks
Construction Manager / Resident Engineer	Grade 6	8	220	1760	\$145	\$255,200	
Office Engineer	Grade 4	8	220	1760	\$110	\$193,600	
Field Inspector	Grade 3	8	220	1760	\$95	\$167,200	
Field Inspector	Grade 3	8	220	1760	\$95	\$167,200	
Field Inspector	Grade 3	7	220	1540	\$95	\$146,300	
Secretary	local	7	173	1211	\$40	\$48,440	Local Hire
<b>Subtotal Field Services</b>				<b>9,781</b>		<b>\$877,340</b>	
Note: Unit rate not increased from 2005 rates - assumes no significant cost increase							
Direct Costs							
Item Description	Unit	Quantity	Unit Rate	Total	Remarks		
Vehicles	Months	8	\$5,000	\$40,000	Five pickups @ 1,000 /mth		
Airline	Trips	15	\$400	\$6,000	Assume 1 flight every other week		
Geotechnical Sampling and Testing	LS	1	\$60,000	\$60,000	QA testing for backfill, compaction		
Geotechnical Investigations	LS	1	\$12,000	\$12,000	allowance		
Reproduction and Courier	LS	1	\$15,000	\$15,000	allowance		
Field Supplies and Misc.	LS	1	\$15,000	\$15,000	allowance		
House Rental for Field Personnel	Months	8	\$3,000	\$24,000	allowance - fully furnished house		
CM Per Diem	Months	8	\$3,300	\$26,400	@ \$110/day		
Meals / Misc. Expenses	Months	8	\$4,600	\$36,800	Assume \$40/day for 4 people		
<b>Subtotal</b>				<b>\$276,800</b>			
Direct Cost Mark-up @ 15%						\$41,520	
<b>Subtotal Direct Costs</b>						<b>\$318,320</b>	
<b>Subtotal Field Services - 2006 Construction Season</b>						<b>\$1,296,300</b>	
<b>Subtotal - Total Field Services</b>						<b>\$1,989,800</b>	
HOME OFFICE ENGINEERING							
Labor							
Item Description	Estimated Hours	Unit rate	Total	Remarks			
Constructability Reviews	100	180	18000				
Prepare and Attend Pre-construction meeting	80	180	14400	Assume 2 people, 1-day meeting each contract, prepare meeting			
Submittal Reviews	240	180	43200	Assume 20 submittal Reviews each contract @ 8hrs each			
Prepare / Attend BOSC Meetings	200	180	36000	Assume 2 meetings @ 100 hrs per meeting			
Request for Information Reviews and Responses	640	180	115200	Assume 20 RFIs per contract, 16 hrs per RFI			
Design modifications / Change orders	240	180	43200	Assume 5 change orders per contract, 24 hours per change order			
Periodic Site Visits	400	180	72000	Assume 1 trip per week, 12 months			
Meetings	288	180	51840	Monthly Meeting (3 people), 12 months			
PM - Coordination	416	210	87360	8 hrs per week, 12 months			
Construction Report	400	180	72000	Assume combine both contracts into one report			
Record Drawings	400	100	40000	Assume 100 drawings, 4-hrs per drawing			
<b>Total Estimated Home Office Labor</b>			<b>\$541,440</b>				
Direct Costs							
Item Description	Unit	Quantity	Unit Rate	Total	Remarks		
Mileage	Trips	70	\$110	\$7,700	Assume 1 trip per week + meetings		
Miscellaneous (meals, etc.)	LS	1	\$5,000	\$5,000	allowance		
Board of Consultants Reviews & Meetings	Ea	2	\$5,000	\$11,200	Assume 2 persons x 2 days per review/mtg x 8 hrs x \$175/hr		
Board of Consultants Expenses	Ea	2	\$1,000	\$2,000	Assume 2 persons x \$500 per mtg		
Reproduction and Courier	LS	1	\$15,000	\$15,000	allowance		
<b>Subtotal</b>				<b>\$40,900</b>			
Direct Cost Mark-up @ 15%						\$6,135	
<b>Subtotal Direct Costs</b>						<b>\$47,035</b>	
<b>Subtotal - Total Home Office Engineering</b>						<b>\$588,500</b>	
Allocation of Home Office Engineering by Contract:							
Subtotal Home Office Engineering - 2005 Construction Season						\$258,000	
Subtotal Home Office Engineering - 2006 Construction Season						\$330,500	
SUMMARY							
<b>Total Estimated Construction Management Costs</b>				<b>\$2,578,300</b>	Includes current contract engineering services during construction budget of \$258,000		
Required Budget - 2005 Construction Season						\$683,500	
Field Services						\$0	
Engineering						\$0	
<b>Total Required Budget - 2005 Construction Season</b>						<b>\$683,500</b>	deduct current allocated budget of \$258,000
Required Budget - 2006 Construction Season						\$1,296,300	
Field Services						\$1,296,300	
Engineering						\$330,600	
<b>Total Required Budget - 2006 Construction Season</b>						<b>\$1,626,800</b>	
<b>Total Estimated Required Budget Adjustment for CM</b>						<b>\$2,320,300</b>	

- Notes:
- Assumes 3.5 month duration for 2005 construction (mid-September - December), 8 month duration for 2006 construction season (February - September)
  - Field office, furniture, job and field testing equipment, and office equipment (computer, copier, fax) assumed to be provided by construction contractor (Contractor)
  - All safety supervisors 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.
  - Assumes levee degradation with 2006 construction contract.
  - Does not include CM services during environmental restoration.

