

<b>OPINION OF PROBABLE COST - CONCEPTUAL DESIGN</b>						
<b>Project: Flat Rock-Huroc Dam Disposition Feasibility Study</b>				<b>Project No.:</b>		<b>2302140</b>
<b>Client: Huron-Clinton Metropolitan Authority</b>				<b>Date:</b>		<b>7/29/2024</b>
<b>Alternative 1 - No Action - Fish Passage Improvement</b>				<b>Estimated by:</b>		<b>ZC/LH</b>
<b>0.04</b>				<b>Checked by:</b>		<b>JMM</b>
<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Cost</u>	<u>Total Cost (Rounded)</u>
<b>0.00 General Conditions</b>						
0.01	Contractor Mobilization / Demobilization					
	Includes: Bonds & Insurance, Permits, Project Management, Temp Facilities, Project Survey/Layout, Indirect Costs	1	LS	\$ 226,000	\$ 226,000	\$ 226,000
				<b>Subtotal</b>	<b>\$ 226,000</b>	<b>\$ 226,000</b>
<b>1.00 Site Prep</b>						
1.01	Erosion and Sediment Control	1	LS	\$ 50,000	\$ 50,000	\$ 50,000
1.02	Temporary Access Roads, Facilities and Laydown Areas	1	LS	\$ 100,000	\$ 100,000	\$ 100,000
				<b>Subtotal</b>	<b>\$ 150,000</b>	<b>\$ 150,000</b>
<b>2.00 Existing Fish Passage Demolition and Water Management</b>						
2.01	Existing Fish Passage Demolition	1	LS	\$ 50,000	\$ 50,000	\$ 50,000
2.02	Temporary Cofferdam	258	CY	\$ 120	\$ 30,960	\$ 31,000
				<b>Subtotal</b>	<b>\$ 80,960</b>	<b>\$ 81,000</b>
<b>3.00 Lock Fish Passage Retrofit</b>						
3.01	Armor Stone, Rapids	1,200	CY	\$ 150	\$ 180,000	\$ 180,000
3.02	Chinking Stone, Rapids	500	CY	\$ 88	\$ 44,000	\$ 44,000
3.03	Weir Boulders, Rapids	65	EA	\$ 500	\$ 32,500	\$ 33,000
3.04	MDOT 23A, Boulder Rapids	900	CY	\$ 65	\$ 58,500	\$ 59,000
3.05	Armor Stone, Channel Bottom	3,200	CY	\$ 150	\$ 480,000	\$ 480,000
3.06	Chinking Stone, Channel Bottom	1,300	CY	\$ 88	\$ 114,400	\$ 115,000
3.07	Site Restoration	1	AC	\$ 15,000	\$ 15,000	\$ 15,000
3.08	Structural Modification (as needed)	1	LS	\$ 350,000	\$ 350,000	\$ 350,000
				<b>Subtotal</b>	<b>\$ 1,274,400</b>	<b>\$ 1,276,000</b>
				Construction Subtotal	\$ 1,731,360	\$ 1,740,000
4.00	Unknown Scope Items			30%	\$ 519,408	\$ 520,000
				<b>Construction Total:</b>	<b>\$ 2,250,768</b>	<b>\$ 2,260,000</b>
<b>Other Costs:</b>						
5.00	Engineering Design and Permitting			10%	\$ 173,136	\$ 170,000
6.00	Construction Engineering and Construction Observation			10%	\$ 173,136	\$ 170,000
				<b>Total Estimated Design and Construction Cost At Flat Rock</b>	<b>\$ 2,597,040</b>	<b>\$ 2,600,000</b>
				<b>AACE Class 4 Expected Accuracy Range</b>	<b>-30%</b>	<b>\$ 1,817,928.0</b>
					<b>50%</b>	<b>\$ 3,895,560.0</b>
<b>7.00 50-Year Life Cycle Regulatory Requirements - No Legislation Change</b>						
				<b>2024 Dollars</b>	<b>Future Dollars</b>	<b>Future Dollars (Rounded)</b>
7.01	Inspections (3 year cycle)	\$ -	0	\$ -	\$ -	\$ -
7.02	Maintenance and Operations	\$ 10,000	50	\$ 500,000	\$ 1,587,738	\$ 1,590,000
7.03	Major rehabilitation/repairs of Flat Rock Dam	\$ 1,500,000	50	\$ 1,500,000	\$ 10,660,025	\$ 10,670,000
				<b>Subtotal</b>	<b>\$ 2,000,000</b>	<b>\$ 12,247,763</b>
				<b>Total Estimated 50-year Life Cycle Cost with Current Regulations</b>	<b>\$ 4,597,040</b>	<b>\$ 14,844,802.69</b>
						<b>\$ 14,840,000</b>
<b>8.00 50-Year Life Cycle Regulatory Requirements - Legislation change</b>						
				<b>2024 Dollars</b>	<b>Future Dollars</b>	<b>Future Dollars (Rounded)</b>
8.01	Inspections (annual)	\$ 10,000	0	\$ 500,000	\$ 1,587,738	\$ 1,590,000
8.02	Increased Spillway Capacity (10yr)	\$ 2,000,000	10	\$ 2,000,000	\$ 2,960,489	\$ 2,970,000
8.03	Maintenance and Operations (annual)	\$ 10,000	0	\$ 500,000	\$ 1,587,738	\$ 1,590,000
8.04	Inspections In Depth (every 10yrs)	\$ 100,000	10	\$ 500,000	\$ 1,882,247	\$ 1,890,000
8.05	Licensing and Insurance Requirements (annual)	\$ 10,000	0	\$ 500,000	\$ 1,587,738	\$ 1,590,000
8.06	Major rehabilitation/repairs	\$ 1,500,000	50	\$ 1,500,000	\$ 10,660,025	\$ 10,670,000
				<b>Subtotal</b>	<b>\$ 5,500,000</b>	<b>\$ 20,265,973</b>
				<b>Total Estimated 50-year Life Cycle Cost with Regulatory Legislative Change</b>	<b>\$ 8,097,040</b>	<b>\$ 22,863,013</b>
						<b>\$ 22,870,000</b>

<b>OPINION OF PROBABLE COST - CONCEPTUAL DESIGN</b>						
