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COST ANALYSIS: ALTERNATIVES 1, 2, AND 3

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ALTERNATIVE 1

GE-Pittsfield EE/CA Alt. #01
EE/CA Addendum

Designed By: Roy F. Weston Inc.
Estimated By: Dan Moretz (610)701-3176

Prepared By: Roy F. Weston Inc.
West Chester Pa.

Preparation Date: 09/14/00
Effective Date of Pricing: 09/14/00

Sales Tax: 0.00%

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GE-Pittsfield Alternative No. 1 - EE/CA Addendum

Wet excavation to cleanup criteria (as determined on a subreach basis and as defined in Section 3 of EE/CA report). Riverbank and riverbed restoration. This alternative involves no river diversion.

See section 5.2 of EE/CA report for written desciptions of activities. Cost includes reduced productitivity and revised volumes.

Project Information

Escalation	0.00%
Contingency	25.00%
Engineering and Design	6.00%
USACE Construction Management	8.00%

General Contractor

Contractor Management	10.00%
Field Overhead	6.00%
Home Office Overhead	15.00%
Profit	5.00%
Bond	0.00%

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** PROJECT OWNER SUMMARY - Scope **

		QUANTITY UOM	CONTRACT	ESCLATIN	CONTINGN	ENG&DES	CONST MT		TOTAL COST	UNIT COST
10	Additional Bank		577,257	0	144,314	43,294	61,189	0	826,055	
20	Mobilization		2,342,582	0	585,646	175,694	248,314	0	3,352,235	
40	Excavate & Tran		6,175,690	0	1,543,922	463,177	654,623	0	8,837,412	
42	Dewatering of E		1,716,024	0	429,006	128,702	181,899	0	2,455,631	
46	Sampling		328,766	0	82,191	24,657	34,849	0	470,464	
60	Restoration of		2,768,404	0	692,101	207,630	293,451	0	3,961,586	
62	Restoration of		6,416,195	0	1,604,049	481,215	680,117	0	9,181,576	
	GE-Pittsfield E	1.00 EA	20,324,919	0	5,081,230	1,524,369	2,154,441	0	29,084,959	29084959

** PROJECT OWNER SUMMARY - Facility **

	QUANTITY UOM	CONTRACT	ESCLATIN	CONTINGN	ENG&DES	CONST MT		TOTAL COST	UNIT COST
10 Additional Bank		577,257	0	144,314	43,294	61,189	0	826,055	
20 Mobilization									
20.10 Mobilize Equ	10.00 EA	4,224	0	1,056	317	448	0	6,044	604.43
20.20 Setup Tempor		99,469	0	24,867	7,460	10,544	0	142,340	
20.30 Install Temp	15000.00 LF	97,782	0	24,445	7,334	10,365	0	139,926	9.33
20.32 Construct Te	12.00 EA	113,753	0	28,438	8,531	12,058	0	162,780	13565.00
20.34 Temporary De		103,176	0	25,794	7,738	10,937	0	147,645	
20.50 Erosion & Se		133,806	0	33,452	10,035	14,183	0	191,476	
20.60 Clearing		106,441	0	26,610	7,983	11,283	0	152,317	
20.70 Temporary Ac		689,745	0	172,436	51,731	73,113	0	987,025	
20.72 Maint. & Pro		664,263	0	166,066	49,820	70,412	0	950,560	
20.76 Truck Decon		48,086	0	12,021	3,606	5,097	0	68,811	
20.90 Demobilizati		115,588	0	28,897	8,669	12,252	0	165,406	
20.92 Pavement Res	8000.00 SY	166,250	0	41,563	12,469	17,623	0	237,904	29.74
TOTAL Mobilization		2,342,582	0	585,646	175,694	248,314	0	3,352,235	
40 Excavate & Tran									
40.10 Excavate Bed	45128.00 CY	3,644,136	0	911,034	273,310	386,278	0	5,214,759	115.55
40.15 ALLOWANCE D		193,733	0	48,433	14,530	20,536	0	277,232	
40.20 Excavate Ban	50247.00 CY	1,889,535	0	472,384	141,715	200,291	0	2,703,924	53.81
40.25 ALLOWANCE Do		24,217	0	6,054	1,816	2,567	0	34,654	
40.40 O&M Truck De	89700.00 CY	424,069	0	106,017	31,805	44,951	0	606,842	6.77
TOTAL Excavate & T		6,175,690	0	1,543,922	463,177	654,623	0	8,837,412	
42 Dewatering of E									
42.10 Manage Dryin	35.50 MO	685,746	0	171,436	51,431	72,689	0	981,302	27642.31
42.20 O & M WTS	35.50 MO	1,030,279	0	257,570	77,271	109,210	0	1,474,329	41530.39
TOTAL Dewatering o		1,716,024	0	429,006	128,702	181,899	0	2,455,631	
46 Sampling									
46.20 Characteriza		328,766	0	82,191	24,657	34,849	0	470,464	
TOTAL Sampling		328,766	0	82,191	24,657	34,849	0	470,464	
60 Restoration of									
60.10 Import/Place		2,527,927	0	631,982	189,595	267,960	0	3,617,463	
60.15 ALLOWANCE Do		240,477	0	60,119	18,036	25,491	0	344,123	

** PROJECT OWNER SUMMARY - Facility **

	QUANTITY	UOM	CONTRACT	ESCLATIN	CONTINGN	ENG&DES	CONST MT		TOTAL COST	UNIT COST
TOTAL Restoration			2,768,404	0	692,101	207,630	293,451	0	3,961,586	
62 Restoration of										
62.12 Import & Pla			1,757,359	0	439,340	131,802	186,280	0	2,514,780	
62.15 ALLOWANCE Do			36,747	0	9,187	2,756	3,895	0	52,585	
62.20 Restoration			4,622,089	0	1,155,522	346,657	489,941	0	6,614,210	
TOTAL Restoration			6,416,195	0	1,604,049	481,215	680,117	0	9,181,576	
TOTAL GE-Pittsfiel	1.00	EA	20,324,919	0	5,081,230	1,524,369	2,154,441	0	29,084,959	29084959

** PROJECT INDIRECT SUMMARY - Scope **

	QUANTITY UOM	DIRECT	Contr MT	Field OH	Home OH	Profit	Bond	TOTAL COST	UNIT COST
10 Additional Bank		410,000	41,000	27,060	71,709	27,488	0	577,257	
20 Mobilization		1,663,831	166,383	109,813	291,004	111,552	0	2,342,582	
40 Excavate & Tran		4,386,315	438,631	289,497	767,166	294,080	0	6,175,690	
42 Dewatering of E		1,218,815	121,881	80,442	213,171	81,715	0	1,716,024	
46 Sampling		233,508	23,351	15,411	40,840	15,656	0	328,766	
60 Restoration of		1,966,273	196,627	129,774	343,901	131,829	0	2,768,404	
62 Restoration of		4,557,135	455,714	300,771	797,043	305,533	0	6,416,195	
GE-Pittsfield E	1.00 EA	14,435,876	1,443,588	952,768	2,524,835	967,853	0	20,324,919	20324919
Contingency								5,081,230	
SUBTOTAL								25,406,149	
Engineering and Design								1,524,369	
SUBTOTAL								26,930,518	
USACE Construction Management								2,154,441	
TOTAL INCL OWNER COSTS								29,084,959	

** PROJECT INDIRECT SUMMARY - Facility **

	QUANTITY UOM	DIRECT	Contr MT	Field OH	Home OH	Profit	Bond	TOTAL COST	UNIT COST
10 Additional Bank		410,000	41,000	27,060	71,709	27,488	0	577,257	
20 Mobilization									
20.10 Mobilize Equ	10.00 EA	3,000	300	198	525	201	0	4,224	422.38
20.20 Setup Tempor		70,648	7,065	4,663	12,356	4,737	0	99,469	
20.30 Install Temp	15000.00 LF	69,450	6,945	4,584	12,147	4,656	0	97,782	6.52
20.32 Construct Te	12.00 EA	80,793	8,079	5,332	14,131	5,417	0	113,753	9479.38
20.34 Temporary De		73,282	7,328	4,837	12,817	4,913	0	103,176	
20.50 Erosion & Se		95,036	9,504	6,272	16,622	6,372	0	133,806	
20.60 Clearing		75,600	7,560	4,990	13,222	5,069	0	106,441	
20.70 Temporary Ac		489,895	48,990	32,333	85,683	32,845	0	689,745	
20.72 Maint. & Pro		471,796	47,180	31,139	82,517	31,632	0	664,263	
20.76 Truck Decon		34,153	3,415	2,254	5,973	2,290	0	48,086	
20.90 Demobilizati		82,097	8,210	5,418	14,359	5,504	0	115,588	
20.92 Pavement Res	8000.00 SY	118,080	11,808	7,793	20,652	7,917	0	166,250	20.78
TOTAL Mobilization		1,663,831	166,383	109,813	291,004	111,552	0	2,342,582	
40 Excavate & Tran									
40.10 Excavate Bed	45128.00 CY	2,588,266	258,827	170,826	452,688	173,530	0	3,644,136	80.75
40.15 ALLOWANCE D		137,600	13,760	9,082	24,066	9,225	0	193,733	
40.20 Excavate Ban	50247.00 CY	1,342,052	134,205	88,575	234,725	89,978	0	1,889,535	37.60
40.25 ALLOWANCE Do		17,200	1,720	1,135	3,008	1,153	0	24,217	
40.40 O&M Truck De	89700.00 CY	301,197	30,120	19,879	52,679	20,194	0	424,069	4.73
TOTAL Excavate & T		4,386,315	438,631	289,497	767,166	294,080	0	6,175,690	
42 Dewatering of E									
42.10 Manage Dryin	35.50 MO	487,054	48,705	32,146	85,186	32,655	0	685,746	19316.78
42.20 O & M WTS	35.50 MO	731,761	73,176	48,296	127,985	49,061	0	1,030,279	29021.93
TOTAL Dewatering o		1,218,815	121,881	80,442	213,171	81,715	0	1,716,024	
46 Sampling									
46.20 Characteriza		233,508	23,351	15,411	40,840	15,656	0	328,766	
TOTAL Sampling		233,508	23,351	15,411	40,840	15,656	0	328,766	
60 Restoration of									
60.10 Import/Place		1,795,473	179,547	118,501	314,028	120,377	0	2,527,927	
60.15 ALLOWANCE Do		170,800	17,080	11,273	29,873	11,451	0	240,477	