**TABLE 2  
BEAR RIVER SETBACK LEVEE PROJECT  
COST ESTIMATE FOR ENVIRONMENTAL MONITORING**

Item	Estimated Cost		Total	Comments
	EDAW	B-E/GEI		
Giant Garter Snake Construction Monitoring	\$54,750	\$11,410	\$66,160	- Assume 31 days of monitoring, 12 hours per day - Assume daily reporting to DFG and USFW
Cultural Resources Construction Monitoring	\$25,200	\$6,980	\$32,180	- Assume 31 days of monitoring, 12 hours per day
Native American Monitor	\$10,000	\$1,500	\$11,500	- Assume 30 days of monitoring, 8 hours per day - Assume one area investigated (ie approximate levee Sta. 22) within work area of foundation contract
Archeological Site Testing and Investigation ODC's	\$37,330	\$8,800	\$46,130	- Includes Native American consultation, site testing, cleaning and cataloging of up to 300 artifacts and report preparation
<b>Total</b>	<b>\$134,780</b>	<b>\$29,820</b>	<b>\$164,600</b>	

**Notes:**

- 1) Budget for construction monitoring is for costs associated with increased monitoring requirements as specified in permit conditions
- 2) Budget for Native American monitor is an allowance - actual involvement is not known at this time.
- 3) Budget for archeological site testing and investigation is for addressing archeological finding revealed by levee foundation excavation
- 4) B-E/GEI costs include subcontractor coordination, review and mark-up



Water Resources • Flood Control • Water Rights

JOSEPH D. COUNTRYMAN, P.E.  
GILBERT COSIO, JR., P.E.  
MARC VAN CAMP, P.E.

ANGUS NORMAN MURRAY  
1913-1985

CONSULTANTS:  
JOSEPH I. BURNS, P.E.  
DONALD E. KIENLEN, P.E.

September 30, 2005

Kent McClain  
915 8th Street, Ste. 115  
Marysville, CA 95901

**Subject: Phase 4 Staff Report for the Three Rivers Levee Improvement Authority Board Meeting**

Dear Mr. McClain:

The following is a summary of Phase 4 activities and recommendations to the TRLIA for actions to move the planning effort forward. Phase 4 is defined as the Reclamation District No. 784 (RD 784) Feather River levee from the confluence with the Bear to the confluence with the Yuba (Feather River, river miles (RM) 12-27) and the RD 784 Yuba River levee from the confluence with the Feather River to the Goldfields (Yuba River RM 0-6).

The draft Phase 4 Erosion Investigation and Problem Identification Reports were completed and distributed for review on September 2, 2005. HDR's alternatives report for the Yuba River levee between the UPRR and Simpson Lane has been delayed to allow for testing to determine if a slurry wall is a feasible option. If this alternative is feasible, it will significantly simplify construction and is the least expensive option for repairing this reach of levee.

Total cost for Phase 4 is estimated at approximately \$90-\$100 million. This cost is for strengthening existing levees in place. Staff is currently working with the development community to prepare a funding plan. There will also not likely be any funding remaining in the Proposition 13 program after completion of our Phase 1, 2, and 3 efforts.

The following is an estimate of the Phase 4 schedule:

Planning – late 2005 through early 2006  
CEQA – 2006  
Design – 2006  
Real Estate Acquisition – late 2006/early 2007  
Construction – Start in 2007, complete in November 2008

It is recommended that the existing consultant teams be retained to do planning, engineering, CEQA compliance and permitting to simplify the FEMA certification process. Staff will be recommending that the BE/GEI team's scope be expanded to include the Phase 4 Feather River reach and the HDR team's scope be expanded to include the Phase 4 Yuba River reach. These teams will be

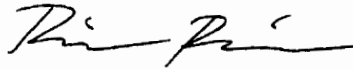
Kent McClain

September 30, 2005

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submitting scopes of work that include a schedule and budget by late October. Upon review, staff will bring forward the contracts for TRLIA Board consideration.

Sincerely,  
MBK ENGINEERS



Ric Reinhardt, P.E.

RR/aw

5141/KENT MCCLAIN 09.30.05