<b>Project: Flat Rock-Huroc Dam Disposition Feasibility Study</b> <b>Client: Huron-Clinton Metropolitan Authority</b> <b>Alternative 1 - No Action - Fish Passage Improvement</b>				<b>Project No.: 2302140</b> <b>Date: 7/29/2024</b> <b>Estimated by: ZC/LH</b> <b>Checked by: JMM</b>		
0.04						
<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Cost</u>	<u>Total Cost (Rounded)</u>
<b>9.00</b>	<b>Huroc Dam Fish Passage Retrofit</b>			<b>2024 Dollars</b>	<b>Future Dollars</b>	<b>Future Dollars (Rounded)</b>
9.01	Construction Total (w/Engineering Design and Construction)			\$ 750,000	\$ 750,000	\$ 750,000
9.02	50-year Life Cycle Cost to maintain Huroc Dam			\$ 500,000	\$ 1,587,738	\$ 1,590,000
9.03	Total Estimated 50-year Life Cycle Cost with Inital Construction			\$ 1,250,000	\$ 2,337,738	\$ 2,340,000
<b>10.00</b>	<b>Total Estimated 50-year Life Cycle Cost with Inital Construction</b>			<b>2024 Dollars</b>	<b>Future Dollars</b>	<b>Future Dollars (Rounded)</b>
10.01	Total Estimated Design and Construction Cost			\$ 3,350,000	\$ 3,350,000	\$ 3,350,000
10.02	50-Year Life Cycle Regulatory Requirements - No Legislation Change			\$ 2,500,000	\$ 13,835,500	\$ 13,840,000
10.03	50-Year Life Cycle Regulatory Requirements - Legislation change			\$ 6,000,000	\$ 21,853,711	\$ 21,860,000
10.04	Total Estimated 50-year Life Cycle Cost with Current Regulations			\$ 5,850,000	\$ 17,185,500	\$ 17,190,000
10.05	Total Estimated 50-year Life Cycle Cost with Regulatory Legislative Change			\$ 9,350,000	\$ 25,203,711	\$ 25,210,000
Information presented on this sheet represents our opinion of probable costs in 2024 dollars. Unit and lump-sum prices are based on costs for similar projects, engineering judgment, and/or published cost data. Client administrative/engineering costs and regulatory fees not included. 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. Future dollars is calculated using an inflation rate of 5% per year over 50 years where applicable.						

<b>OPINION OF PROBABLE COST - CONCEPTUAL DESIGN</b>						
<b>Project: Flat Rock-Huroc Dam Disposition Feasibility Study</b>				<b>Project No.:</b>		<b>2302140</b>
<b>Client: Huron-Clinton Metropolitan Authority</b>				<b>Date:</b>		<b>7/29/2024</b>
<b>Partial Dam Removal - Rock Arch Rapids at Flat Rock and Huroc Dam</b>				<b>Estimated by:</b>		<b>ZC</b>
				<b>Checked by:</b>		<b>LH</b>
<b>FLAT ROCK DAM</b>						
<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Cost</u>	<u>Total Cost (Rounded)</u>
<b>0.00 General Conditions</b>						
0.01	Contractor Mobilization / Demobilization	1	LS	\$ 986,000	\$ 986,000	\$ 986,000
	Includes: Bonds & Insurance, Permits, Project Management, Temp Facilities, Project					
				<b>Subtotal</b>	<b>\$ 986,000</b>	<b>\$ 986,000</b>
<b>1.00 Site Prep</b>						
1.01	Erosion and Sediment Control	1	LS	\$ 37,500	\$ 37,500	\$ 40,000
1.02	Temporary Access Roads, Facilities and Laydown Areas	1	LS	\$ 150,000	\$ 150,000	\$ 150,000
1.03	Clearing and Grubbing	1	AC	\$ 18,750	\$ 18,750	\$ 19,000
				<b>Subtotal</b>	<b>\$ 206,250</b>	<b>\$ 209,000</b>
<b>2.00 Flat Rock Demolition and Water Management</b>						
2.01	Incremental Demolition and Construction Dewatering	1	LS	\$ 645,000	\$ 645,000	\$ 645,000
2.02	Temporary Cofferdam	848	CY	\$ 120	\$ 101,760	\$ 102,000
				<b>Subtotal</b>	<b>\$ 746,760</b>	<b>\$ 747,000</b>
<b>3.00 Flat Rock Rock Arch Rapids Construction</b>						
3.01	Armor Stone, Rapids	15,600	CY	\$ 150	\$ 2,340,000	\$ 2,340,000
3.02	Chinking Stone, Rapids	6,300	CY	\$ 88	\$ 554,400	\$ 555,000
3.03	Weir Boulders, Rapids	583	EA	\$ 500	\$ 291,500	\$ 292,000
3.04	Excavation, Rapids	25,900	CY	\$ 80	\$ 2,072,000	\$ 2,072,000
3.05	High Terrace Fill, Floodplain and Portage	9,700	CY	\$ 15	\$ 145,500	\$ 146,000
3.09	MDOT 23A, Boulder Rapids	3,150	CY	\$ 65	\$ 204,750	\$ 205,000
3.11	Site Restoration	1	AC	\$ 15,000	\$ 15,000	\$ 15,000
				<b>Subtotal</b>	<b>\$ 5,623,150</b>	<b>\$ 5,625,000</b>
				<b>Construction Subtotal</b>	<b>\$ 7,562,160</b>	<b>\$ 7,563,000</b>
6.00	Unknown Scope Items			30%	\$ 2,268,648	\$ 2,269,000
				<b>Construction Total:</b>	<b>\$ 9,830,808</b>	<b>\$ 9,832,000</b>
<b>Other Costs:</b>						
7.00	Engineering Design and Permitting			10%	\$ 756,216	\$ 757,000
