

The Trinchera Irrigation Company



610 Main Street, Blanca, CO 81123 (719)379-3467

August 7, 2018

Mr. Jonathan Hernandez, P.E.
Project Manager
Finance Section
Colorado Water Conservation Board
1313 Sherman St., Rm. 718
Denver, CO 80203

Subject: Mountain Home Reservoir Outlet Rehabilitation
Final Construction Loan

Dear Mr. Hernandez

Trinchera Irrigation Company's (TIC) intention from the start of this Project was to avoid draining the Mountain Home Reservoir. Due in part to being in an exceptional drought and the necessity to fulfill our Shareholders need to irrigate their crops the reservoir is at a lower level than typical. In addition to the valve gates the age of the outlet pipelines is also of concern however with high water levels in the reservoir and trying to avoid draining the reservoir the initial plan for work on the Mountain Home Reservoir Dam outlet gates was to be done with water in the reservoir. With water in the reservoir work on the outlet pipelines was to be incorporated into a future project. However due to exceptional drought conditions the TIC Board has agreed to drain the reservoir prior to initiating construction. With the reservoir drained work to repair the outlet pipelines can now be conducted as part of the outlet rehabilitation project.

The rehabilitation of the pipelines will increase the cost of the project but with the work constructed in the dry the need for a bulkhead and divers is eliminated resulting in a smaller increase in overall construction cost.

The TIC Board would like to increase the loan by \$323,200 from \$440,360 to \$763,560.

Your assistance is greatly appreciated

Tracy Kester
President

Trinchera Irrigation Company

August 1, 2018
Project No. 315005

Mr. Jonathan Hernandez, P.E.
Project Manager
Finance Section
Colorado Water Conservation Board
1313 Sherman St., Rm. 718,
Denver, CO 80203

Subject: Mountain Home Reservoir Outlet Rehabilitation
Project Scope Change Memorandum

Dear Mr. Hernandez

Mountain Home Reservoir has made multiple dam improvements in the past, including rehabilitation of the spillway, raising the dam crest, and installation of a toe drain on the downstream toe. Currently, the original gate valves located within the outlet works tower controlling discharge flow are deteriorated and in need of repair. The three 30-inch gate valves located within the outlet structure are all experiencing leakage. Per the 2016 SEO Inspection Report, both the right (north) and left (south) valves were recorded to have significant leakage, and the center valve was recorded to have minor leakage. The report also stated that only one of the three gate valves was considered operable. The intent of this project is to repair the outlets and gates.

In addition to the gates the age of the outlet pipelines is also of concern however with high water levels in the reservoir and trying to avoid draining the reservoir the initial plan for work on the Mountain Home Reservoir outlet gates was to be done with water in the reservoir. With water in the reservoir work on the outlet pipelines was to be incorporated into a future project. However, due to drought conditions the Trinchera Irrigation Company (TIC) has agreed to drain the reservoir prior to initiating construction. With the reservoir drained work to repair the outlet pipelines can now be conducted as part of the outlet rehabilitation project.

With the new design the plan is to line the three 30-inch diameter pipes with 24-inch diameter HDPE pipes and grout the new pipes into place. The new design for the outlets will change the outlet configuration from two 30-inch gates and one 16-inch gate to three 24-inch gates. The change in diameters will slightly reduce the outlet capacity; however this has been discussed with Mark Perry, PE with the Colorado Division of Water Resources. While the reduced capacity will affect the draindown time of the reservoir Engineering Analytics believes the benefits of longer life and better leak protection outweigh the negatives. With the work constructed in the dry the need for a bulkhead and divers is eliminated resulting in a smaller increase in overall construction costs. Table 4 shows the Construction Cost estimate for this new Alternative.

BASED ON MOLTZ BID?

Line the Outlets with 24-inch HDPE and install 24-inch gates					
Item No.	Description	Qty	Unit	Unit Price	Amount
1	Mobilization, Insurance, Bonds	1	LS	\$225,369.00	\$225,369.00
2	Dewatering/Water Control Cofferdam and Water Control	1	LS	\$143,186.00	\$143,186.00
					\$143,186.00
3	Outlet Gates				
	Demo Existing Gate Valves	1	LS	\$57,319.00	\$57,319.00
	Concrete Removal	1	LS	\$39,173.00	\$39,173.00
	New Gates 3 ea 24" dia	1	LS	\$179,652.00	\$179,652.00
	Stainless Steel Sheet Metal	1	EA	\$39,303.00	\$39,303.00
	New Concrete Structure	1	LS	\$38,456.00	\$38,456.00
	Ecodur Tower Lining (Lower 30 feet)	1	LS	\$14,389.00	\$14,389.00
	HDPE Lining 3ea 24" SDR 32.5	1	LS	\$236,335.00	\$236,335.00
					\$604,627.00
4	Outlet Structure Trash Rack (replace)	1	EA	\$21,027.00	\$21,027.00
					\$21,027.00
5	Valve House Remove/Replace Valve House	1	LS	\$11,857.00	\$11,857.00
					\$11,857.00
CONSTRUCTION COST					\$1,006,066.00
CONTINGENCY (15%)					\$150,909.90
ENGINEERING DESIGN					\$70,000.00
ENGINEERING CONSTRUCTION MANAGEMENT					\$80,000.00
TOTAL COST					\$1,306,975.90

368,292

MARCH 8/14/18 (M.P.A.)

*-NEW \$61 OR
PRESENT
MONEY?*

Engineering Analytics has been working with the Dam Safety Engineers at the Colorado Division of Water Resources to incorporate this change in design. In talking with Mark Perry Engineering Analytics believes that the schedule for implementation should remain the same with construction starting around September 15, 2018.

If you have any questions, please feel free to contact us.

Sincerely,

Engineering Analytics, Inc.



Mr. L. Clint Brown, P.E.