

Water Resources Association of Yolo County Project Funds – Fiscal Year 2008-09

PROJECT TITLE: RD 2035 Sacramento River Intake Fish Screen Project

Task 2 – Design Development

- 2.1 This subtask includes feasibility-level design of the proposed fish screen facility and preparation of CAD drawings. The subtask also includes reviewing fish screen placement relative to proposed pumps and developing pump discharge piping arrangement and routing through levee and incorporating into intake layout. Fish screens will be designed for barge removal rather than land-based removal and existing “blank panels” will be deleted from the design.
- 2.2 This subtask includes providing a feasibility-level design concept for noise mitigation for the proposed pumping equipment to be located on the intake. For design and cost estimating purposes MWH will assume that a building enclosure will be added to the design for noise mitigation.
- 2.3 This subtask includes developing a feasibility-level design for the outlet structure required for discharge to the RD 2035 canal.
- 2.4 This subtask includes preparation of a comparison of pump operation power costs for an intake with a land-side pump station vs an intake with pumps on the intake.
- 2.5 This subtask includes preparation of a preliminary design and construction schedule for the intake project, including time required for environmental documentation.
- 2.6 This subtask includes preparation of a 2-phase construction approach for the proposed intake facility, with initial construction of DWWSP facilities followed with RD 2035 facilities constructed at a later date.

Task 3 – Opinion of Probable Construction Costs

- 3.1 This subtask includes preparation of a Class 5 opinion of probable cost for a joint-use project with modified intake.
- 3.2 This subtask includes preparation of a Class 5 opinion of probable cost for an alternative project design with a 2-phased approach (developed in Task 2.6), one cost for initial construction of DWWSP facilities and a second cost for the later construction of RD 2035 facilities.

Assumptions:

1. Revised intake design will retain the one-sided screen arrangement and will retain the existing fish screen style and cleaning system. In the new design fish screens will be removed by barge for maintenance rather than by crane.
2. Revised intake designs will accommodate flow requirements as noted in the MWH TM cited above and will include 4 pumps for DWWSP partners.

3. The opinions described in Task 3 above shall be considered to be “Class 5” level estimates in accordance with the cost estimate classes as defined by the Association for the Advancement of Cost Engineering. The Client acknowledges that Consultant has no control over costs of labor, materials, competitive bidding environments and procedures, unidentified field conditions, financial and/or market conditions, or other factors likely to affect the probable cost of the construction of the pipeline, all of which are and will unavoidably remain in a state of change, especially in light of the high volatility of the market attributable to the natural disasters and the associated cleanup/restoration activities and other events beyond the control of Consultant. Client further acknowledges that this is a “snapshot in time” and that the reliability of this engineering opinion of probable construction cost will inherently degrade over time. Client agrees that Consultant cannot and does not make any warranty, promise, guarantee, or representation, either express or implied, that proposals, bids, project construction costs, or cost of operation or maintenance will not vary substantially from its good faith Class 5 cost estimate.
4. Meetings. MWH will attend:
 - a. One design kick-off meeting.
 - b. One design review meeting with RD 2035, DWWSP Partners, and WYA.

Deliverables:

1. Draft and Final TM describing the design development and proposed intake designs (10 copies each version). (Tasks 1, 2 & 3)
 - a. TM will include text describing the design development.
 - b. TM will include plan-view drawing of the intake, section-view drawings of the intake and levee, indicating pump and pipe placement, and profile of RD 2035 pipeline leading to canal, including outlet structure.
 - c. TM will include project design and construction schedule, including environmental requirements.
 - d. TM will include Class 5 opinions of probable cost for the items described in Task 3 above.
2. Handouts and large-scale drawings for presentation of the project to reviewing agencies.

Schedule:

MWH will complete and deliver the Draft TM no later than 90 calendar days following receipt of Notice to Proceed. It is expected that Notice to Proceed will be given on May 1, 2008. MWH will complete and deliver the Final TM no later than 21 calendar days following receipt of edits to the Draft TM.



BUILDING A BETTER WORLD

Cost Proposal for DWWSP-RD 2035 Fish Screen Project

April 7, 2008

Task No.	TASK DESCRIPTION	Estimated Hours					Subcontracted Services			Other Direct Costs (1)	MWH Labor Costs	Total Cost
		Principal 1	Supervng Engr	Sr. Engr	Lead Estimator	Sr Admin						
Hourly Billing Rate		\$ 200	\$ 170	\$ 145	\$ 170	\$ 85						
1	Project Management	24	38	24	0	14	\$0			\$1,888	\$15,930	\$17,818
1.1	Attend Kick-Off Meeting	4	4	8	0	2				\$446	\$2,810	
1.2	Conduct Design Review Meeting and Project Presentation Meetings	12	18	16	0	6				\$1,083	\$8,290	
1.3	Project Controls, Project and Technical Management	8	16	0	0	6				\$359	\$4,830	
2	Design Development	16	100	164	0	39	\$0			\$5,662	\$47,295	\$52,957
2.1	Intake Designs and Drawings	16	64	80	0	39				\$3,856	\$28,995	
2.2	Develop Noise Mitigation	0	8	20	0	0				\$335	\$4,260	
2.3	Outlet Structure Design	0	8	20	0	0				\$703	\$4,260	
2.4	Power Cost Comparison	0	4	16	0	0				\$240	\$3,000	
2.5	Project Schedule	0	8	8	0	0				\$192	\$2,520	
2.6	Two Phase Approach	0	8	20	0	0				\$335	\$4,260	
3	Opinion of Probable Construction Costs	0	8	0	40	0	\$0			\$575	\$8,160	\$8,735
3.1	Modified Existing Intake		4		28					\$383	\$5,440	
3.2	Two Phase Approach		4		12					\$192	\$2,720	
TOTALS		40	146	188	40	53	0			\$8,125	\$71,385	\$79,510

Notes:

1. This column includes Associated Project Costs, Other Direct Costs and CADD charges