** PROJECT INDIRECT SUMMARY - Facility **

	QUANTITY UOM	DIRECT	Contr MT	Field OH	Home OH	Profit	Bond	TOTAL COST	UNIT COST
TOTAL Restoration		1,966,273	196,627	129,774	343,901	131,829	0	2,768,404	
62 Restoration of									
62.12 Import & Pla		1,248,173	124,817	82,379	218,305	83,684	0	1,757,359	
62.15 ALLOWANCE Do		26,100	2,610	1,723	4,565	1,750	0	36,747	
62.20 Restoration		3,282,862	328,286	216,669	574,173	220,099	0	4,622,089	
TOTAL Restoration		4,557,135	455,714	300,771	797,043	305,533	0	6,416,195	
TOTAL GE-Pittsfiel	1.00 EA	14,435,876	1,443,588	952,768	2,524,835	967,853	0	20,324,919	20324919
Contingency								5,081,230	
SUBTOTAL								25,406,149	
Engineering and Design								1,524,369	
SUBTOTAL								26,930,518	
USACE Construction Management								2,154,441	
TOTAL INCL OWNER COSTS								29,084,959	

** PROJECT DIRECT SUMMARY - Scope **

	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
10 Additional Bank Sampling			0	0	0	0	410,000	410,000	
20 Mobilization			0	592,316	79,163	164,293	828,060	1,663,831	
40 Excavate & Transport Sed./Soils			0	1403915	932,500	203,400	1846500	4,386,315	
42 Dewatering of Excavated Material			0	639,179	129,575	320,253	129,808	1,218,815	
46 Sampling			0	0	0	0	233,508	233,508	
60 Restoration of River Bed			0	523,591	757,925	684,757	0	1,966,273	
62 Restoration of River Bank			0	409,353	479,550	944,313	2723919	4,557,135	
TOTAL GE-Pittsfield EE/CA Alt. #01	1.00	EA	0	3568354	2378713	2317015	6171794	14,435,876	14435876
Contractor Management								1,443,588	
SUBTOTAL								15,879,463	
Field Overhead								952,768	
SUBTOTAL								16,832,231	
Home Office Overhead								2,524,835	
SUBTOTAL								19,357,066	
Profit								967,853	
TOTAL INCL INDIRECTS								20,324,919	
Contingency								5,081,230	
SUBTOTAL								25,406,149	
Engineering and Design								1,524,369	
SUBTOTAL								26,930,518	
USACE Construction Management								2,154,441	
TOTAL INCL OWNER COSTS								29,084,959	

** PROJECT DIRECT SUMMARY - Facility **

	QUANTITY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
10 Additional Bank Sampling		0	0	0	0	410,000	410,000	
20 Mobilization								
20.10 Mobilize Equipment	10.00 EA	0	0	0	0	3,000	3,000	300.00
20.20 Setup Temporary Facilities		0	21,498	17,750	6,900	24,500	70,648	
20.30 Install Temporary Fence	15000.00 LF	0	0	0	0	69,450	69,450	4.63
20.32 Construct Temp. Dewatering Area	12.00 EA	0	38,079	24,100	18,614	0	80,793	6732.78
20.34 Temporary Dewatering Area WTS		0	6,786	2,788	63,708	0	73,282	
20.50 Erosion & Sedimentation Control		0	30,774	10,800	25,713	27,750	95,036	
20.60 Clearing		0	0	0	0	75,600	75,600	
20.70 Temporary Access Road		0	0	0	0	489,895	489,895	
20.72 Maint. & Protection of Traffic		0	441,796	0	30,000	0	471,796	
20.76 Truck Decon Facilities		0	10,385	1,425	8,058	14,285	34,153	
20.90 Demobilization		0	42,997	22,300	11,300	5,500	82,097	
20.92 Pavement Restoration	8000.00 SY	0	0	0	0	118,080	118,080	14.76
TOTAL Mobilization		0	592,316	79,163	164,293	828,060	1,663,831	
40 Excavate & Transport Sed./Soils								
40.10 Excavate Bed Sediments	45128.00 CY	0	737,616	486,750	120,400	1243500	2,588,266	57.35
40.15 ALLOWANCE Down Time Bed Exc.		0	0	137,600	0	0	137,600	
40.20 Excavate Bank Soils	50247.00 CY	0	381,102	290,950	67,000	603,000	1,342,052	26.71
40.25 ALLOWANCE Down Time Bank Exc.		0	0	17,200	0	0	17,200	
40.40 O&M Truck Decon Facilities	89700.00 CY	0	285,197	0	16,000	0	301,197	3.36
TOTAL Excavate & Transport Sed./Soils		0	1403915	932,500	203,400	1846500	4,386,315	
42 Dewatering of Excavated Material								
42.10 Manage Drying Area	35.50 MO	0	337,954	129,575	19,525	0	487,054	13719.84
42.20 O & M WTS	35.50 MO	0	301,225	0	300,728	129,808	731,761	20612.97
TOTAL Dewatering of Excavated Material		0	639,179	129,575	320,253	129,808	1,218,815	
46 Sampling								
46.20 Characterization Sampling		0	0	0	0	233,508	233,508	
TOTAL Sampling		0	0	0	0	233,508	233,508	
60 Restoration of River Bed								
60.10 Import/Place River Bed Backfill		0	523,591	587,125	684,757	0	1,795,473	
60.15 ALLOWANCE Down Time Bed Backfill		0	0	170,800	0	0	170,800	

** PROJECT DIRECT SUMMARY - Facility **

	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
TOTAL Restoration of River Bed			0	523,591	757,925	684,757	0	1,966,273	
62 Restoration of River Bank									
62.12 Import & Place Fill Material			0	295,115	404,550	548,508	0	1,248,173	
62.15 ALLOWANCE Down Time Equip. Rent.			0	0	26,100	0	0	26,100	
62.20 Restoration			0	114,238	48,900	395,805	2723919	3,282,862	
TOTAL Restoration of River Bank			0	409,353	479,550	944,313	2723919	4,557,135	
TOTAL GE-Pittsfield EE/CA Alt. #01	1.00	EA	0	3568354	2378713	2317015	6171794	14,435,876	14435876
Contractor Management								1,443,588	
SUBTOTAL								15,879,463	
Field Overhead								952,768	
SUBTOTAL								16,832,231	
Home Office Overhead								2,524,835	
SUBTOTAL								19,357,066	
Profit								967,853	
TOTAL INCL INDIRECTS								20,324,919	
Contingency								5,081,230	
SUBTOTAL								25,406,149	
Engineering and Design								1,524,369	
SUBTOTAL								26,930,518	
USACE Construction Management								2,154,441	
TOTAL INCL OWNER COSTS								29,084,959	

10. Additional Bank Sampling

	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
10. Additional Bank Sampling									
USR GC Additional Bank Sampling @ Depth			0.00	0.00	0.00	0.00	60000	60000.00	
	1.00	LS	0	0	0	0	60,000	60,000	60000.00
USR GC Appendix IX Sampling @ Depth			0.00	0.00	0.00	0.00	100000	100000.00	
	1.00	LS	0	0	0	0	100,000	100,000	100000.00
USR GC Detailed Survey of River			0.00	0.00	0.00	0.00	100000	100000.00	
	1.00	LS	0	0	0	0	100,000	100,000	100000.00
USR GC Geotech Investigation & Analysis			0.00	0.00	0.00	0.00	150000	150000.00	
	1.00	LS	0	0	0	0	150,000	150,000	150000.00
TOTAL Additional Bank Sampling			0	0	0	0	410,000	410,000	

20.10. Mobilize Equipment	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20. Mobilization									
20.10. Mobilize Equipment									
Mobilize equipment									
Excavator 2									
Front End Loader 1									
Dozer 2									
Compactor 2									
Trencher 2									
Truck Crane 1									
TOTAL Mobilize Equipment	10.00	EA	0	0	0	0	3,000	3,000	300.00

20.20. Setup Temporary Facilities	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.20. Setup Temporary Facilities								
Setup Temporary Facilities includes setup of trailers, installation of temporary utilities, install construction entrance, etc.								
USR GC Excavator (monthly)		0.00	0.00	7500.00	0.00	0.00	7500.00	
	1.00 MO	0	0	7,500	0	0	7,500	7500.00
USR GC Front End Loader (monthly)		0.00	0.00	3650.00	0.00	0.00	3650.00	
	1.00 MO	0	0	3,650	0	0	3,650	3650.00
USR GC Office Trailer Rental		0.00	0.00	300.00	0.00	0.00	300.00	
	22.00 MO	0	0	6,600	0	0	6,600	300.00
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	352.00 HR	0	10,743	0	0	0	10,743	30.52
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	352.00 HR	0	8,297	0	0	0	8,297	23.57
USR GC Electrician		0.00	30.62	0.00	0.00	0.00	30.62	
	40.00 HR	0	1,225	0	0	0	1,225	30.62
USR GC Pipefitter		0.00	30.85	0.00	0.00	0.00	30.85	
	40.00 HR	0	1,234	0	0	0	1,234	30.85
USR GC Misc. Daily Materials		0.00	0.00	0.00	200.00	0.00	200.00	
	22.00 DA	0	0	0	4,400	0	4,400	200.00
USR GC Misc. Electrical Materials		0.00	0.00	0.00	2500.00	0.00	2500.00	
	1.00 LS	0	0	0	2,500	0	2,500	2500.00
USR GC Misc. Plumbing Materials		0.00	0.00	0.00	0.00	2500.00	2500.00	
	1.00 LS	0	0	0	0	2,500	2,500	2500.00
USR GC Office Trailer Utilities		0.00	0.00	0.00	0.00	1000.00	1000.00	
	22.00 MO	0	0	0	0	22,000	22,000	1000.00
TOTAL Setup Temporary Facilities		0	21,498	17,750	6,900	24,500	70,648	

20.30. Install Temporary Fence	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.30. Install Temporary Fence									
USR GC Temporary fence			0.00	0.00	0.00	0.00	3.38	3.38	
MEANS Site Work and Landscape	15000	LF	0	0	0	0	50,700	50,700	3.38
Cost Data 1999									
Temporary fence page 118									
USR GC Remove wood fence			0.00	0.00	0.00	0.00	1.25	1.25	
MEANS Site Work and Landscape	15000	LF	0	0	0	0	18,750	18,750	1.25
Cost Data 1999									
Remove wood fence pg 29									
TOTAL Install Temporary Fence	15000	LF	0	0	0	0	69,450	69,450	4.63