8.00	Engineering and Construction Observation			10%	\$ 756,216	\$ 757,000
					<b>Flat Rock Estimated Design and Construction Cost</b>	<b>\$ 11,343,240</b>
						<b>\$ 11,346,000</b>
<b>9 50-Year Life Cycle Regulatory Requirements - No Legislation Change</b>						
				<b>2024 Dollars</b>	<b>Future Dollars</b>	<b>Future Dollars (Rounded)</b>
9.01	Inspections (5 year cycle)	\$ -	0	\$ -	\$ -	\$ -
9.02	Maintenance and Operations	\$ 10,000	0	\$ 500,000.00	\$ 1,587,737.67	\$ 1,588,000
9.03	Inspections In Depth (every 10yrs)		10	\$ -	\$ -	\$ -
9.04	Increased Spillway Capacity (10yrs)		10	\$ -	\$ -	\$ -
9.05	Major rehabilitation/repairs	\$ 1,500,000	50	\$ 1,500,000.00	\$ 10,660,025	\$ 10,661,000
			<b>Subtotal</b>	<b>\$ 2,000,000</b>	<b>\$ 12,247,763</b>	<b>\$ 12,248,000</b>
				<b>Flat Rock Dam Estimated 50-year Life Cycle Cost with Current Regulations</b>	<b>\$ 13,343,240</b>	<b>\$ 23,591,002.69</b>
						<b>\$ 23,592,000</b>
<b>10 50-Year Life Cycle Regulatory Requirements - Legislation change</b>						
				<b>2024 Dollars</b>	<b>Future Dollars</b>	<b>Future Dollars (Rounded)</b>
10.01	Inspections (5 year cycle)	\$ 10,000	10	\$ 100,000	\$ 342,932	\$ 343,000
10.02	Maintenance and Operations	\$ 10,000	0	\$ 500,000	\$ 1,587,738	\$ 1,588,000
10.03	Licensing and Insurance Requirements (annual)	\$ 10,000	0	\$ 500,000	\$ 1,587,738	\$ 1,588,000
10.04	Major rehabilitation/repairs	\$ 1,500,000	50	\$ 1,500,000	\$ 10,660,025	\$ 10,661,000
			<b>Subtotal</b>	<b>\$ 2,600,000</b>	<b>\$ 14,178,432</b>	<b>\$ 14,180,000</b>
				<b>Flat Rock Dam Estimated 50-year Life Cycle Cost with Legislation Change</b>	<b>\$ 13,943,240</b>	<b>\$ 25,521,672.02</b>
						<b>\$ 25,526,000</b>

HUROC DAM						
Item	Description	Quantity	Units	Unit Price	Total Cost	Total Cost (Rounded)
<b>0.00 General Conditions</b>						
0.01	Contractor Mobilization / Demobilization					
	Includes: Bonds & Insurance, Permits, Project Management, Temp Facilities, Project Survey/Layout, Indirect Costs	1	LS	\$ 107,000	\$ 107,000	\$ 107,000
				<b>Subtotal</b>	<b>\$ 107,000</b>	<b>\$ 107,000</b>
<b>1.00 Site Prep</b>						
1.01	Erosion and Sediment Control	1	LS	\$ 12,500	\$ 12,500	\$ 10,000
1.02	Temporary Access Roads, Facilities and Laydown Areas	1	LS	\$ 50,000	\$ 50,000	\$ 50,000
1.03	Clearing and Grubbing	1	AC	\$ 6,250	\$ 6,250	\$ 7,000
				<b>Subtotal</b>	<b>\$ 68,750</b>	<b>\$ 67,000</b>
<b>4.00 Huroc Demolition and Water Management</b>						
4.01	Incremental Demolition and Construction Dewate	1	LS	\$ 225,000	\$ 225,000	\$ 225,000
4.02	Temporary Cofferdam	358	CY	\$ 120	\$ 42,960	\$ 43,000
4.03	Clearing and Grubbing	1	AC	\$ 25,000	\$ 25,000	\$ 25,000
				<b>Subtotal</b>	<b>\$ 292,960</b>	<b>\$ 293,000</b>
<b>5.00 Huroc Rock Arch Rapids Construction</b>						
5.01	Armor Stone, Rapids	1,200	CY	\$ 150	\$ 180,000	\$ 180,000
5.02	Chinking Stone, Rapids	500	CY	\$ 88	\$ 44,000	\$ 44,000
5.03	Weir Boulders, Rapids	85	EA	\$ 500	\$ 42,500	\$ 43,000
5.04	Excavation, Rapids	91	CY	\$ 40	\$ 3,640	\$ 4,000
5.05	High Terrace Fill, Floodplain and Portage	800	CY	\$ 15	\$ 12,000	\$ 12,000
5.09	MDOT 23A, Boulder Rapids	250	CY	\$ 65	\$ 16,250	\$ 17,000
5.10	Rebar Anchored Weir Boulders, Rapids	58	EA	\$ 600	\$ 34,800	\$ 35,000
5.11	Site Restoration	1	AC	\$ 15,000	\$ 15,000	\$ 15,000
				<b>Subtotal</b>	<b>\$ 348,190</b>	<b>\$ 350,000</b>
				Construction Subtotal	\$ 816,900	\$ 817,000
6.00	Unknown Scope Items			30%	\$ 245,070	\$ 246,000
				<b>Construction Total:</b>	<b>\$ 1,061,970</b>	<b>\$ 1,063,000</b>
<b>Other Costs:</b>						
7.00	Engineering Design and Permitting			10%	\$ 81,690	\$ 82,000
8.00	Engineering and Construction Observation			10%	\$ 81,690	\$ 82,000
				<b>Huroc Dam Estimated Design and Construction Cost</b>	<b>\$ 1,225,350</b>	<b>\$ 1,227,000</b>
<b>9 50-Year Life Cycle Regulatory Requirements - No Legislation Change</b>						
				<b>2024 Dollars</b>	<b>Future Dollars</b>	<b>Future Dollars (Rounded)</b>
9.01	Inspections (5 year cycle)	\$ -	0	\$ -	\$ -	\$ -
9.02	Maintenance and Operations	\$ 10,000	0	\$ 500,000.00	\$ 1,587,737.67	\$ 1,588,000
9.03	Inspections In Depth (every 10yrs)		10	\$ -	\$ -	\$ -
9.04	Increased Spillway Capacity (10yrs)		10	\$ -	\$ -	\$ -
