

**Opinion of Probable Construction Cost**

Indianford Dam Spillway Capacity Upgrades  
80% Design  
2/21/2020

Item	Quantity	Units	Unit Cost	Subtotal	Contingency	Total	Comment
<b>Mobilization</b>	1	LS	\$15,000	\$15,000	15%	\$17,250	skidsteer, gantry, hoist, shoring, rigging, forms
<b>Demolition and Removals (Exterior)</b>							
Demo west step handrail	1	LS	\$40	\$40	15%	\$46	
Demo fence with gate	1	LS	\$200	\$200	15%	\$230	
Demo window for new door to platform	1	LS	\$150	\$150	15%	\$173	
Demo hoist beams, columns	1	LS	\$2,000	\$2,000	15%	\$2,300	
Demo railing east steps	1	LS	\$40	\$40	15%	\$46	
<b>Dewatering</b>							
Leakage Mitigation	12	WEEKS	\$1,000	\$12,000	50%	\$18,000	dewatering pumps and generator for 12 weeks
Downstream Bulkheads	2	EA	\$60,000	\$120,000	40%	\$168,000	(2) new 15'x15' bulkheads, based on discussions with JMW
<b>Demolition and Removals (Interior)</b>							
Intake header shoring	1	LS	\$800	\$800	15%	\$920	
Intake header concrete sawcutting	4,792	LF-INCH	\$19	\$92,048	15%	\$105,807	
Remove Wicket Gates and Linkages	1	LS	\$20,000	\$20,000	50%	\$30,000	Includes removal and disposal offsite
Shoring, multiple slopes	850	SF	\$10	\$8,500	15%	\$9,413	425 SF in plan. \$3.21 per SF for heavy duty flat shoring. Assume this is 3x more complicated.
Concrete sawcutting, track mounted	30,900	LF-INCH	\$13.50	\$417,150	15%	\$479,723	Assume average block size is 2'x4'x3'
Mobile gantry crane, hoist, trolley rental 3 ton	1	LS	\$4,800	\$4,800	15%	\$5,520	These are not common rental equipment. Half of cost of new equipment used as rental fee.
Debris removal, skidsteer	1	LS	\$20,000	\$20,000	15%	\$23,000	Labor and skidsteer rental, largest available, four wheel steel, bucket and forks
C&D dumpster, 20 CY	8	EA	\$625	\$5,000	15%	\$5,750	
<b>Improvements (Exterior)</b>							
Operator Support Frame	13,824	LB	\$4	\$48,384	15%	\$55,642	includes fabrication and installation
Bar Grating	400	SF	\$20	\$8,000	15%	\$9,200	includes procurement and installation
Slide Gates	6	EA	\$38,000	\$228,000	20%	\$273,600	(6) new 12'x10' slide gates, based on JMW quote
Gate Operators	6	EA	\$36,140	\$216,840	15%	\$249,366	(6) new rising-stem operators, based on Limitorque quote
Electrical Service Upgrades	1	LS	\$30,000	\$30,000	50%	\$45,000	Assume tying into existing electrical (no modifications)
Installation of Slide Gates and Operators	6	EA	\$3,614	\$21,684	15%	\$24,937	Assume 10% of procurement cost
Intake Concrete Repairs	260	SF	\$180	\$46,800	50%	\$70,200	by divers, assumes half of gate slot area and area within 3' of waterline requires repair
New Trash Rack	1	LS	\$80,000	\$80,000	20%	\$96,000	Estimate based on past projects, verified with HCS
Install Trash Rack and Dispose of Existing	1	LS	\$20,000	\$20,000	20%	\$24,000	Assume 25% of trash rack cost, verified with HCS
New cast-in-place concrete	5	CY	\$800	\$4,000	20%	\$4,800	
Exterior stair railing	2	LS	\$800	\$1,600	20%	\$1,920	
Exterior steel stair/railing	1	LS	\$1,200	\$1,200	20%	\$1,440	
New exterior door to platform	1	LS	\$800	\$800	20%	\$960	
<b>Improvements (Interior)</b>							
Rollway concrete form, flat sloped	472	SF	\$18	\$8,581	15%	\$9,868	
Rollway concrete form, curved	147	SF	\$30	\$4,410	15%	\$5,072	
Rollway concrete shores, reshores	1	LS	\$5,000	\$5,000	15%	\$5,750	
Rollway concrete, reinforced, pumped	164	CY	\$250	\$41,000	15%	\$47,150	
Edge beam concrete form	300	SF	\$17	\$5,229	15%	\$6,013	
Edge beam concrete, reinforced, pumped	32	CY	\$250	\$8,000	15%	\$9,200	
Closure wall forming stay in place, plywood	497	SF	\$16	\$8,191	15%	\$9,419	
Closure wall steel form, removed, reuse	497	SF	\$8	\$3,951	15%	\$4,544	
Closure wall concrete, heavily reinforced, pumped	37	CY	\$250	\$9,250	15%	\$10,638	
Interior steel stair/railing	1	LS	\$7,000	\$7,000	15%	\$8,050	
<b>Construction Cost</b>						<b>\$1,838,945</b>	
<b>General Conditions (4%)</b>						<b>\$73,558</b>	
<b>Overhead (5%)</b>						<b>\$91,947</b>	
<b>General Contractor Total Expenses</b>						<b>\$2,004,450</b>	
<b>Contractor Profit (8%)</b>						<b>\$160,356</b>	
<b>Total Construction Cost</b>						<b>\$2,164,806</b>	
<b>Engineering (Design and Grant Application)</b>							
Phase 1 Design (80%)	1	LS	\$110,000	\$110,000	0%	\$110,000	Includes hydrographic survey and diving inspection
Grant Application	1	LS	\$4,400	\$4,400	0%	\$4,400	
Phase 2 Design (final)	1	LS	\$25,000	\$25,000	10%	\$27,500	
<b>Engineering (Construction Services)</b>							
Construction Inspection	1	LS	\$75,000	\$75,000	10%	\$82,500	
Material Testing & Inspection	1	LS	\$25,000	\$25,000	20%	\$30,000	Concrete testing and weld inspection by a CWI
<b>Total Engineering Cost</b>						<b>\$254,400</b>	
<b>Total Project Cost</b>						<b>\$2,420,000</b>	

Information presented on this sheet represents our opinion of probable project costs in 2020 dollars, and is based upon limited engineering. Unit and lump sum prices are based on costs for similar projects, vendor quotes, engineering judgment, and/or published cost data. Actual bids and total project costs may vary based on contractor's perceived risk, site access, season, market conditions, etc. No warranties concerning the accuracy of costs presented herein are expressed or implied.