20.32. Construct Temp. Dewatering Area	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.32. Construct Temp. Dewatering Area Assume 12 areas 40'x 40' each with earthen berms, lined with PVC liner, layer of geotextile, layer of sand and layer of stone, precast concrete inlet for use as sump.									
USR GC Front End Loader (monthly)			0.00	0.00	3650.00	0.00	0.00	3650.00	
	2.00	MO	0	0	7,300	0	0	7,300	3650.00
USR GC Dozer (monthly)			0.00	0.00	4500.00	0.00	0.00	4500.00	
	2.00	MO	0	0	9,000	0	0	9,000	4500.00
USR GC Compactor (monthly)			0.00	0.00	3900.00	0.00	0.00	3900.00	
	2.00	MO	0	0	7,800	0	0	7,800	3900.00
USR GC Inlet Grate			0.00	0.00	0.00	214.00	0.00	214.00	
	12.00	EA	0	0	0	2,568	0	2,568	214.00
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	704.00	HR	0	21,486	0	0	0	21,486	30.52
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	704.00	HR	0	16,593	0	0	0	16,593	23.57
USR GC 30 mil PVC Liner			0.00	0.00	0.00	0.60	0.00	0.60	
	4300.00	SY	0	0	0	2,580	0	2,580	0.60
USR GC Concrete Inlet 4'dia. 4' deep			0.00	0.00	0.00	315.00	0.00	315.00	
	12.00	EA	0	0	0	3,780	0	3,780	315.00
USR GC Concrete Inlet Cover			0.00	0.00	0.00	148.00	0.00	148.00	
	12.00	EA	0	0	0	1,776	0	1,776	148.00
USR GC Sand			0.00	0.00	0.00	7.50	0.00	7.50	
	240.00	CY	0	0	0	1,800	0	1,800	7.50
USR GC Fill Material			0.00	0.00	0.00	5.00	0.00	5.00	
	430.00	CY	0	0	0	2,150	0	2,150	5.00
USR GC 3/4" Gravel			0.00	0.00	0.00	16.50	0.00	16.50	
	240.00	CY	0	0	0	3,960	0	3,960	16.50
TOTAL Construct Temp. Dewatering Area	12.00	EA	0	38,079	24,100	18,614	0	80,793	6732.78

20.34. Temporary Dewatering Area WTS	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST

20.34. Temporary Dewatering Area WTS

Temporary dewatering area water treatment system.
Assume treat 100 gpm using (1) modular tank, (4) bag filters, (1) dual bed carbon unit, one submersible pump and one effluent pump and PVC pipe and flexible hose.

Assume discharge returns water into river.

USR GC Front End Loader (monthly)		0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.25 MO	0	0	913	0	0	913	3650.00
USR GC Excavator (monthly)		0.00	0.00	7500.00	0.00	0.00	7500.00	
	0.25 MO	0	0	1,875	0	0	1,875	7500.00
USR GC Carbon Units 100 gpm		0.00	0.00	0.00	13217.00	0.00	13217.00	
	1.00 EA	0	0	0	13,217	0	13,217	13217.00
USR GC Bag Filters		0.00	0.00	0.00	919.00	0.00	919.00	
	4.00 EA	0	0	0	3,676	0	3,676	919.00
USR GC ALLOWANCE PVC Pipe		0.00	0.00	0.00	1000.00	0.00	1000.00	
	1.00 LS	0	0	0	1,000	0	1,000	1000.00
USR GC ALLOWANCE Hose		0.00	0.00	0.00	1000.00	0.00	1000.00	
	1.00 LS	0	0	0	1,000	0	1,000	1000.00
USR GC Misc. Daily Materials		0.00	0.00	0.00	200.00	0.00	200.00	
	5.00 DA	0	0	0	1,000	0	1,000	200.00
USR GC Misc. Electrical Materials		0.00	0.00	0.00	7500.00	0.00	7500.00	
	1.00 LS	0	0	0	7,500	0	7,500	7500.00
USR GC Misc. Plumbing Materials		0.00	0.00	0.00	7500.00	0.00	7500.00	
	1.00 LS	0	0	0	7,500	0	7,500	7500.00
USR GC Modular Tank		0.00	0.00	0.00	28815.00	0.00	28815.00	
	1.00 EA	0	0	0	28,815	0	28,815	28815.00
USR GC Electrician		0.00	30.62	0.00	0.00	0.00	30.62	
	40.00 HR	0	1,225	0	0	0	1,225	30.62
USR GC Pipefitter		0.00	30.85	0.00	0.00	0.00	30.85	
	40.00 HR	0	1,234	0	0	0	1,234	30.85
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	80.00 HR	0	1,886	0	0	0	1,886	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	80.00 HR	0	2,442	0	0	0	2,442	30.52

20. Mobilization

20.34. Temporary Dewatering Area WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
TOTAL Temporary Dewatering Area WTS			0	6,786	2,788	63,708	0	73,282	

20.50. Erosion & Sedimentation Control	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.50. Erosion & Sedimentation Control								
20.50.10. Install Silt Fence								
MEANS Site Work and Landscape Cost Data 1999								
Silt Fence Installation pg 58 and Excavating, Utility Trench pg 52								
Trenching $0.54/lf								
Install silt fence $0.88/lf								
Backfill trench $0.43/lf								
TOTAL $1.85/lf								
TOTAL Install Silt Fence	15000 LF	0	0	0	0	27,750	27,750	1.85
20.50.30. Turbidity Barrier								
Assume barriers placed across river every 100 lf, for entire EE/CA length.								
7500 lf / 1/100lf = 75 barriers x 50 ft/barrier = 3750 lf								
USR GC Truck Crane		0.00	0.00	5400.00	0.00	0.00	5400.00	
	2.00 MO	0	0	10,800	0	0	10,800	5400.00
USR GC Misc. Daily Materials		0.00	0.00	0.00	200.00	0.00	200.00	
	38.00 DA	0	0	0	7,600	0	7,600	200.00
USR GC Turbidity Barrier		0.00	0.00	0.00	4.83	0.00	4.83	
	3750.00 LF	0	0	0	18,113	0	18,113	4.83
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	912.00 HR	0	21,496	0	0	0	21,496	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	304.00 HR	0	9,278	0	0	0	9,278	30.52
TOTAL Turbidity Barrier	3750.00 LF	0	30,774	10,800	25,713	0	67,286	17.94
TOTAL Erosion & Sedimentation Control		0	30,774	10,800	25,713	27,750	95,036	

20.60. Clearing	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.60. Clearing									
20.60.10. Clearing									
MEANS Site Work and Landscape Cost Data 1999									
Cut & Chip medium, trees to 12" dia. pg 39									
TOTAL Clearing	14.00	AC	0	0	0	0	75,600	75,600	5400.00
TOTAL Clearing			0	0	0	0	75,600	75,600	

20.70. Temporary Access Road	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.70. Temporary Access Road								
20.70.10. Construct Temporary Access Road								
MEANS Site Work and Landscape Cost Data 1999								
Roads, gravel fill, no surfacing, 8" depth, pg 15								
Geotextile included in unit price, pg 57								
Temporary Road $5.60 /sy								
Geotextile $1.43 /sy								
Total $7.03 /sy								
TOTAL Construct Temporary Access Road	21700 SY	0	0	0	0	152,551	152,551	7.03
20.70.20. Remove Temporary Access Road								
MEANS Site Work and Landscape Cost Data 1999								
Pavement removal, bituminuous roads, 3" thick, pg 30								
Assume remove during excavation activities.								
TOTAL Remove Temporary Access Road	21700 SY	0	0	0	0	82,894	82,894	3.82
20.70.30. T & D of Access Road Materials								
Access road assumed to be 8" thick and cover 21700 sy								
((21700 sy x 9 sf/sy x 0.67 ft) / 27 cf/cy) x 1.5 tn/cy = 7270 tn								
Assume able to dispose of material as landfill cover.								
Material loaded during removal activity.								
USR GC Trans Landfill Cover		0.00	0.00	0.00	0.00	20.00	20.00	
	7270.00 TN	0	0	0	0	145,400	145,400	20.00
USR GC Disposal Landfill Cover		0.00	0.00	0.00	0.00	15.00	15.00	
	7270.00 TN	0	0	0	0	109,050	109,050	15.00
TOTAL T & D of Access Road Materials		0	0	0	0	254,450	254,450	
TOTAL Temporary Access Road		0	0	0	0	489,895	489,895	

20.72. Maint. & Protection of Traffic	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.72. Maint. & Protection of Traffic								
Assume maintenance and protection of traffic full time during excavation and backfill activities, two flagmen full time (12 hr/day for 35.5 months).								
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	18744 HR	0	441,796	0	0	0	441,796	23.57
USR GC Misc. Signage		0.00	0.00	0.00	300.00	0.00	300.00	
	100.00 EA	0	0	0	30,000	0	30,000	300.00
TOTAL Maint. & Protection of Traffic		0	441,796	0	30,000	0	471,796	

20.76. Truck Decon Facilities	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.76. Truck Decon Facilities								
Truck decon facilities includes construction of pads.								
Assume decon pads constructed of asphalt with precast concrete inlets used								
as sumps.								
20.76.10. Construct Truck Decon Pads								
USR GC Backhoe		0.00	0.00	2850.00	0.00	0.00	2850.00	
	0.50 MO	0	0	1,425	0	0	1,425	2850.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	192.00 HR	0	4,525	0	0	0	4,525	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	192.00 HR	0	5,860	0	0	0	5,860	30.52
USR GC Concrete Inlet 4' dia. x 4' deep		0.00	0.00	0.00	315.00	0.00	315.00	
	6.00 EA	0	0	0	1,890	0	1,890	315.00
USR GC Concrete Inlet Cover		0.00	0.00	0.00	148.00	0.00	148.00	
	6.00 EA	0	0	0	888	0	888	148.00
USR GC PVC Liner		0.00	0.00	0.00	0.60	0.00	0.60	
	800.00 SY	0	0	0	480	0	480	0.60
USR GC 1000 gal HDPE Tank		0.00	0.00	0.00	800.00	0.00	800.00	
	6.00 EA	0	0	0	4,800	0	4,800	800.00
USR GC Asphalt Pads		0.00	0.00	0.00	0.00	14.76	14.76	
	800.00 SY	0	0	0	0	11,808	11,808	14.76
USR GC Asphalt Curbing		0.00	0.00	0.00	0.00	2.58	2.58	
MEANS Site and Landscape Cost	960.00 LF	0	0	0	0	2,477	2,477	2.58
Data 1999, pg 74								
TOTAL Construct Truck Decon Pads	6.00 EA	0	10,385	1,425	8,058	14,285	34,153	5692.18
TOTAL Truck Decon Facilities		0	10,385	1,425	8,058	14,285	34,153	