9.05	Major rehabilitation/repairs		50	\$ -	\$ -	\$ -
			<b>Subtotal</b>	<b>\$ 500,000</b>	<b>\$ 1,587,738</b>	<b>\$ 1,588,000</b>
				<b>Huroc Dam Total Estimated 50-year Life Cycle Cost with Current Regulations</b>	<b>\$ 1,725,350</b>	<b>\$ 2,813,087.67</b>
<b>10 50-Year Life Cycle Regulatory Requirements - Legislation change</b>						
				<b>2024 Dollars</b>	<b>Future Dollars</b>	<b>Future Dollars (Rounded)</b>
10.01	Inspections (5 year cycle)		10	\$ -	\$ -	\$ -
10.02	Maintenance and Operations	\$ 10,000	0	\$ 500,000	\$ 1,587,738	\$ 1,588,000
10.03	Licensing and Insurance Requirements (annual)		0	\$ -	\$ -	\$ -
10.04	Major rehabilitation/repairs		50	\$ -	\$ -	\$ -
			<b>Subtotal</b>	<b>\$ 500,000</b>	<b>\$ 1,587,738</b>	<b>\$ 1,588,000</b>
				<b>Huroc Dam Estimated 50-year Life Cycle Cost with Legislation Change</b>	<b>\$ 1,726,000</b>	<b>\$ 2,813,087.67</b>

	2024 Dollars	Future Dollars
<b>TOTAL ESTIMATED DESIGN AND CONSTRUCTION COST (FLAT ROCK AND HUROC)</b>	\$ 12,573,000	\$ 12,573,000
<b>Total Estimated 50-year Life Cycle Cost with Current Regulations</b>	\$ 2,500,000	\$ 13,836,000
<b>Total Estimated 50-year Life Cycle Cost with Legislation Change</b>	\$ 3,100,000	\$ 15,768,000
<b>TOTAL W/ CONSTRUCTION COSTS (No legislation change)</b>	\$ 15,069,000	\$ 26,407,000
<b>TOTAL W/ CONSTRUCTION COSTS (with legislation change)</b>	\$ 15,670,000	\$ 28,341,000

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<b>OPINION OF PROBABLE COST - CONCEPTUAL DESIGN</b>						
<b>Project: Flat Rock-Huroc Dam Disposition Feasibility Study</b>				<b>Project No.:</b>		<b>2302140</b>
<b>Client: Huron-Clinton Metropolitan Authority</b>				<b>Date:</b>		<b>7/29/2024</b>
<b>Dam Removal - Active Restoration</b>				<b>Estimated by:</b>		<b>LH</b>
				<b>Checked by:</b>		<b>JMM</b>
<b>Flat Rock Dam</b>						
<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Cost</u>	<u>Total Cost (Rounded)</u>
<b>0.00 General Conditions</b>						
0.01	Contractor Mobilization / Demobilization	1	LS	\$ 3,225,000	\$ 3,225,000	\$ 3,230,000
	Includes: Bonds & Insurance, Permits, Project Management, Temp Facilities, Project Survey/Layout, Indirect Costs	1	LS	\$ -	\$ -	\$ -
		1	LS	\$ -	\$ -	\$ -
				<b>Subtotal</b>	<b>\$ 3,225,000</b>	<b>\$ 3,230,000</b>
<b>1.00 Site Prep</b>						
1.01	Erosion and Sediment Control	1	LS	\$ 170,000	\$ 170,000	\$ 170,000
1.02	Temporary Access Roads, Facilities and Laydown Areas	1	LS	\$ 425,000	\$ 425,000	\$ 430,000
1.03	Clearing and Grubbing	9	AC	\$ 25,000	\$ 212,500	\$ 210,000
				<b>Subtotal</b>	<b>\$ 807,500</b>	<b>\$ 810,000</b>
<b>2.00 Water Management</b>						
2.00	Incremental Demolition and Construction Dewatering	1	LS	\$ 645,000	\$ 645,000	\$ 650,000
				<b>Subtotal</b>	<b>\$ 645,000</b>	<b>\$ 650,000</b>
<b>3.00 Dam Removal</b>						
3.01	Dam Demolition	33	DAYS	\$ 10,000	\$ 330,000	\$ 330,000
3.02	Excavation for River Channel and Floodplain	380,135	CY	\$ 40	\$ 15,205,400	\$ 15,210,000
				<b>Subtotal</b>	<b>\$ 15,535,400</b>	<b>\$ 15,540,000</b>
<b>4.00 Stream Restoration</b>						
4.01	Engineered Bank Protection - Type C	3,114	LFT	\$ 600	\$ 1,868,400	\$ 1,870,000
4.02	Engineered Bank Protection - Type B	3,340	LFT	\$ 133	\$ 444,220	\$ 450,000
4.03	Non-Engineered Bank Protection - Type A	17,766	LFT	\$ 24	\$ 426,384	\$ 430,000
4.04	Riffles	12	EA	\$ 100,000	\$ 1,200,000	\$ 1,200,000
4.05	Upland Restoration	68	ACRE	\$ 4,000	\$ 272,000	\$ 280,000
4.06	Floodplain Restoration	43	ACRE	\$ 7,000	\$ 301,000	\$ 310,000
				<b>Subtotal</b>	<b>\$ 4,512,004</b>	<b>\$ 4,520,000</b>
				<b>Construction Subtotal</b>	<b>\$ 24,724,904</b>	<b>\$ 24,730,000</b>
5.00	Unknown Scope Items			30%	\$ 7,417,471	\$ 7,419,000
				<b>Construction Total:</b>	<b>\$ 32,142,375</b>	<b>\$ 32,143,000</b>
<b>Other Costs:</b>						
6.00	Engineering Design and Permitting			10%	\$ 2,472,490	\$ 2,473,000
7.00	Engineering and Construction Observation			10%	\$ 2,472,490	\$ 2,473,000
				<b>Total Estimated Design and Construction Cost</b>	<b>\$ 37,087,356</b>	<b>\$ 37,089,000</b>
<b>8 50-Year Life Cycle Costs</b>						
				<b>2024 Dollars</b>	<b>Future Dollars</b>	<b>Future Dollars (Rounded)</b>
