

Engineer's Estimate of Probable Construction Costs
Gude Landfill Remediation
30% Design
November 2018

Item	Cost Categories and Items	Description/Assumptions	Quantity	Units	Unit Cost	Total Cost
1	MOBILIZATION AND SITE PREPARATION					\$4,186,350
	Mobilization and Bonding	Includes trailers and utility connection (estimated @ 12% of Items 2-8)	1	LS	\$3,444,000	\$3,444,000
	Surveying		1	LS	\$120,000	\$120,000
	Submittals	Preparation and management of submittals	1	LS	\$90,000	\$90,000
	Remove Existing LFG piping	6-8 -in HDPE	19,250	LF	\$7	\$134,750
	Remove Existing Chain-Link Fence		3,400	LF	\$4	\$13,600
	Remove Existing Storm Drains		5,600	LF	\$30	\$168,000
	Remove Existing Storm Drain Structures		16	EA	\$1,000	\$16,000
	Disposal of Removed Materials		150	TON	\$200	\$30,000
	Temporary Chain-Link Fencing		3,400	LF	\$50	\$170,000
2	WASTE RELOCATION AND SUBGRADE PREPARATION					\$5,120,000
	Clearing and Grubbing	Entire limit of disturbance	100	AC	\$7,500	\$750,000
	Excavation and Stockpiling of Existing Cover	Clean soil to be re-used to cover waste after relocation	60,000	CY	\$10	\$600,000
	Waste Excavation and Placement	Includes undercut	262,000	CY	\$10	\$2,620,000
	Environmental Controls	Tarps, foam, dust control, etc.	1	LS	\$400,000	\$400,000
	Install Onsite Soil for Subgrade	Includes compaction and grading of onsite soil	60,000	CY	\$10	\$600,000
	Furnish and Install Offsite Soil for Subgrade	Purchase, transport, and install clean soil from offsite	5,000	CY	\$30	\$150,000
3	EROSION & SEDIMENT CONTROL					\$800,000
	Erosion & Sediment Controls	Includes perimeter controls, sediment basins, temporary stabilization	1	LS	\$800,000	\$800,000
4	CAPPING					\$15,393,900
	Geosynthetics	Furnish and install, textile, composite, liner	457,000	SY	\$12	\$5,484,000
	Vegetative Support Soil	Furnish and install	254,000	CY	\$30	\$7,620,000
	Topsoil	Material cost, delivery, and placement, 4" soil over cap area	51,000	CY	\$35	\$1,785,000
	Perimeter Riprap Drainage		8,415	TON	\$60	\$504,900
5	LANDFILL GAS (LFG) COLLECTION					\$2,124,510
	Abandon Existing LFG Extraction Wells	Removal of wellhead, 5-ft cut off, capping, and backfill	53	EA	\$1,000	\$53,000
	Extend Existing LFG Extraction Wells		1	LS	\$215,000	\$215,000
	Shorten Existing LFG Extraction Wells		1	LS	\$50,000	\$50,000
	New LFG Extraction Wells	Assumes average length of LFG pipe is 40 ft and at \$155/LF	20	EA	\$6,200	\$124,000
	LFG Header Piping and Fittings		9,260	LF	\$114	\$1,055,640
	LFG Lateral Piping and Fittings		12,530	LF	\$29	\$363,370
	LFG Valves		70	EA	\$3,300	\$231,000
	Condensate Traps		13	EA	\$2,500	\$32,500
6	DRAINAGE AND STORMWATER MANAGEMENT					\$3,283,500
	Modifications To Ex. Stormwater Ponds		1	LS	\$2,000,000	\$2,000,000
	New Storm Drain Inlets		20	EA	\$3,000	\$60,000
	New Storm Drains And Culverts		700	LF	\$125	\$87,500
	Downchutes	MDE standard gabion	180	LF	\$200	\$36,000
	Swales and Benches	Includes erosion control lining, excludes excavation	15,000	SY	\$60	\$900,000
	Water Quality Facilities		1	LS	\$200,000	\$200,000
7	ROADS AND OPERATIONAL AREA					\$1,453,360
	Asphalt Access Road	Assume 8" asphalt section	2,640	TON	\$75	\$198,000
	Subbase for Asphalt Access Road	Assume 8" aggregate base	5,940	SY	\$19	\$112,860
	Access Roads with Pervious Pavement		14,900	SY	\$25	\$372,500
	Operational Area Asphalt Paving	Assume 8" asphalt section	6,000	TON	\$75	\$450,000
	Subbase for Operational Area Asphalt	Assume 8" aggregate base	12,000	SY	\$19	\$228,000
	Retaining Wall	3-ft tall wall at operational area	240	LF	\$300	\$72,000
	Traffic Protection	"Jersey" barrier	800	LF	\$25	\$20,000
8	SITE RESTORATION AND DEMOBILIZATION					\$521,500
	Remove Erosion & Sediment Controls		1	LS	\$80,000	\$80,000
	Tree Planting		100	EA	\$175	\$17,500
	Seeding and Stabilization		100	ACRE	\$2,000	\$200,000
	Chain-Link Fence		3,400	LF	\$50	\$170,000
	Chain-Link Gate	Pedestrian gate	4	EA	\$1,000	\$4,000
	Closeout Requirements		1	LS	\$50,000	\$50,000
					Subtotal	\$32,883,120
					20% Contingency	\$6,576,624
					Total	\$39,459,744