20.90. Demobilization	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.90. Demobilization								
TOTAL Demobilize Equipment	10.00 EA	0	0	0	0	3,000	3,000	300.00
20.90.20. Teardown Temporary Facilities								
Teardown Temporary Facilities include removal of trailers, removal of temporary utilites, removal of construction entrance, etc.								
USR GC Excavator (monthly)		0.00	0.00	7500.00	0.00	0.00	7500.00	
	2.00 MO	0	0	15,000	0	0	15,000	7500.00
USR GC Front End Loader (monthly)		0.00	0.00	3650.00	0.00	0.00	3650.00	
	2.00 MO	0	0	7,300	0	0	7,300	3650.00
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	704.00 HR	0	21,486	0	0	0	21,486	30.52
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	704.00 HR	0	16,593	0	0	0	16,593	23.57
USR GC Electrician		0.00	30.62	0.00	0.00	0.00	30.62	
	80.00 HR	0	2,450	0	0	0	2,450	30.62
USR GC Pipefitter		0.00	30.85	0.00	0.00	0.00	30.85	
	80.00 HR	0	2,468	0	0	0	2,468	30.85
USR GC Misc. Daily Materials		0.00	0.00	0.00	200.00	0.00	200.00	
	44.00 DA	0	0	0	8,800	0	8,800	200.00
USR GC Misc. Electrical Materials		0.00	0.00	0.00	2500.00	0.00	2500.00	
	1.00 LS	0	0	0	2,500	0	2,500	2500.00
USR GC Misc. Plumbing Materials		0.00	0.00	0.00	0.00	2500.00	2500.00	
	1.00 LS	0	0	0	0	2,500	2,500	2500.00
TOTAL Teardown Temporary Facilities		0	42,997	22,300	11,300	2,500	79,097	
TOTAL Demobilization		0	42,997	22,300	11,300	5,500	82,097	

20.92. Pavement Restoration	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.92. Pavement Restoration									
MEANS Site Work and Landscape Cost Data 1999, pg 71									
TOTAL Pavement Restoration	8000.00	SY	0	0	0	0	118,080	118,080	14.76
TOTAL Mobilization			0	592,316	79,163	164,293	828,060	1,663,831	

40.10. Excavate Bed Sediments	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40. Excavate & Transport Sed./Soils									
40.10. Excavate Bed Sediments									
Estimated duration to excavate 45,128 cy based on 75 cy per day = 27.5 months.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	27.50	MO	0	0	206,250	0	0	206,250	7500.00
USR GC Dump Truck (2)			0.00	0.00	0.00	0.00	75.00	75.00	
	10560	HR	0	0	0	0	792,000	792,000	75.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	27.50	MO	0	0	280,500	0	0	280,500	10200.00
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	10560	HR	0	322,291	0	0	0	322,291	30.52
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	10560	HR	0	248,899	0	0	0	248,899	23.57
USR GC Foreman			0.00	31.52	0.00	0.00	0.00	31.52	
	5280.00	HR	0	166,426	0	0	0	166,426	31.52
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	602.00	DA	0	0	0	120,400	0	120,400	200.00
USR GC Roll-Off Truck w/ Sludge Box (1)			0.00	0.00	0.00	0.00	750.00	750.00	
	602.00	DA	0	0	0	0	451,500	451,500	750.00
TOTAL Excavate Bed Sediments	45128	CY	0	737,616	486,750	120,400	1243500	2,588,266	57.35

40.15. ALLOWANCE Down Time Bed Exc.	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.15. ALLOWANCE Down Time Bed Exc.									
Assume down time 27.5 months x 30% = 8 months.									
USR GC Excavator (monthly)			0.00	0.00	7000.00	0.00	0.00	7000.00	
	8.00	MO	0	0	56,000	0	0	56,000	7000.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	8.00	MO	0	0	81,600	0	0	81,600	10200.00
TOTAL ALLOWANCE Down Time Bed Exc.			0	0	137,600	0	0	137,600	

40.20. Excavate Bank Soils	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.20. Excavate Bank Soils									
Estimated duration to excavate 50,247 cy based on 150 cy per day = 15.5 months.									
Includes removal of concrete and misc. structures along river bank.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	15.50	MO	0	0	116,250	0	0	116,250	7500.00
USR GC Dump Truck (3)			0.00	0.00	0.00	0.00	75.00	75.00	
	8040.00	HR	0	0	0	0	603,000	603,000	75.00
USR GC Excavator w/ Breaker			0.00	0.00	8300.00	0.00	0.00	8300.00	
	2.00	MO	0	0	16,600	0	0	16,600	8300.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	15.50	MO	0	0	158,100	0	0	158,100	10200.00
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	5456.00	HR	0	166,517	0	0	0	166,517	30.52
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	5456.00	HR	0	128,598	0	0	0	128,598	23.57
USR GC Foreman			0.00	31.52	0.00	0.00	0.00	31.52	
	2728.00	HR	0	85,987	0	0	0	85,987	31.52
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	335.00	DA	0	0	0	67,000	0	67,000	200.00
TOTAL Excavate Bank Soils	50247	CY	0	381,102	290,950	67,000	603,000	1,342,052	26.71

40.25. ALLOWANCE Down Time Bank Exc.	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.25. ALLOWANCE Down Time Bank Exc.									
Allowance down time 15.5 months x 5% = 0.78 months, say 1 month.									
USR GC Excavator (monthly)			0.00	0.00	7000.00	0.00	0.00	7000.00	
	1.00	MO	0	0	7,000	0	0	7,000	7000.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	1.00	MO	0	0	10,200	0	0	10,200	10200.00
TOTAL ALLOWANCE Down Time Bank Exc.			0	0	17,200	0	0	17,200	

40.40. O&M Truck Decon Facilities	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.40. O&M Truck Decon Facilities									
USR GC Pressure Washer			0.00	0.00	0.00	3000.00	0.00	3000.00	
ALLOWANCE	2.00	EA	0	0	0	6,000	0	6,000	3000.00
USR GC Trash Pump w/ Suct. & Disch. Hse			0.00	0.00	0.00	5000.00	0.00	5000.00	
ALLOWANCE	2.00	EA	0	0	0	10,000	0	10,000	5000.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
27.5mo x 22day/mo x 2 workers x 10hr/day	12100	HR	0	285,197	0	0	0	285,197	23.57
TOTAL O&M Truck Decon Facilities	89700	CY	0	285,197	0	16,000	0	301,197	3.36
TOTAL Excavate & Transport Sed./Soils			0	1403915	932,500	203,400	1846500	4,386,315	

42.10. Manage Drying Area	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
42. Dewatering of Excavated Material								
42.10. Manage Drying Area								
USR GC Front End Loader (monthly)		0.00	0.00	3650.00	0.00	0.00	3650.00	
	35.50 MO	0	0	129,575	0	0	129,575	3650.00
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
8hr x 22 day/mo x 35.5mo	6248.00 HR	0	190,689	0	0	0	190,689	30.52
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	6248.00 HR	0	147,265	0	0	0	147,265	23.57
USR GC Silt Sack		0.00	0.00	0.00	25.00	0.00	25.00	
	781.00 EA	0	0	0	19,525	0	19,525	25.00
TOTAL Manage Drying Area	35.50 MO	0	337,954	129,575	19,525	0	487,054	13719.84

42.20. O & M WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST

42.20. O & M WTS

Operation and Maintenance of water treatment system

Electricity - ALLOWANCE $/mo assume $1500/mo

Carbon: Assume one change per month 1760# x 2 units x 35.5 months = 124,960#

Bag Filter Bags: Assume 4 bags per filter per shift x 4 filters x 1 shift per day x 3 years x 365 days per year = 17520 bags

Assume weekly sampling throughout project.

USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
Assume operation 12 hours per day.30x35.5x12	12780	HR	0	301,225	0	0	0	301,225	23.57
USR GC Carbon Replacement			0.00	0.00	0.00	2.00	0.00	2.00	
	124960	LB	0	0	0	249,920	0	249,920	2.00
USR GC Bag Filter Bags			0.00	0.00	0.00	2.90	0.00	2.90	
	17520	EA	0	0	0	50,808	0	50,808	2.90
USR GC ALLOWANCE Elec Svc for WTS			0.00	0.00	0.00	0.00	1500.00	1500.00	
	35.50	MO	0	0	0	0	53,250	53,250	1500.00
USR GC Spent Carbon Removal & Disposal			0.00	0.00	0.00	0.00	0.25	0.25	
	124960	LB	0	0	0	0	31,240	31,240	0.25
USR GC Anal. TSS			0.00	0.00	0.00	0.00	30.00	30.00	
	156.00	EA	0	0	0	0	4,680	4,680	30.00
USR GC Anal. O & G			0.00	0.00	0.00	0.00	30.00	30.00	
	156.00	EA	0	0	0	0	4,680	4,680	30.00
USR GC Anal. Phenol			0.00	0.00	0.00	0.00	30.00	30.00	
	156.00	EA	0	0	0	0	4,680	4,680	30.00
USR GC Anal. Settlable Solids			0.00	0.00	0.00	0.00	30.00	30.00	
	156.00	EA	0	0	0	0	4,680	4,680	30.00
USR GC Anal. PCBs			0.00	0.00	0.00	0.00	132.50	132.50	
	156.00	EA	0	0	0	0	20,670	20,670	132.50
USR GC Anal. Iron (total)			0.00	0.00	0.00	0.00	30.00	30.00	
	156.00	EA	0	0	0	0	4,680	4,680	30.00
USR GC Anal. pH			0.00	0.00	0.00	0.00	8.00	8.00	
	156.00	EA	0	0	0	0	1,248	1,248	8.00
USR GC Anal. Temp. (field measurement)			0.00	0.00	0.00	0.00	0.00	0.00	
	156.00	EA	0	0	0	0	0	0	0.00

42.20. O & M WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
TOTAL O & M WTS	35.50	MO	0	301,225	0	300,728	129,808	731,761	20612.97
TOTAL Dewatering of Excavated Material			0	639,179	129,575	320,253	129,808	1,218,815	

46.20. Characterization Sampling	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
46. Sampling									
46.20. Characterization Sampling									
USR GC PCB Analysis (1/150 tn)			0.00	0.00	0.00	0.00	132.50	132.50	
	885.00	EA	0	0	0	0	117,263	117,263	132.50
USR GC TCLP Analysis (1/2000 tn)			0.00	0.00	0.00	0.00	1095.00	1095.00	
	67.00	EA	0	0	0	0	73,365	73,365	1095.00
USR GC Dioxin Analysis (1/2000 tn)			0.00	0.00	0.00	0.00	400.00	400.00	
	67.00	EA	0	0	0	0	26,800	26,800	400.00
USR GC RCRA Characteristics (1/2000 tn)			0.00	0.00	0.00	0.00	215.00	215.00	
(Ignitability, Corrosivity, Reactivity)	67.00	EA	0	0	0	0	14,405	14,405	215.00
USR GC pH (1/2000 tn)			0.00	0.00	0.00	0.00	15.00	15.00	
	67.00	EA	0	0	0	0	1,005	1,005	15.00
USR GC Moisture Content (1/2000 tn)			0.00	0.00	0.00	0.00	10.00	10.00	
	67.00	EA	0	0	0	0	670	670	10.00
TOTAL Characterization Sampling			0	0	0	0	233,508	233,508	
TOTAL Sampling			0	0	0	0	233,508	233,508	