8.01	Invasive Species Management	\$ -	0	\$ 1,309,800	\$ 3,254,053	\$ 3,255,000
				<b>Subtotal</b>	<b>\$ 1,309,800</b>	<b>\$ 3,255,000</b>
				<b>Flat Rock Dam Estimated 50-year Life Cycle Cost with Construction</b>	<b>\$ 38,397,156</b>	<b>\$ 40,341,408.51</b>
						<b>\$ 40,342,000</b>
<b>HUROC DAM</b>						
<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Cost</u>	<u>Total Cost (Rounded)</u>
<b>0.00 General Conditions</b>						
0.01	Contractor Mobilization / Demobilization	1	LS	\$ 247,000	\$ 247,000	\$ 250,000
	Includes: Bonds & Insurance, Permits, Project Management, Temp Facilities, Project Survey/Layout, Indirect Costs	1	LS	\$ -	\$ -	\$ -
		1	LS	\$ -	\$ -	\$ -
				<b>Subtotal</b>	<b>\$ 247,000</b>	<b>\$ 250,000</b>
<b>1.00 Site Prep</b>						
1.01	Erosion and Sediment Control	1	LS	\$ 30,000	\$ 30,000	\$ 30,000
1.02	Temporary Access Roads, Facilities and Laydown Areas	1	LS	\$ 75,000	\$ 75,000	\$ 80,000
1.03	Clearing and Grubbing	1	AC	\$ 25,000	\$ 25,000	\$ 30,000
				<b>Subtotal</b>	<b>\$ 130,000</b>	<b>\$ 130,000</b>
<b>2.00 Water Management</b>						
2.00	Incremental Demolition and Construction Dewatering	1	LS	\$ 75,000	\$ 75,000	\$ 80,000
				<b>Subtotal</b>	<b>\$ 75,000</b>	<b>\$ 80,000</b>
<b>3.00 Dam Removal</b>						
3.01	Dam Demolition	5	DAYS	\$ 10,000	\$ 50,000	\$ 50,000
3.02	Excavation for River Channel and Floodplain	689	CY	\$ 40	\$ 27,540	\$ 30,000
				<b>Subtotal</b>	<b>\$ 77,540</b>	<b>\$ 80,000</b>

<b>4.00 Stream Restoration</b>						
4.01	Engineered Bank Protection - Type C	1,690	LFT	\$ 600	\$ 1,014,000	\$ 1,020,000
4.02	Engineered Bank Protection - Type B	1,690	LFT	\$ 133	\$ 224,770	\$ 230,000
4.03	Non-Engineered Bank Protection - Type A	-	LFT	\$ 24	\$ -	\$ -
4.04	Riffles	1	EA	\$ 100,000	\$ 100,000	\$ 100,000
4.05	Upland Restoration	4	ACRE	\$ 4,000	\$ 15,029	\$ 20,000
4.06	Floodplain Restoration	1	ACRE	\$ 7,000	\$ 9,234	\$ 10,000
				<b>Subtotal</b>	<b>\$ 1,363,033</b>	<b>\$ 1,370,000</b>
				<b>Construction Subtotal</b>	<b>\$ 1,892,573</b>	<b>\$ 1,900,000</b>
				30%	<b>\$ 567,772</b>	<b>\$ 570,000</b>
				<b>Construction Total:</b>	<b>\$ 2,460,345</b>	<b>\$ 2,470,000</b>
<b>Other Costs:</b>						
6.00	Engineering Design and Permitting			10%	\$ 189,257	\$ 190,000
7.00	Engineering and Construction Observation			10%	\$ 189,257	\$ 190,000
				<b>Total Estimated Design and Construction Cost</b>	<b>\$ 2,838,859</b>	<b>\$ 2,850,000</b>

<b>8 50-Year Life Cycle Costs</b>						
				2024 Dollars	Future Dollars	Future Dollars (Rounded)
8.01	Invasive Species Management	\$ 59,000	1	\$ 59,000	\$ 146,579	
				<b>Subtotal</b>	<b>\$ 59,000</b>	<b>\$ 146,579</b>
				<b>Huroc Dam Estimated 50-year Life Cycle Cost with Construction</b>	<b>\$ 2,897,859</b>	<b>\$ 2,985,438.33</b>
						<b>\$ 2,986,000</b>
<b>TOTAL ESTIMATED DESIGN AND CONSTRUCTION COST</b>				<b>\$ 39,926,215</b>	<b>\$ 39,926,215</b>	
<b>TOTAL 50-YEAR LIFE CYCLE COST</b>				<b>\$ 1,368,800</b>	<b>\$ 3,400,631</b>	
<b>TOTAL COST (INCLUDING INITIAL CONSTRUCTION)</b>				<b>\$ 41,295,015</b>	<b>\$ 43,326,847</b>	

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<b>OPINION OF PROBABLE COST - CONCEPTUAL DESIGN</b>						
<b>Project: Flat Rock-Huroc Dam Disposition Feasibility Study</b>				<b>Project No.:</b>		<b>2302140</b>
<b>Client: Huron-Clinton Metropolitan Authority</b>				<b>Date:</b>		<b>7/29/2024</b>
<b>Dam Removal - Passive Restoration</b>				<b>Estimated by:</b>		<b>LH</b>
				<b>Checked by:</b>		<b>JMM</b>
<b>FLAT ROCK DAM</b>						
<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Cost</u>	<u>Total Cost (Rounded)</u>
<b>0.00 General Conditions</b>						
0.01	Contractor Mobilization / Demobilization	1	LS	\$ 2,571,000	\$ 2,571,000	\$ 2,571,000
	Includes: Bonds & Insurance, Permits, Project Management, Temp Facilities, Project Survey/Layout, Indirect Costs	1	LS	\$ -	\$ -	\$ -
		1	LS	\$ -	\$ -	\$ -
				<b>Subtotal</b>	<b>\$ 2,571,000</b>	<b>\$ 2,580,000</b>
<b>1.00 Site Prep</b>						
1.01	Erosion and Sediment Control	1	LS	\$ 170,000	\$ 170,000	\$ 170,000
1.02	Temporary Access Roads, Facilities and Laydown Areas	1	LS	\$ 425,000	\$ 425,000	\$ 430,000
1.03	Clearing and Grubbing	9	AC	\$ 25,000	\$ 225,000	\$ 230,000
