

**Table 6-7b**  
**Construction Cost Estimate for Soil Alternative No. 4b**  
Rolling Knolls Landfill Superfund Site - Feasibility Study  
Chatham, New Jersey

Geosyntec Consultants

Component	Range Unit Cost			Unit	Quantity	Construction Cost Estimate	
A - Design/Construction Oversight/Permits							
2-ft Excavation of Selected Area							
Pre-Design Investigation	0.5%	to	1%	% Construction <sup>(2)</sup>	\$ 33,615,100	\$	252,200
Remedial Design	0.5%	to	1%	% Construction <sup>(2)</sup>	\$ 33,615,100	\$	252,200
Remedial Oversight	5%	to	10%	% Construction <sup>(2)</sup>	\$ 33,615,100	\$	2,521,200
4-ft Excavation of Selected Area							
Pre-Design Investigation	0.5%	to	1%	% Construction <sup>(2)</sup>	\$ 56,977,700	\$	427,400
Remedial Design	0.5%	to	1%	% Construction <sup>(2)</sup>	\$ 56,977,700	\$	427,400
Remedial Oversight	5%	to	10%	% Construction <sup>(2)</sup>	\$ 56,977,700	\$	4,273,400
Subtotal (Option 1: 2-ft Excavation of Selected Area)						\$	3,025,600
Subtotal (Option 2: 4-ft Excavation of Selected Area)						\$	5,128,200
B - Construction Preparation							
2-ft Excavation of Selected Area							
Bonding, insurance etc.	0.05%	to	0.10%	% Construction <sup>(2)</sup>	\$ 33,615,100	\$	25,300
Mobilization/Demobilization	0.25%	to	0.75%	% Construction <sup>(2)</sup>	\$ 33,615,100	\$	168,100
4-ft Excavation of Selected Area							
Bonding, insurance etc.	0.05%	to	0.10%	% Construction <sup>(2)</sup>	\$ 56,977,700	\$	42,800
Mobilization/Demobilization	0.25%	to	0.75%	% Construction <sup>(2)</sup>	\$ 56,977,700	\$	284,900
Subtotal (Option 1: 2-ft Excavation of Selected Area)						\$	193,400
Subtotal (Option 2: 4-ft Excavation of Selected Area)						\$	327,700
C - General Construction and Site Management							
Site management and facilities	\$ 5,400	to	\$ 21,600	per mth	24	\$	324,000
Survey (topo , wetlands, etc.)	\$ 80,800	to	\$ 107,700	est.	1	\$	94,300
Britten Road entrance overlay	\$ 6	to	\$ 7	sft	35,000	\$	227,500
Construction entrance	\$ 5,400	to	\$ 10,800	est.	1	\$	8,100
Traffic management	\$ 2,200	to	\$ 10,800	mth	20	\$	130,000
Demolition existing structures and offsite disposal	\$ 10,800	to	\$ 27,000	est.	1	\$	18,900
25-ft wide construction access road	\$ 110	to	\$ 220	lin ft	5,600	\$	924,000
15-ft wide permanent access road (half of perimeter)	\$ 65	to	\$ 130	lin ft	5,600	\$	546,000
Structural BMP (bog turtle)	\$ 21,600	to	\$ 43,100	est.	1	\$	32,400
Subtotal						\$	2,305,200