60.10. Import/Place River Bed Backfill	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
60. Restoration of River Bed								
60.10. Import/Place River Bed Backfill								
USR GC Excavator (monthly)		0.00	0.00	7500.00	0.00	0.00	7500.00	
	27.50 MO	0	0	206,250	0	0	206,250	7500.00
USR GC Front End Loader (monthly)		0.00	0.00	3650.00	0.00	0.00	3650.00	
	27.50 MO	0	0	100,375	0	0	100,375	3650.00
USR GC Excavator, Long Reach (monthly)		0.00	0.00	10200.00	0.00	0.00	10200.00	
	27.50 MO	0	0	280,500	0	0	280,500	10200.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	9680.00 HR	0	228,158	0	0	0	228,158	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	9680.00 HR	0	295,434	0	0	0	295,434	30.52
USR GC Misc. Daily Expenses		0.00	0.00	0.00	200.00	0.00	200.00	
	602.00 DA	0	0	0	120,400	0	120,400	200.00
USR GC Fill Material		0.00	0.00	0.00	5.00	0.00	5.00	
	9489.00 CY	0	0	0	47,445	0	47,445	5.00
USR GC 3/4" Gravel		0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 stone, 3/4" to 1/2" plus 10 miles transportation, pg 205	7444.00 CY	0	0	0	122,826	0	122,826	16.50
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
MEANS Site Work and Landscape Cost Data 1999 Rip-Rap, random broken stone pg 60	22202 CY	0	0	0	394,086	0	394,086	17.75
TOTAL Import/Place River Bed Backfill		0	523,591	587,125	684,757	0	1,795,473	

60.15. ALLOWANCE Down Time Bed Backfill	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
60.15. ALLOWANCE Down Time Bed Backfill									
Assume down time 27.5 months x 30% = 8 months.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	8.00	MO	0	0	60,000	0	0	60,000	7500.00
USR GC Front End Loader			0.00	0.00	3650.00	0.00	0.00	3650.00	
	8.00	MO	0	0	29,200	0	0	29,200	3650.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	8.00	MO	0	0	81,600	0	0	81,600	10200.00
TOTAL ALLOWANCE Down Time Bed Backfill			0	0	170,800	0	0	170,800	
TOTAL Restoration of River Bed			0	523,591	757,925	684,757	0	1,966,273	

62.12. Import & Place Fill Material	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
62. Restoration of River Bank								
62.12. Import & Place Fill Material								
USR GC Dozer (monthly)		0.00	0.00	4500.00	0.00	0.00	4500.00	
	15.50 MO	0	0	69,750	0	0	69,750	4500.00
USR GC Compactor (monthly)		0.00	0.00	3900.00	0.00	0.00	3900.00	
	15.50 MO	0	0	60,450	0	0	60,450	3900.00
USR GC Excavator (monthly)		0.00	0.00	7500.00	0.00	0.00	7500.00	
	15.50 MO	0	0	116,250	0	0	116,250	7500.00
USR GC Excavator, Long Reach (monthly)		0.00	0.00	10200.00	0.00	0.00	10200.00	
	15.50 MO	0	0	158,100	0	0	158,100	10200.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	5456.00 HR	0	128,598	0	0	0	128,598	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	5456.00 HR	0	166,517	0	0	0	166,517	30.52
USR GC Misc. Daily Expenses		0.00	0.00	0.00	200.00	0.00	200.00	
	335.00 DA	0	0	0	67,000	0	67,000	200.00
USR GC Fill Material		0.00	0.00	0.00	5.00	0.00	5.00	
	36146 CY	0	0	0	180,730	0	180,730	5.00
USR GC 3/4" Gravel		0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 stone, 3/4" to 1/2" plus 10 miles transportation, pg 205	4413.00 CY	0	0	0	72,815	0	72,815	16.50
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
MEANS Site Work and Landscape Cost Data 1999 Rip-Rap, random broken stone pg 60	12843 CY	0	0	0	227,963	0	227,963	17.75
TOTAL Import & Place Fill Material		0	295,115	404,550	548,508	0	1,248,173	

62.15. ALLOWANCE Down Time Equip. Rent.	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
62.15. ALLOWANCE Down Time Equip. Rent.									
Allowance down time 15.5 months x 5% = 0.76 months, say 1 month.									
USR GC Dozer			0.00	0.00	4500.00	0.00	0.00	4500.00	
	1.00	MO	0	0	4,500	0	0	4,500	4500.00
USR GC Compactor			0.00	0.00	3900.00	0.00	0.00	3900.00	
	1.00	MO	0	0	3,900	0	0	3,900	3900.00
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	1.00	MO	0	0	7,500	0	0	7,500	7500.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	1.00	MO	0	0	10,200	0	0	10,200	10200.00
TOTAL ALLOWANCE Down Time Equip. Rent.			0	0	26,100	0	0	26,100	

62.20. Restoration	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
62.20. Restoration								
62.20.10. Revegetation								
USR GC Front End Loader		0.00	0.00	3650.00	0.00	0.00	3650.00	
	2.00 MO	0	0	7,300	0	0	7,300	3650.00
USR GC Dozer		0.00	0.00	4500.00	0.00	0.00	4500.00	
	2.00 MO	0	0	9,000	0	0	9,000	4500.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	704.00 HR	0	16,593	0	0	0	16,593	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	704.00 HR	0	21,486	0	0	0	21,486	30.52
USR GC Coir Blanket		0.00	0.00	0.00	1.21	0.00	1.21	
	5986.00 SY	0	0	0	7,243	0	7,243	1.21
USR GC Geotextile		0.00	0.00	0.00	0.42	0.00	0.42	
	47886 SY	0	0	0	20,112	0	20,112	0.42
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
	5986.00 CY	0	0	0	106,252	0	106,252	17.75
USR GC Seeding		0.00	0.00	0.00	0.00	0.05	0.05	
MEANS Site Work and Landscape Cost Data 1999 Rye fine textured hydro or air seeding pg 127	153648 SF	0	0	0	0	7,682	7,682	0.05
USR GC Shrubs		0.00	0.00	0.00	0.00	26.67	26.67	
MEANS Site Work and Landscape Cost Data 1999 Shrubs, Cornus mas, 2' to 3', pg 160 Planting, potted heavy or stoney soil, pg 130	2449.00 EA	0	0	0	0	65,315	65,315	26.67
USR GC Trees		0.00	0.00	0.00	0.00	166.00	166.00	
MEANS Site Work and Landscape Cost Data 1999 Populus nigra italica, 20 gal pg 137 Bagged and burlapped, 12" dia. ball, backhoe pg 130	6146.00 EA	0	0	0	0	1020236	1,020,236	166.00
USR GC Vines		0.00	0.00	0.00	0.00	2.49	2.49	
MEANS Site Work and Landscape Cost Data 1999 Ground covers, vines and	1007.00 EA	0	0	0	0	2,507	2,507	2.49

62.20. Restoration	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
climbing plants, pg 175								
Planting, plotted, 3" dia. pg 130								
TOTAL Revegetation	22750 SF	0	38,079	16,300	133,607	1095741	1,283,727	56.43
62.20.20. Bioengineering								
USR GC Front End Loader		0.00	0.00	3650.00	0.00	0.00	3650.00	
	2.00 MO	0	0	7,300	0	0	7,300	3650.00
USR GC Dozer		0.00	0.00	4500.00	0.00	0.00	4500.00	
	2.00 MO	0	0	9,000	0	0	9,000	4500.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	704.00 HR	0	16,593	0	0	0	16,593	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	704.00 HR	0	21,486	0	0	0	21,486	30.52
USR GC Geotextile		0.00	0.00	0.00	0.42	0.00	0.42	
	8409.00 SY	0	0	0	3,532	0	3,532	0.42
USR GC Misc. Daily Material		0.00	0.00	0.00	200.00	0.00	200.00	
	44.00 DA	0	0	0	8,800	0	8,800	200.00
USR GC 3/4" Gravel		0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 Stone, 3/4" to 1/2" plus 10 miles transportation, pg 205.	2702.00 CY	0	0	0	44,583	0	44,583	16.50
USR GC Geogrid		0.00	0.00	0.00	0.40	0.00	0.40	
	9948.00 SY	0	0	0	3,979	0	3,979	0.40
USR GC Rip-Rap		0.00	0.00	0.00	16.50	0.00	16.50	
	2211.00 CY	0	0	0	36,482	0	36,482	16.50
USR GC Coir Blanket		0.00	0.00	0.00	1.21	0.00	1.21	
	56740 SY	0	0	0	68,655	0	68,655	1.21
USR GC Seeding		0.00	0.00	0.00	0.00	0.05	0.05	
MEANS Site Work and Landscape Cost Data 1999, Rye fine textured hyrdro or air seeding pg 71.	75677 SF	0	0	0	0	3,784	3,784	0.05
USR GC Shrubs		0.00	0.00	0.00	0.00	26.67	26.67	
MEANS Site Work and Landscape Cost Data 1999	2211.00 EA	0	0	0	0	58,967	58,967	26.67

62.20. Restoration	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
Shrubs, Cornus mas, 2' to 3', pg 160.									
USR GC Trees			0.00	0.00	0.00	0.00	166.00	166.00	
MEANS Site Work and Landscape Cost Data 1999, Populus nigra italica, 20 gal pg 137 Bagged and burlapped, 12" dia. ball, backhoe pg 130.	3027.00	EA	0	0	0	0	502,482	502,482	166.00
USR GC Vines			0.00	0.00	0.00	0.00	2.49	2.49	
MEANS Site Work and Landscape Cost Data 1999, Ground covers, vines and climbing plants, pg 175 Planting, plotted, 3" dia. pg 130	466.00	EA	0	0	0	0	1,160	1,160	2.49
TOTAL Bioengineering	199925	SF	0	38,079	16,300	166,031	566,394	786,804	3.94
62.20.30. Hard Structures									
USR GC Front End Loader			0.00	0.00	3650.00	0.00	0.00	3650.00	
	2.00	MO	0	0	7,300	0	0	7,300	3650.00
USR GC Dozer			0.00	0.00	4500.00	0.00	0.00	4500.00	
	2.00	MO	0	0	9,000	0	0	9,000	4500.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	704.00	HR	0	16,593	0	0	0	16,593	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	704.00	HR	0	21,486	0	0	0	21,486	30.52
USR GC Geotextile			0.00	0.00	0.00	0.42	0.00	0.42	
	10951	SY	0	0	0	4,599	0	4,599	0.42
USR GC Misc. Daily Material			0.00	0.00	0.00	200.00	0.00	200.00	
	44.00	DA	0	0	0	8,800	0	8,800	200.00
USR GC 3/4" Gravel			0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 Stone, 3/4" to 1/2" plus 10 miles transportation, pg 205.	3356.00	CY	0	0	0	55,374	0	55,374	16.50
USR GC 6" dia. PE Perf. Pipe			0.00	0.00	0.00	0.51	0.00	0.51	
	4400.00	LF	0	0	0	2,244	0	2,244	0.51