				<b>Subtotal</b>	<b>\$ 820,000</b>	<b>\$ 820,000</b>
<b>2.00 Water Management</b>						
2.01	Incremental Demolition and Construction Dewatering	1	LS	\$ 645,000	\$ 645,000	\$ 650,000
				<b>Subtotal</b>	<b>\$ 645,000</b>	<b>\$ 650,000</b>
<b>3.00 Dam Removal</b>						
3.01	Dam Demolition	33	DAYS	\$ 10,000	\$ 330,000	\$ 330,000
3.02	Excavation for Pilot Channel	361,000	CY	\$ 40	\$ 14,440,000	\$ 14,440,000
				<b>Subtotal</b>	<b>\$ 14,770,000</b>	<b>\$ 14,770,000</b>
<b>4.00 Stream Restoration</b>						
4.01	Engineered Bank Protection - Type C	1,180	LFT	\$ 600	\$ 708,000	\$ 710,000
4.02	Engineered Bank Protection - Type B	-	LFT	\$ 133	\$ -	\$ -
4.03	Riffles	2	EA	\$ 100,000	\$ 200,000	\$ 200,000
				<b>Subtotal</b>	<b>\$ 908,000</b>	<b>\$ 910,000</b>
				<b>Construction Subtotal</b>	<b>\$ 19,714,000</b>	<b>\$ 19,730,000</b>
5.00	Contingency			30%	\$ 5,914,200	\$ 5,910,000
				<b>Construction Total:</b>	<b>\$ 25,628,200</b>	<b>\$ 25,640,000</b>
<b>Other Costs:</b>						
6.00	Engineering Design and Permitting			10%	\$ 1,971,400	\$ 1,970,000
7.00	Engineering and Construction Observation			10%	\$ 1,971,400	\$ 1,970,000
				<b>Total Estimated Design and Construction Cost</b>	<b>\$ 29,571,000</b>	<b>\$ 29,580,000</b>
<b>8 50-Year Life Cycle Costs</b>						
				<b>2024 Dollars</b>	<b>Future Dollars</b>	<b>Future Dollars (Rounded)</b>
8.01	Invasive Species Management	\$ 1,554,000	1	\$ 1,554,000	\$ 3,536,794	\$ 3,537,000
				<b>Subtotal</b>	<b>\$ 1,554,000</b>	<b>\$ 3,537,000</b>
				<b>Flat Rock Dam Estimated 50-year Life Cycle Cost with Construction</b>	<b>\$ 31,125,000</b>	<b>\$ 33,107,794.02</b>
						<b>\$ 33,108,000</b>
<b>HUROC DAM</b>						
<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Cost</u>	<u>Total Cost (Rounded)</u>
<b>0.00 General Conditions</b>						
0.01	Contractor Mobilization / Demobilization	1	LS	\$ 150,000	\$ 150,000	\$ 150,000
	Includes: Bonds & Insurance, Permits, Project Management, Temp Facilities, Project Survey/Layout, Indirect Costs	1	LS	\$ -	\$ -	\$ -
		1	LS	\$ -	\$ -	\$ -
				<b>Subtotal</b>	<b>\$ 150,000</b>	<b>\$ 150,000</b>
<b>1.00 Site Prep</b>						
1.01	Erosion and Sediment Control	1	LS	\$ 30,000	\$ 30,000	\$ 30,000
1.02	Temporary Access Roads, Facilities and Laydown Areas	1	LS	\$ 75,000	\$ 75,000	\$ 80,000
1.03	Clearing and Grubbing	1	AC	\$ 25,000	\$ 25,000	\$ 30,000
				<b>Subtotal</b>	<b>\$ 130,000</b>	<b>\$ 130,000</b>
<b>2.00 Water Management</b>						
2.01	Incremental Demolition and Construction Dewatering	1	LS	\$ 75,000	\$ 75,000	\$ 80,000
				<b>Subtotal</b>	<b>\$ 75,000</b>	<b>\$ 80,000</b>
<b>3.00 Dam Removal</b>						
3.01	Dam Demolition	5	DAYS	\$ 10,000	\$ 50,000	\$ 50,000
3.02	Excavation for Pilot Channel	654	CY	\$ 40	\$ 26,163	\$ 30,000
				<b>Subtotal</b>	<b>\$ 76,163</b>	<b>\$ 80,000</b>



<b>4.00 Stream Restoration</b>							
4.01	Engineered Bank Protection - Type C		845	LFT	\$ 600	\$ 507,000	\$ 510,000
4.02	Engineered Bank Protection - Type B		845	LFT	\$ 133	\$ 112,385	\$ 120,000
4.03	Riffles		1	EA	\$ 100,000	\$ 100,000	\$ 100,000
					<b>Subtotal</b>	<b>\$ 719,385</b>	<b>\$ 730,000</b>
					<b>Construction Subtotal</b>	<b>\$ 1,150,548</b>	<b>\$ 1,170,000</b>
5.00	Contingency				30%	\$ 345,164	\$ 350,000
					<b>Construction Total:</b>	<b>\$ 1,495,712</b>	<b>\$ 1,520,000</b>
<b>Other Costs:</b>							
6.00	Engineering Design and Permitting				10%	\$ 115,055	\$ 120,000
7.00	Engineering and Construction Observation				10%	\$ 115,055	\$ 120,000
					<b>Total Estimated Design and Construction Cost</b>	<b>\$ 1,725,822</b>	<b>\$ 1,730,000</b>
<b>8</b>	<b>50-Year Life Cycle Costs</b>				<b>2024 Dollars</b>	<b>Future Dollars</b>	<b>Future Dollars (Rounded)</b>
8.01	Invasive Species Management	\$ 70,000		1	\$ 70,000	\$ 159,315	\$ 160,000
					<b>Subtotal</b>	<b>\$ 70,000</b>	<b>\$ 159,315</b>
					<b>Huroc Dam Estimated 50-year Life Cycle Cost with Construction</b>	<b>\$ 1,795,822</b>	<b>\$ 1,885,137.05</b>
						<b>\$ 1,886,000</b>	<b>\$ 1,886,000</b>
	<b>TOTAL ESTIMATED DESIGN AND CONSTRUCTION COST</b>				<b>\$ 31,296,822</b>	<b>\$ 31,296,822</b>	<b>\$ 31,297,000</b>
	<b>TOTAL 50-YEAR LIFE CYCLE COST</b>				<b>\$ 1,624,000</b>	<b>\$ 3,696,109</b>	<b>\$ 3,697,000</b>
