

Opinion of Probable Construction Cost

Indianford Dam Spillway Capacity Upgrades
100% Design
1/5/2021

Item	Quantity	Units	Unit Cost	Subtotal	Contingency	Total	Comment
Mobilization	1	LS	\$15,000	\$15,000	15%	\$17,250	skidsteer, gantry, hoist, shoring, rigging, forms, erosion control measures
Demolition and Removals (Exterior)							
Trash rack	1	LS	\$2,000	\$2,000	20%	\$2,400	
West step railing	1	LS	\$40	\$40	15%	\$46	
West fence with gate	1	LS	\$200	\$200	15%	\$230	
Window for new door to platform	1	LS	\$150	\$150	15%	\$173	
Hoist beams and columns	1	LS	\$2,000	\$2,000	15%	\$2,300	
East step railing	1	LS	\$40	\$40	15%	\$46	
Dewatering							
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
Demolition and Removals (Interior)							
Reinforced concrete generator bases	2	EA	\$2,500	\$5,000	20%	\$6,000	
Steel head plates	2	EA	\$1,500	\$3,000	20%	\$3,600	
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	
Improvements (Exterior)							
Operator Support Frame	13,824	LB	\$4	\$48,816	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	\$55,000	\$330,000	20%	\$396,000	(6) new 12'x10' slide gates, based on JMW quote, escalated to account for design for debris impact
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	\$50,000	\$50,000	15%	\$57,500	Includes service upgrade and all other electrical work
Installation of Slide Gates and Operators	6	EA	\$3,614	\$21,684	15%	\$24,937	Assume 10% of procurement cost
Intake Concrete Repairs	1	LS	\$20,000	\$20,000	20%	\$24,000	by divers, based on repair areas identified during diving inspection
Cast-in-place concrete step in-fill	1.5	CY	\$800	\$1,200	20%	\$1,440	Includes east and west steps
East railing	1	LS	\$800	\$800	20%	\$960	
West fence	1	LS	\$800	\$800	20%	\$960	
New exterior door to platform	1	LS	\$1,600	\$1,600	20%	\$1,920	Includes architectural work
Improvements (Interior)							
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	\$5,100	15%	\$5,850	
Edge beam concrete, reinforced, pumped	32	CY	\$250	\$8,000	15%	\$9,200	
Closure wall farming 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	
Powerhouse hole covers (framing)	1,600	LB	\$4	\$6,400	15%	\$7,360	
Powerhouse hole covers (bar grating)	245	SF	\$20	\$4,900	15%	\$5,635	
Construction Cost						\$1,828,800	
General Conditions (4%)						\$73,152	
Overhead (5%)						\$91,440	
General Contractor Total Expenses						\$1,993,392	
Contractor Profit (8%)						\$159,471	
Total Construction Cost						\$2,152,864	
Engineering (Design and Grant Application)							
Phase 1 Design (80%)	1	LS	\$97,350	\$97,350	0%	\$97,350	
Grant Application	1	LS	\$4,400	\$4,400	0%	\$4,400	
Phase 2 Design (final)	1	LS	\$71,900	\$71,900	0%	\$71,900	
Engineering (Construction Services)							
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
Total Engineering Cost						\$286,150	
Total Project Cost						\$2,440,000	

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Installation of Slide Gates and Operators	6	EA	\$4,156	\$24,937	Assume 10% of procurement cost
Intake Concrete Repairs	1	LS	\$24,000	\$24,000	by divers, based on repair areas identified during diving inspection
Cast-in-place concrete step in-fill	1.5	CY	\$960	\$1,440	Includes east and west steps
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Overhead (5%)				\$91,440	
General Contractor Total Expenses				\$1,993,394	
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Total Construction Cost				\$2,152,865	
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