62.20. Restoration	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
USR GC 6" dia. PE Pipe Cplg.		0.00	0.00	0.00	1.65	0.00	1.65	
	8.00 EA	0	0	0	13	0	13	1.65
USR GC Geogrid		0.00	0.00	0.00	0.40	0.00	0.40	
	22954 SY	0	0	0	9,182	0	9,182	0.40
USR GC Rip-Rap		0.00	0.00	0.00	16.50	0.00	16.50	
	725.00 CY	0	0	0	11,963	0	11,963	16.50
USR GC Coir Blanket		0.00	0.00	0.00	1.21	0.00	1.21	
	3300.00 SY	0	0	0	3,993	0	3,993	1.21
USR GC Concrete Foundation		0.00	0.00	0.00	0.00	168.00	168.00	
MEANS Site Work and Landscape Cost Data 1999 Concrete in place including forms and reinforcing, footings strip, 36" x 12", reinforced pg 207	644.00 CY	0	0	0	0	108,192	108,192	168.00
USR GC Interlock. Segmental Block Wall		0.00	0.00	0.00	0.00	12.05	12.05	
MEANS Site Work and Landscape Cost Data 1999 Retaining walls, segmental wall system, interlocking including installation, pg 59.	68861 SF	0	0	0	0	829,775	829,775	12.05
USR GC Seeding		0.00	0.00	0.00	0.00	0.05	0.05	
MEANS Site Work and Landscape Cost Data 1999, Rye fine textured hyrdro or air seeding pg 71.	39150 SF	0	0	0	0	1,958	1,958	0.05
USR GC Shrubs		0.00	0.00	0.00	0.00	26.67	26.67	
MEANS Site Work and Landscape Cost Data 1999 Shrubs, Cornus mas, 2' to 3', pg 160.	1263.00 EA	0	0	0	0	33,684	33,684	26.67
USR GC Trees		0.00	0.00	0.00	0.00	166.00	166.00	
MEANS Site Work and Landscape Cost Data 1999, Populus nigra italica, 20 gal pg 137 Bagged and burlapped, 12" dia. ball, backhoe pg 130.	522.00 EA	0	0	0	0	86,652	86,652	166.00

62.20. Restoration	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
USR GC Vines			0.00	0.00	0.00	0.00	2.49	2.49	
MEANS Site Work and Landscape Cost Data 1999, Ground covers, vines and climbing plants, pg 175 Planting, plotted, 3" dia. pg 130	612.00	EA	0	0	0	0	1,524	1,524	2.49
TOTAL Hard Structures	29700	SF	0	38,079	16,300	96,168	1061785	1,212,332	40.82
TOTAL Restoration			0	114,238	48,900	395,805	2723919	3,282,862	
TOTAL Restoration of River Bank			0	409,353	479,550	944,313	2723919	4,557,135	
TOTAL GE-Pittsfield EE/CA Alt. #01	1.00	EA	0	3568354	2378713	2317015	6171794	14,435,876	14435876

APPENDIX D.2

ALTERNATIVE 2

GE-Pittsfield EE/CA Alt. #02
EE/CA Addendum

Designed By: Roy F. Weston Inc.
Estimated By: Dan Moretz (610)701-3176

Prepared By: Roy F. Weston Inc.
West Chester, Pa.

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Sales Tax: 0.00%

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GE-Pittsfield Alternative No. 2 - EE/CA Addendum

Dry excavation to meet cleanup criteria. Open channel river diversion using sheetpiling, except in the cobble reaches or inaccessible areas where flow would be diverted from the river channel by pumping through a piping bypass. Riverbank and riverbed restoration.

See section 5.3 of EE/CA report for written description of activities. Cost includes increased sheetpile sheet length, reduced productivity, and revised volumes.

Project Information

Escalation	0.00%
Contingency	25.00%
Engineering and Design	6.00%
USACE Construction Management	8.00%

General Contractor

Contractor Management	10.00%
Field Overhead	6.00%
Home Office Overhead	15.00%
Profit	5.00%
Bond	0.00%

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** PROJECT OWNER SUMMARY - Scope **

		QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	ENG&DES	CONST MT		TOTAL COST	UNIT COST
10	Additional Bank		577,257	0	144,314	43,294	61,189	0	826,055	
20	Mobilization		2,547,068	0	636,767	191,030	269,989	0	3,644,854	
30	Install Sheetpi		3,489,329	0	872,332	261,700	369,869	0	4,993,230	
32	Pumping bypass		2,535,427	0	633,857	190,157	268,755	0	3,628,196	
34	Dewatering of r		2,023,181	0	505,795	151,739	214,457	0	2,895,172	
40	Excavate & Tran		4,248,276	0	1,062,069	318,621	450,317	0	6,079,283	
42	Dewatering of E		1,898,943	0	474,736	142,421	201,288	0	2,717,388	
46	Sampling		328,766	0	82,191	24,657	34,849	0	470,464	
60	Restoration of		1,755,663	0	438,916	131,675	186,100	0	2,512,354	
62	Restoration of		5,785,482	0	1,446,371	433,911	613,261	0	8,279,025	
	GE-Pittsfield E	1.00 EA	25,189,393	0	6,297,348	1,889,204	2,670,076	0	36,046,021	36046021

** PROJECT OWNER SUMMARY - Facility **

	QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	ENG&DES	CONST MT		TOTAL COST	UNIT COST
10 Additional Bank		577,257	0	144,314	43,294	61,189	0	826,055	
20 Mobilization									
20.10 Mobilize Equ	10.00 EA	4,224	0	1,056	317	448	0	6,044	604.43
20.20 Setup Tempor		121,433	0	30,358	9,107	12,872	0	173,771	
20.30 Install Temp	15000.00 LF	97,782	0	24,445	7,334	10,365	0	139,926	9.33
20.32 Construct Te	12.00 EA	113,753	0	28,438	8,531	12,058	0	162,780	13565.00
20.34 Temporary De		103,176	0	25,794	7,738	10,937	0	147,645	
20.50 Erosion & Se		133,806	0	33,452	10,035	14,183	0	191,476	
20.60 Clearing		106,441	0	26,610	7,983	11,283	0	152,317	
20.70 Temporary Ac		689,745	0	172,436	51,731	73,113	0	987,025	
20.72 Maint. & Pro		754,261	0	188,565	56,570	79,952	0	1,079,348	
20.74 Exc. Seepage		92,523	0	23,131	6,939	9,807	0	132,401	
20.76 Truck Decon		48,086	0	12,021	3,606	5,097	0	68,811	
20.90 Demobilizati		115,588	0	28,897	8,669	12,252	0	165,406	
20.92 Pavement Res	8000.00 SY	166,250	0	41,563	12,469	17,623	0	237,904	29.74
TOTAL Mobilization		2,547,068	0	636,767	191,030	269,989	0	3,644,854	
30 Install Sheetpi									
30.10 Install & Re	69440.00 SF	3,489,329	0	872,332	261,700	369,869	0	4,993,230	71.91
TOTAL Install Shee		3,489,329	0	872,332	261,700	369,869	0	4,993,230	
32 Pumping bypass									
32.10 Setup & Tear	2.00 EA	615,437	0	153,859	46,158	65,236	0	880,690	440344.85
32.15 Setup & Tear	2.00 EA	26,830	0	6,708	2,012	2,844	0	38,394	19197.12
32.20 Operate and	9.00 MO	1,893,160	0	473,290	141,987	200,675	0	2,709,112	301012.49
TOTAL Pumping bypa		2,535,427	0	633,857	190,157	268,755	0	3,628,196	
34 Dewatering of r									
34.10 Dewatering o		153,385	0	38,346	11,504	16,259	0	219,494	
34.20 Setup/Teardo		127,221	0	31,805	9,542	13,485	0	182,053	
34.22 O & M of See		1,742,575	0	435,644	130,693	184,713	0	2,493,625	
TOTAL Dewatering o		2,023,181	0	505,795	151,739	214,457	0	2,895,172	
40 Excavate & Tran									
40.10 Excavate Bed	45128.00 CY	2,072,007	0	518,002	155,401	219,633	0	2,965,042	65.70
40.15 ALLOWANCE Do		62,302	0	15,575	4,673	6,604	0	89,154	
40.20 Excavate Ban	50274.00 CY	1,835,408	0	458,852	137,656	194,553	0	2,626,469	52.24

** PROJECT OWNER SUMMARY - Facility **

	QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	ENG&DES	CONST MT		TOTAL COST	UNIT COST
40.25 ALLOWANCE Do		18,690	0	4,673	1,402	1,981	0	26,746	
40.40 O & M Truck	89700.00 CY	259,868	0	64,967	19,490	27,546	0	371,871	4.15
TOTAL Excavate & T		4,248,276	0	1,062,069	318,621	450,317	0	6,079,283	
42 Dewatering of E									
42.10 Manage Dryin	40.50 MO	782,330	0	195,582	58,675	82,927	0	1,119,514	27642.31
42.20 O & M WTS	40.50 MO	1,116,614	0	279,153	83,746	118,361	0	1,597,874	39453.68
TOTAL Dewatering o		1,898,943	0	474,736	142,421	201,288	0	2,717,388	
46 Sampling									
46.20 Characteriza		328,766	0	82,191	24,657	34,849	0	470,464	
TOTAL Sampling		328,766	0	82,191	24,657	34,849	0	470,464	
60 Restoration of									
60.10 Import/Place	1.00 TN	1,663,795	0	415,949	124,785	176,362	0	2,380,891	2380891
60.15 ALLOWANCE Do		91,868	0	22,967	6,890	9,738	0	131,464	
TOTAL Restoration		1,755,663	0	438,916	131,675	186,100	0	2,512,354	
62 Restoration of									
62.12 Import & Pla		1,139,852	0	284,963	85,489	120,824	0	1,631,128	
62.15 ALLOWANCE Do		18,374	0	4,593	1,378	1,948	0	26,293	
62.20 Restoration		4,627,257	0	1,156,814	347,044	490,489	0	6,621,604	
TOTAL Restoration		5,785,482	0	1,446,371	433,911	613,261	0	8,279,025	
TOTAL GE-Pittsfiel	1.00 EA	25,189,393	0	6,297,348	1,889,204	2,670,076	0	36,046,021	36046021