	<b>TOTAL COST (INCLUDING INITIAL CONSTRUCTION)</b>				<b>\$ 32,920,822</b>	<b>\$ 34,992,931</b>	<b>\$ 34,993,000</b>

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<b>OPINION OF PROBABLE COST - CONCEPTUAL DESIGN</b>						
<b>Project: Flat Rock-Huroc Dam Disposition Feasibility Study</b>				<b>Project No.:</b>		<b>2302140</b>
<b>Client: Huron-Clinton Metropolitan Authority</b>				<b>Date:</b>		<b>3/25/2024</b>
<b>Sea Lamprey Barrier at Huroc Dam- Alternative A</b>				<b>Estimated by:</b>		<b>LH/MS</b>
				<b>Checked by:</b>		<b>JMM</b>
<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Cost</u>	<u>Total Cost (Rounded)</u>
<b>0.00 General Conditions</b>						
0.01	Contractor Mobilization / Demobilization	1	LS	\$ 546,000	\$ 546,000	\$ 546,000
	Includes: Bonds & Insurance, Permits, Project Management, Temp Facilities, Project Survey/Layout, Indirect Costs					
0.02	Temporary Care-of-Water (5%) (less mobilization)			5%	\$ 181,841	\$ 180,000
				<b>Subtotal</b>	<b>\$ 727,841</b>	<b>\$ 726,000</b>
<b>1.00 Primary Structure</b>						
1.01	Structural Concrete	504	CY	\$ 2,000	\$ 1,007,407	\$ 1,010,000
1.02	Excavation/Fill	1,111	CY	\$ 40	\$ 44,444	\$ 40,000
1.03	Site Preparation and Grading	2,444	SY	\$ 20	\$ 48,880	\$ 50,000
1.04	Riprap	1,022	CY	\$ 155	\$ 158,410	\$ 160,000
1.05	Adjustable Gates	112	LF	\$ 4,200	\$ 470,400	\$ 470,000
				<b>Subtotal</b>	<b>\$ 1,729,542</b>	<b>\$ 1,730,000</b>
<b>2.00 Fishway</b>						
2.01	Structural Concrete	156	CY	\$ 2,000	\$ 311,111	\$ 310,000
2.02	Excavation/Fill	622	CY	\$ 40	\$ 24,889	\$ 20,000
2.03	Alluvium Backfill	370	CY	\$ 160	\$ 59,259	\$ 60,000
2.04	Site Preparation and Grading	278	SY	\$ 20	\$ 5,560	\$ 10,000
2.05	Adjustable Gates	36	LF	\$ 4,200	\$ 151,200	\$ 150,000
				<b>Subtotal</b>	<b>\$ 552,019</b>	<b>\$ 550,000</b>
<b>3.00 Berm</b>						
3.01	Excavation/Fill	8,556	CY	\$ 35	\$ 299,444	\$ 300,000
3.02	Riprap	2,444	CY	\$ 155	\$ 378,889	\$ 380,000
3.03	Seeding	35,000	SF	\$ 0.57	\$ 20,090	\$ 20,000
				<b>Subtotal</b>	<b>\$ 698,423</b>	<b>\$ 700,000</b>
<b>4.00 Additional</b>						
4.01	Control House	1	EA	\$ 150,000	\$ 150,000	\$ 150,000
4.02	Site Security	1	EA	\$ 50,000	\$ 50,000	\$ 50,000
4.03	Access Corridor/Pathway	1	EA	\$ 50,000	\$ 50,000	\$ 50,000
4.04	Electrical	1	EA	\$ 150,000	\$ 150,000	\$ 150,000
4.05	Telemetry	1	EA	\$ 50,000	\$ 50,000	\$ 50,000
4.06	Testing and Calibration	1	EA	\$ 200,000	\$ 200,000	\$ 200,000
4.07	Reseeding	12,000	SF	\$ 0.57	\$ 6,840	\$ 10,000
				<b>Subtotal</b>	<b>\$ 656,840</b>	<b>\$ 660,000</b>
				<b>Construction Subtotal</b>	<b>\$ 4,364,666</b>	<b>\$ 4,366,000</b>
5.00	Contingency			30%	\$ 1,309,400	\$ 1,309,800
				<b>Construction Total:</b>	<b>\$ 5,674,065</b>	<b>\$ 5,675,800</b>
<b>Other Costs:</b>						
6.00	Engineering Design and Permitting			10%	\$ 436,467	\$ 436,600
7.00	Engineering and Construction Observation			10%	\$ 436,467	\$ 436,600
				<b>Total Estimated Design and Construction Cost</b>	<b>\$ 6,546,999</b>	<b>\$ 6,549,000</b>

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<b>OPINION OF PROBABLE COST - CONCEPTUAL DESIGN</b>						
<b>Project: Flat Rock-Huroc Dam Disposition Feasibility Study</b>				<b>Project No.:</b>		<b>2302140</b>
<b>Client: Huron-Clinton Metropolitan Authority</b>				<b>Date:</b>		<b>4/11/2024</b>
<b>Sea Lamprey Barrier at Flat Rock Dam- Alternative B</b>				<b>Estimated by:</b>		<b>LH/MS</b>
				<b>Checked by:</b>		<b>JMM</b>
<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Cost</u>	<u>Total Cost (Rounded)</u>
<b>0.00 General Conditions</b>						
0.01	Contractor Mobilization / Demobilization Includes: Bonds & Insurance, Permits, Project Management, Temp Facilities, Project Survey/Layout, Indirect Costs	1	LS	\$ 737,000	\$ 737,000	\$ 737,000
0.02	Temporary Care-of-Water (5%) (less mobilization)			5%	\$ 245,661	\$ 250,000
				<b>Subtotal</b>	<b>\$ 982,661</b>	<b>\$ 987,000</b>
<b>1.00 Primary Structure</b>						
1.01	Structural Concrete	881	CY	\$ 2,000	\$ 1,762,963	\$ 1,760,000
1.02	SSP	4,294	SF	\$ 61	\$ 261,922	\$ 260,000
1.03	Excavation/Fill	13,630	CY	\$ 40	\$ 545,185	\$ 550,000
1.04	Site Preparation and Grading	5,111	SY	\$ 10	\$ 51,110	\$ 50,000