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Component	Range	Unit	Cost	Unit	Quantity	Construction Cost Estimate
<b>D - Areas of Particular Concern (APCs)</b>						
APCs include POI-09, POI-14, SS-109 (i.e., TP-09), SS-90, SS-97, SS-103, and SS-118.						
Assumed 1-acre remediation for each APC.						
Remediation area:	7.0	acres				
Flood hazard area (FHA):	4.0	acres				
Surface Debris Area :	2.0	acres				
Wetland impact area:	4.8	acres				
Remediation area perimeter:	5,200	feet				
<b>Site Preparation</b>						
Silt fence (perimeter of each APC)			\$ 6	lin ft	6,240	\$ 37,500
Turbidity curtain			\$ 11	lin ft	5,200	\$ 57,200
Clearing/grubbing			\$ 2,200	acre	8.4	\$ 18,500
Relocation of surface debris using LGP equipment			\$ 11	cyd	3,300	\$ 36,300
<b>Excavate and Dispose Offsite</b>						
Excavate 2-ft thick impacted soil			\$ 22	cyd	22,600	\$ 497,200
Off-site transportation	\$ 6	to	\$ 11	ton	22,600	\$ 192,100
Off-site disposal (hazardous waste)	\$ 220	to	\$ 540	ton	11,300	\$ 4,294,000
Off-site disposal (non-hazardous waste)	\$ 44	to	\$ 76	ton	11,300	\$ 678,000
Backfill with offsite soil (e.g., loam)			\$ 44	cyd	22,600	\$ 994,400
Wetland restoration (re-vegetation)			\$ 3,300	acre	4.8	\$ 15,900
<b>Subtotal</b>						\$ 6,821,100
<b>E - 25-Acre Selected Area (Functional Area 1)</b>						
Remediation area:	25	acres				
Flood hazard area (FHA):	0	acres				
Wetland impact area:	4	acres				
Remediation area perimeter:	6,100	feet				
<b>Site Preparation</b>						
Silt fence			\$ 6	lin ft	7,320	\$ 44,000
Turbidity curtain			\$ 11	lin ft	1,525	\$ 16,800
Clearing/grubbing			\$ 2,200	acre	30	\$ 66,000
<b>2-ft Excavate and Dispose Offsite</b>						
2-ft excavation			\$ 17	cyd	80,700	\$ 1,371,900
Off-site transportation (hazardous waste)	\$ 6	to	\$ 11	ton	80,700	\$ 686,000
Off-site disposal (hazardous waste)	\$ 220	to	\$ 540	ton	40,350	\$ 15,333,000
Off-site disposal (non-hazardous waste)	\$ 44	to	\$ 76	ton	40,350	\$ 2,421,000
Backfill with off-site soil			\$ 44	cyd	80,700	\$ 3,550,800
<b>4-ft Excavate and Dispose Offsite</b>						
2-ft excavation			\$ 17	cyd	161,400	\$ 2,743,800
Off-site transportation (hazardous waste)	\$ 6	to	\$ 11	ton	161,400	\$ 1,371,900
Off-site disposal (hazardous waste)	\$ 220	to	\$ 540	ton	80,700	\$ 30,666,000
Off-site disposal (non-hazardous waste)	\$ 44	to	\$ 76	ton	80,700	\$ 4,842,000
Backfill with off-site soil			\$ 44	cyd	161,400	\$ 7,101,600
Wetland 1:1 on-Site reconstruction			\$ 161,600	acre	4.0	\$ 646,400
Wetland restoration (re-vegetation)			\$ 3,300	acre	1	\$ 3,300
<b>Subtotal (Option 1: 2-ft Excavation of Selected Area)</b>						\$ 24,139,200

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Component	Range	Unit Cost	Unit	Quantity	Construction Cost Estimate
<div></div> Subtotal (Option 2: 4-ft Excavation of Selected Area)					\$ 47,501,800

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Component		Range	Unit Cost	Unit	Quantity	Construction Cost Estimate
F - Vegetation of Non-Vegetated Areas						
Outside of FHA	2	acres				
Scarify, fertilize, and hydroseed			\$ 3,600	acre	1	\$ 3,600
2-ft soil (veg. support + topsoil), and hydroseed			\$ 120,000	acre	1	\$ 120,000
Subtotal						\$ 123,600
G - Site Controls (physical)						
7-ft high perimeter fence			\$ 33	lin ft	6,500	\$ 214,500
20-ft wide double access gates			\$ 4,400	each	2	\$ 8,800
3-ft wide man gates			\$ 870	each	3	\$ 2,700
Subtotal						\$ 226,000
H - Site Controls (administrative)						
Institutional controls			\$ 10,800	est.	1	\$ 10,800
Reporting to EPA			\$ 4,400	every 5-yr	6	\$ 26,400
Reporting to NJ			\$ 4,400	every 2-yr	15	\$ 66,000
Subtotal						\$ 103,200
I - Post-Remedy Operation & Maintenance						
Maintenance of Vegetation Areas (Item F)	\$ 1,300	to \$ 3,800		annual	30	\$ 112,000
Fence O&M	\$ 2,300	to \$ 6,800		annual	30	\$ 199,800
Wetland mitigation monitoring/maintenance	\$ 40,400	to \$ 53,900		annual	5	\$ 247,900
Subtotal						\$ 559,700
Total (Option 1 - 2-ft Excavation of Selected Area)						\$ 37,497,000
Total (Option 2 - 4-ft Excavation of Selected Area)						\$ 63,097,000

Notes:

- (1) See Table 6-4 for cost estimate assumptions, notes, and limitations.
- (2) Construction cost to estimate these items include the costs of Items C through G.