** PROJECT INDIRECT SUMMARY - Scope **

	QUANTITY UOM	DIRECT	Contr MT	Field OH	Home OH	Profit	Bond	TOTAL COST	UNIT COST
10 Additional Bank		410,000	41,000	27,060	71,709	27,488	0	577,257	
20 Mobilization		1,809,068	180,907	119,398	316,406	121,289	0	2,547,068	
30 Install Sheetpi		2,478,314	247,831	163,569	433,457	166,159	0	3,489,329	
32 Pumping bypass		1,800,800	180,080	118,853	314,960	120,735	0	2,535,427	
34 Dewatering of r		1,436,974	143,697	94,840	251,327	96,342	0	2,023,181	
40 Excavate & Tran		3,017,359	301,736	199,146	527,736	202,299	0	4,248,276	
42 Dewatering of E		1,348,734	134,873	89,016	235,894	90,426	0	1,898,943	
46 Sampling		233,508	23,351	15,411	40,840	15,656	0	328,766	
60 Restoration of		1,246,969	124,697	82,300	218,095	83,603	0	1,755,663	
62 Restoration of		4,109,168	410,917	271,205	718,693	275,499	0	5,785,482	
GE-Pittsfield E	1.00 EA	17,890,893	1,789,089	1,180,799	3,129,117	1,199,495	0	25,189,393	25189393
Contingency								6,297,348	
SUBTOTAL								31,486,741	
Engineering and Design								1,889,204	
SUBTOTAL								33,375,946	
USACE Construction Management								2,670,076	
TOTAL INCL OWNER COSTS								36,046,021	

** PROJECT INDIRECT SUMMARY - Facility **

	QUANTITY UOM	DIRECT	Contr MT	Field OH	Home OH	Profit	Bond	TOTAL COST	UNIT COST
10 Additional Bank		410,000	41,000	27,060	71,709	27,488	0	577,257	
20 Mobilization									
20.10 Mobilize Equ	10.00 EA	3,000	300	198	525	201	0	4,224	422.38
20.20 Setup Tempor		86,248	8,625	5,692	15,085	5,783	0	121,433	
20.30 Install Temp	15000.00 LF	69,450	6,945	4,584	12,147	4,656	0	97,782	6.52
20.32 Construct Te	12.00 EA	80,793	8,079	5,332	14,131	5,417	0	113,753	9479.38
20.34 Temporary De		73,282	7,328	4,837	12,817	4,913	0	103,176	
20.50 Erosion & Se		95,036	9,504	6,272	16,622	6,372	0	133,806	
20.60 Clearing		75,600	7,560	4,990	13,222	5,069	0	106,441	
20.70 Temporary Ac		489,895	48,990	32,333	85,683	32,845	0	689,745	
20.72 Maint. & Pro		535,718	53,572	35,357	93,697	35,917	0	754,261	
20.74 Exc. Seepage		65,715	6,572	4,337	11,494	4,406	0	92,523	
20.76 Truck Decon		34,153	3,415	2,254	5,973	2,290	0	48,086	
20.90 Demobilizati		82,097	8,210	5,418	14,359	5,504	0	115,588	
20.92 Pavement Res	8000.00 SY	118,080	11,808	7,793	20,652	7,917	0	166,250	20.78
TOTAL Mobilization		1,809,068	180,907	119,398	316,406	121,289	0	2,547,068	
30 Install Sheetpi									
30.10 Install & Re	69440.00 SF	2,478,314	247,831	163,569	433,457	166,159	0	3,489,329	50.25
TOTAL Install Shee		2,478,314	247,831	163,569	433,457	166,159	0	3,489,329	
32 Pumping bypass									
32.10 Setup & Tear	2.00 EA	437,117	43,712	28,850	76,452	29,307	0	615,437	307718.28
32.15 Setup & Tear	2.00 EA	19,056	1,906	1,258	3,333	1,278	0	26,830	13415.18
32.20 Operate and	9.00 MO	1,344,627	134,463	88,745	235,175	90,150	0	1,893,160	210351.14
TOTAL Pumping bypa		1,800,800	180,080	118,853	314,960	120,735	0	2,535,427	
34 Dewatering of r									
34.10 Dewatering o		108,942	10,894	7,190	19,054	7,304	0	153,385	
34.20 Setup/Teardo		90,359	9,036	5,964	15,804	6,058	0	127,221	
34.22 O & M of See		1,237,673	123,767	81,686	216,469	82,980	0	1,742,575	
TOTAL Dewatering o		1,436,974	143,697	94,840	251,327	96,342	0	2,023,181	
40 Excavate & Tran									
40.10 Excavate Bed	45128.00 CY	1,471,654	147,165	97,129	257,392	98,667	0	2,072,007	45.91
40.15 ALLOWANCE Do		44,250	4,425	2,921	7,739	2,967	0	62,302	
40.20 Excavate Ban	50274.00 CY	1,303,608	130,361	86,038	228,001	87,400	0	1,835,408	36.51

** PROJECT INDIRECT SUMMARY - Facility **

	QUANTITY UOM	DIRECT	Contr MT	Field OH	Home OH	Profit	Bond	TOTAL COST	UNIT COST
40.25 ALLOWANCE Do		13,275	1,328	876	2,322	890	0	18,690	
40.40 O & M Truck	89700.00 CY	184,573	18,457	12,182	32,282	12,375	0	259,868	2.90
TOTAL Excavate & T		3,017,359	301,736	199,146	527,736	202,299	0	4,248,276	
42 Dewatering of E									
42.10 Manage Dryin	40.50 MO	555,654	55,565	36,673	97,184	37,254	0	782,330	19316.78
42.20 O & M WTS	40.50 MO	793,081	79,308	52,343	138,710	53,172	0	1,116,614	27570.71
TOTAL Dewatering o		1,348,734	134,873	89,016	235,894	90,426	0	1,898,943	
46 Sampling									
46.20 Characteriza		233,508	23,351	15,411	40,840	15,656	0	328,766	
TOTAL Sampling		233,508	23,351	15,411	40,840	15,656	0	328,766	
60 Restoration of									
60.10 Import/Place	1.00 TN	1,181,719	118,172	77,993	206,683	79,228	0	1,663,795	1663795
60.15 ALLOWANCE Do		65,250	6,525	4,307	11,412	4,375	0	91,868	
TOTAL Restoration		1,246,969	124,697	82,300	218,095	83,603	0	1,755,663	
62 Restoration of									
62.12 Import & Pla		809,586	80,959	53,433	141,597	54,279	0	1,139,852	
62.15 ALLOWANCE Do		13,050	1,305	861	2,282	875	0	18,374	
62.20 Restoration		3,286,532	328,653	216,911	574,814	220,346	0	4,627,257	
TOTAL Restoration		4,109,168	410,917	271,205	718,693	275,499	0	5,785,482	
TOTAL GE-Pittsfiel	1.00 EA	17,890,893	1,789,089	1,180,799	3,129,117	1,199,495	0	25,189,393	25189393
Contingency								6,297,348	
SUBTOTAL								31,486,741	
Engineering and Design								1,889,204	
SUBTOTAL								33,375,946	
USACE Construction Management								2,670,076	
TOTAL INCL OWNER COSTS								36,046,021	

** PROJECT DIRECT SUMMARY - Scope **

	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
10 Additional Bank Sampling			0	0	0	0	410,000	410,000	
20 Mobilization			0	656,238	82,763	230,008	840,060	1,809,068	
30 Install Sheetpile			0	0	0	555,520	1922794	2,478,314	
32 Pumping bypass at cobble reach			0	170,042	1021568	540,720	68,470	1,800,800	
34 Dewatering of river bed			0	423,666	14,600	803,539	195,170	1,436,974	
40 Excavate & Transport Sed./Soils			0	940,834	631,075	139,200	1306250	3,017,359	
42 Dewatering of Excavated Material			0	729,204	147,825	364,977	106,728	1,348,734	
46 Sampling			0	0	0	0	233,508	233,508	
60 Restoration of River Bed			0	314,155	495,900	436,914	0	1,246,969	
62 Restoration of River Bank			0	247,516	244,650	893,083	2723919	4,109,168	
TOTAL GE-Pittsfield EE/CA Alt. #02	1.00	EA	0	3481655	2638380	3963961	7806897	17,890,893	17890893
Contractor Management								1,789,089	
SUBTOTAL								19,679,982	
Field Overhead								1,180,799	
SUBTOTAL								20,860,781	
Home Office Overhead								3,129,117	
SUBTOTAL								23,989,898	
Profit								1,199,495	
TOTAL INCL INDIRECTS								25,189,393	
Contingency								6,297,348	
SUBTOTAL								31,486,741	
Engineering and Design								1,889,204	
SUBTOTAL								33,375,946	
USACE Construction Management								2,670,076	
TOTAL INCL OWNER COSTS								36,046,021	

** PROJECT DIRECT SUMMARY - Facility **

	QUANTITY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
10 Additional Bank Sampling		0	0	0	0	410,000	410,000	
20 Mobilization								
20.10 Mobilize Equipment	10.00 EA	0	0	0	0	3,000	3,000	300.00
20.20 Setup Temporary Facilities		0	21,498	21,350	6,900	36,500	86,248	
20.30 Install Temporary Fence	15000.00 LF	0	0	0	0	69,450	69,450	4.63
20.32 Construct Temp. Dewatering Area	12.00 EA	0	38,079	24,100	18,614	0	80,793	6732.78
20.34 Temporary Dewatering Area WTS		0	6,786	2,788	63,708	0	73,282	
20.50 Erosion & Sedimentation Control		0	30,774	10,800	25,713	27,750	95,036	
20.60 Clearing		0	0	0	0	75,600	75,600	
20.70 Temporary Access Road		0	0	0	0	489,895	489,895	
20.72 Maint. & Protection of Traffic		0	505,718	0	30,000	0	535,718	
20.74 Exc. Seepage WTS (equip & matl)		0	0	0	65,715	0	65,715	
20.76 Truck Decon Facilites		0	10,385	1,425	8,058	14,285	34,153	
20.90 Demobilization		0	42,997	22,300	11,300	5,500	82,097	
20.92 Pavement Restoration	8000.00 SY	0	0	0	0	118,080	118,080	14.76
TOTAL Mobilization		0	656,238	82,763	230,008	840,060	1,809,068	
30 Install Sheetpile								
30.10 Install & Remove Sheetpile	69440.00 SF	0	0	0	555,520	1922794	2,478,314	35.69
TOTAL Install Sheetpile		0	0	0	555,520	1922794	2,478,314	
32 Pumping bypass at cobble reach								
32.10 Setup & Teardown Pumping System	2.00 EA	0	8,654	143,993	216,000	68,470	437,117	218558.45
32.15 Setup & Teardown Diversion Dams	2.00 EA	0	8,654	5,575	4,827	0	19,056	9528.20
32.20 Operate and Maintain Bypass Sys.	9.00 MO	0	152,734	872,000	319,893	0	1,344,627	149402.96
TOTAL Pumping bypass at cobble reach		0	170,042	1021568	540,720	68,470	1,800,800	
34 Dewatering of river bed								
34.10 Dewatering of river bed		0	31,156	7,300	69,987	500	108,942	
34.20 Setup/Teardown Seepage WTS		0	48,859	7,300	7,200	27,000	90,359	
34.22 O & M of Seepage WTS		0	343,651	0	726,352	167,670	1,237,673	
TOTAL Dewatering of river bed		0	423,666	14,600	803,539	195,170	1,436,974	
40 Excavate & Transport Sed./Soils								
40.10 Excavate Bed Sediments	45128.00 CY	0	403,454	292,050	72,200	703,950	1,471,654	32.61
40.15 ALLOWANCE Down Time Bed Exc.		0	0	44,250	0	0	44,250	
40.20 Excavate Bank Soils	50274.00 CY	0	368,808	265,500	67,000	602,300	1,303,608	25.93