1.05	Riprap	2,874	CY	\$ 155	\$ 445,481	\$ 450,000
1.06	Adjustable Gates	200	LF	\$ 4,200	\$ 840,000	\$ 840,000
				<b>Subtotal</b>	<b>\$ 3,906,661</b>	<b>\$ 3,910,000</b>
<b>2.00 Fishway</b>						
2.01	Structural Concrete	102	CY	\$ 2,000	\$ 204,444	\$ 200,000
2.02	Excavation/Fill	256	CY	\$ 40	\$ 10,222	\$ 10,000
2.03	Site Preparation and Grading	333	SY	\$ 20	\$ 6,660	\$ 10,000
2.04	Adjustable Gates	24	LF	\$ 4,200	\$ 100,800	\$ 101,000
				<b>Subtotal</b>	<b>\$ 322,127</b>	<b>\$ 321,000</b>
<b>3.00 Additional</b>						
3.01	Control House	1	EA	\$ 150,000	\$ 150,000	\$ 150,000
3.02	Site Security	1	EA	\$ 50,000	\$ 50,000	\$ 50,000
3.03	Access Corridor/Pathway	1	EA	\$ 50,000	\$ 50,000	\$ 50,000
3.04	Electrical	1	EA	\$ 150,000	\$ 150,000	\$ 150,000
3.05	Telemetry	1	EA	\$ 50,000	\$ 50,000	\$ 50,000
3.06	Testing and Calibration	1	EA	\$ 200,000	\$ 200,000	\$ 200,000
3.07	Reseeding	60,000	SF	\$ 0.57	\$ 34,440	\$ 35,000
				<b>Subtotal</b>	<b>\$ 684,440</b>	<b>\$ 685,000</b>
				<b>Construction Subtotal</b>	<b>\$ 5,895,890</b>	<b>\$ 5,903,000</b>
4.00	Contingency			30%	\$ 1,768,767	\$ 1,770,900
				<b>Construction Total:</b>	<b>\$ 7,664,656</b>	<b>\$ 7,673,900</b>
<b>Other Costs:</b>						
5.00	Engineering Design and Permitting			10%	\$ 589,589	\$ 590,300
6.00	Engineering and Construction Observation			10%	\$ 589,589	\$ 590,300
				<b>Total Estimated Design and Construction Cost</b>	<b>\$ 8,843,834</b>	<b>\$ 8,854,500</b>

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<b>OPINION OF PROBABLE COST - CONCEPTUAL DESIGN</b>						
<b>Project: Flat Rock-Huroc Dam Disposition Feasibility Study</b>				<b>Project No.:</b>		<b>2302140</b>
<b>Client: Huron-Clinton Metropolitan Authority</b>				<b>Date:</b>		<b>4/11/2024</b>
<b>Sea Lamprey Electrical Barrier- Alternative C</b>				<b>Estimated by:</b>		<b>LH/MS</b>
				<b>Checked by:</b>		<b>JMM</b>
<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Cost</u>	<u>Total Cost (Rounded)</u>
<b>0.00</b>	<b>General Conditions</b>					
0.01	Contractor Mobilization / Demobilization	1	LS	\$ 434,000	\$ 434,000	\$ 434,000
	Includes: Bonds & Insurance, Permits, Project Management, Temp Facilities, Project Survey/Layout, Indirect Costs					
0.02	Temporary Care-of-Water (5%) (less mobilization)			5%	\$ 144,773	\$ 150,000
				<b>Subtotal</b>	<b>\$ 578,773</b>	<b>\$ 584,000</b>
<b>1.00</b>	<b>Primary Structure</b>					
1.01	Structural Concrete	215	CY	\$ 2,000	\$ 429,630	\$ 430,000
1.02	Excavation/Fill	519	CY	\$ 40	\$ 20,741	\$ 20,000
1.03	Site Preparation and Grading	1,444	SY	\$ 10	\$ 14,444	\$ 15,000
1.04	Riprap	1,363	CY	\$ 155	\$ 211,259	\$ 212,000
1.05	DC Electrical Barrier	1	EA	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
				<b>Subtotal</b>	<b>\$ 1,676,074</b>	<b>\$ 1,677,000</b>
<b>2.00</b>	<b>Fishway</b>					
2.01	Structural Concrete	233	CY	\$ 2,000	\$ 466,667	\$ 470,000
2.02	Excavation/Fill	622	CY	\$ 40	\$ 24,889	\$ 25,000
2.03	Alluvium Backfill	370	CY	\$ 160	\$ 59,259	\$ 60,000
2.04	Site Preparation and Grading	278	SY	\$ 20	\$ 5,556	\$ 6,000
2.05	Adjustable Gates	36	LF	\$ 4,200	\$ 151,200	\$ 152,000
				<b>Subtotal</b>	<b>\$ 707,570</b>	<b>\$ 713,000</b>
<b>3.00</b>	<b>Additional</b>					
3.01	Control House	1	EA	\$ 150,000	\$ 150,000	\$ 150,000
3.02	Site Security	1	EA	\$ 75,000	\$ 75,000	\$ 80,000
3.03	Access Corridor/Pathway	1	EA	\$ 50,000	\$ 50,000	\$ 50,000
3.04	Electrical	1	EA	\$ 150,000	\$ 150,000	\$ 150,000
3.05	Telemetry	1	EA	\$ 15,000	\$ 15,000	\$ 20,000
3.06	Testing and Calibration	1	EA	\$ 50,000	\$ 50,000	\$ 50,000
3.07	Reseeding	38,000	SF	\$ 0.57	\$ 21,812	\$ 20,000
				<b>Subtotal</b>	<b>\$ 511,812</b>	<b>\$ 510,000</b>
				<b>Construction Subtotal</b>	<b>\$ 3,474,229</b>	<b>\$ 3,484,000</b>
4.00	Contingency			30%	\$ 1,042,269	\$ 1,045,200
				<b>Construction Total:</b>	<b>\$ 4,516,498</b>	<b>\$ 4,529,200</b>
<b>Other Costs:</b>						
5.00	Engineering Design and Permitting			10%	\$ 347,423	\$ 348,400
6.00	Engineering and Construction Observation			10%	\$ 347,423	\$ 348,400
	<b>Total Estimated Design and Construction Cost</b>				<b>\$ 5,211,344</b>	<b>\$ 5,226,000</b>

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