** PROJECT DIRECT SUMMARY - Facility **

	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.25 ALLOWANCE Down Time Bank Exc.			0	0	13,275	0	0	13,275	
40.40 O & M Truck Decon Facilities	89700.00	CY	0	168,573	16,000	0	0	184,573	2.06
TOTAL Excavate & Transport Sed./Soils			0	940,834	631,075	139,200	1306250	3,017,359	
42 Dewatering of Excavated Material									
42.10 Manage Drying Area	40.50	MO	0	385,554	147,825	22,275	0	555,654	13719.84
42.20 O & M WTS	40.50	MO	0	343,651	0	342,702	106,728	793,081	19582.23
TOTAL Dewatering of Excavated Material			0	729,204	147,825	364,977	106,728	1,348,734	
46 Sampling									
46.20 Characterization Sampling			0	0	0	0	233,508	233,508	
TOTAL Sampling			0	0	0	0	233,508	233,508	
60 Restoration of River Bed									
60.10 Import/Place River Bed Backfill	1.00	TN	0	314,155	430,650	436,914	0	1,181,719	1181719
60.15 ALLOWANCE Down Time Bed Backfill			0	0	65,250	0	0	65,250	
TOTAL Restoration of River Bed			0	314,155	495,900	436,914	0	1,246,969	
62 Restoration of River Bank									
62.12 Import & Place Fill Material			0	133,278	182,700	493,608	0	809,586	
62.15 ALLOWANCE Down Time Bank Backfil			0	0	13,050	0	0	13,050	
62.20 Restoration			0	114,238	48,900	399,475	2723919	3,286,532	
TOTAL Restoration of River Bank			0	247,516	244,650	893,083	2723919	4,109,168	
TOTAL GE-Pittsfield EE/CA Alt. #02	1.00	EA	0	3481655	2638380	3963961	7806897	17,890,893	17890893
Contractor Management								1,789,089	
SUBTOTAL								19,679,982	
Field Overhead								1,180,799	
SUBTOTAL								20,860,781	
Home Office Overhead								3,129,117	
SUBTOTAL								23,989,898	
Profit								1,199,495	
TOTAL INCL INDIRECTS								25,189,393	

** PROJECT DIRECT SUMMARY - Facility **

	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
Contingency								6,297,348	
SUBTOTAL								31,486,741	
Engineering and Design								1,889,204	
SUBTOTAL								33,375,946	
USACE Construction Management								2,670,076	
TOTAL INCL OWNER COSTS								36,046,021	

	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
10. Additional Bank Sampling									
USR GC Additional Bank Sampling @ Depth			0.00	0.00	0.00	0.00	60000	60000.00	
	1.00	LS	0	0	0	0	60,000	60,000	60000.00
USR GC Appenix IX Sampling @ Depth			0.00	0.00	0.00	0.00	100000	100000.00	
	1.00	LS	0	0	0	0	100,000	100,000	100000.00
USR GC Detailed Survey of River			0.00	0.00	0.00	0.00	100000	100000.00	
	1.00	LS	0	0	0	0	100,000	100,000	100000.00
USR GC Geotech Investigation & Anal.			0.00	0.00	0.00	0.00	150000	150000.00	
	1.00	LS	0	0	0	0	150,000	150,000	150000.00
TOTAL Additional Bank Sampling			0	0	0	0	410,000	410,000	

20.10. Mobilize Equipment	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20. Mobilization									
20.10. Mobilize Equipment									
Mobilize equipment									
Excavator 2									
Front End Loader 1									
Dozer 2									
Compactor 2									
Trencher 2									
Truck Crane 1									
TOTAL Mobilize Equipment	10.00	EA	0	0	0	0	3,000	3,000	300.00

20.20. Setup Temporary Facilities	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.20. Setup Temporary Facilities								
Setup Temporary Facilities includes setup of trailers, installation of temporary utilities, install construction entrance, etc.								
USR GC Excavator (monthly)		0.00	0.00	7500.00	0.00	0.00	7500.00	
	1.00 MO	0	0	7,500	0	0	7,500	7500.00
USR GC Front End Loader (monthly)		0.00	0.00	3650.00	0.00	0.00	3650.00	
	1.00 MO	0	0	3,650	0	0	3,650	3650.00
USR GC Office Trailer Rental		0.00	0.00	300.00	0.00	0.00	300.00	
	34.00 MO	0	0	10,200	0	0	10,200	300.00
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	352.00 HR	0	10,743	0	0	0	10,743	30.52
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	352.00 HR	0	8,297	0	0	0	8,297	23.57
USR GC Electrician		0.00	30.62	0.00	0.00	0.00	30.62	
	40.00 HR	0	1,225	0	0	0	1,225	30.62
USR GC Pipefitter		0.00	30.85	0.00	0.00	0.00	30.85	
	40.00 HR	0	1,234	0	0	0	1,234	30.85
USR GC Misc. Daily Materials		0.00	0.00	0.00	200.00	0.00	200.00	
	22.00 DA	0	0	0	4,400	0	4,400	200.00
USR GC Misc. Electrical Materials		0.00	0.00	0.00	2500.00	0.00	2500.00	
	1.00 LS	0	0	0	2,500	0	2,500	2500.00
USR GC Misc. Plumbing Materials		0.00	0.00	0.00	0.00	2500.00	2500.00	
	1.00 LS	0	0	0	0	2,500	2,500	2500.00
USR GC Office Trailer Utilities		0.00	0.00	0.00	0.00	1000.00	1000.00	
	34.00 MO	0	0	0	0	34,000	34,000	1000.00
TOTAL Setup Temporary Facilities		0	21,498	21,350	6,900	36,500	86,248	

20.30. Install Temporary Fence	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.30. Install Temporary Fence								
USR GC Temporary Fence		0.00	0.00	0.00	0.00	3.38	3.38	
MEANS Site Work and Landscape	15000 LF	0	0	0	0	50,700	50,700	3.38
Cost Data 1999								
Temporary fence page 118								
USR GC Remove wood fence		0.00	0.00	0.00	0.00	1.25	1.25	
MEANS Site Work and Landscape	15000 LF	0	0	0	0	18,750	18,750	1.25
Cost Data 1999								
Remove wood fence page 29								
TOTAL Install Temporary Fence	15000 LF	0	0	0	0	69,450	69,450	4.63

20.32. Construct Temp. Dewatering Area	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.32. Construct Temp. Dewatering Area								
Assume 12 areas 40'x 40' each with earthen berms, lined with PVC liner, layer of geotextile, layer of sand and layer of stone, precast concrete inlet used as sump.								
USR GC Front End Loader (monthly)		0.00	0.00	3650.00	0.00	0.00	3650.00	
	2.00 MO	0	0	7,300	0	0	7,300	3650.00
USR GC Dozer (monthly)		0.00	0.00	4500.00	0.00	0.00	4500.00	
	2.00 MO	0	0	9,000	0	0	9,000	4500.00
USR GC Compactor (monthly)		0.00	0.00	3900.00	0.00	0.00	3900.00	
	2.00 MO	0	0	7,800	0	0	7,800	3900.00
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	704.00 HR	0	21,486	0	0	0	21,486	30.52
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	704.00 HR	0	16,593	0	0	0	16,593	23.57
USR GC PVC Liner		0.00	0.00	0.00	0.60	0.00	0.60	
	4300.00 SY	0	0	0	2,580	0	2,580	0.60
USR GC Concrete Inlet 4'dia. 4' deep		0.00	0.00	0.00	315.00	0.00	315.00	
	12.00 EA	0	0	0	3,780	0	3,780	315.00
USR GC Concrete Inlet Cover		0.00	0.00	0.00	148.00	0.00	148.00	
	12.00 EA	0	0	0	1,776	0	1,776	148.00
USR GC Inlet Grate		0.00	0.00	0.00	214.00	0.00	214.00	
	12.00 EA	0	0	0	2,568	0	2,568	214.00
USR GC 3/4" Gravel		0.00	0.00	0.00	16.50	0.00	16.50	
	240.00 CY	0	0	0	3,960	0	3,960	16.50
USR GC Sand		0.00	0.00	0.00	7.50	0.00	7.50	
	240.00 CY	0	0	0	1,800	0	1,800	7.50
USR GC Fill Material		0.00	0.00	0.00	5.00	0.00	5.00	
	430.00 CY	0	0	0	2,150	0	2,150	5.00
TOTAL Construct Temp. Dewatering Area	12.00 EA	0	38,079	24,100	18,614	0	80,793	6732.78

20.34. Temporary Dewatering Area WTS	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST

20.34. Temporary Dewatering Area WTS
Temporary dewatering area water treatment system. One WTS for each dewatering area
Assume treat 100 gpm using (1) modular tank, (4) bag filters, (1) dual bed carbon unit, one submersible pump and one effluent pump, PVC pipe and flexible hose.

Assume discharge returns water into river.

USR GC Front End Loader (monthly)		0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.25 MO	0	0	913	0	0	913	3650.00
USR GC Excavator (monthly)		0.00	0.00	7500.00	0.00	0.00	7500.00	
	0.25 MO	0	0	1,875	0	0	1,875	7500.00
USR GC Carbon Units 100 gpm		0.00	0.00	0.00	13217.00	0.00	13217.00	
	1.00 EA	0	0	0	13,217	0	13,217	13217.00
USR GC Bag Filters		0.00	0.00	0.00	919.00	0.00	919.00	
	4.00 EA	0	0	0	3,676	0	3,676	919.00
USR GC ALLOWANCE PVC Pipe		0.00	0.00	0.00	1000.00	0.00	1000.00	
	1.00 LS	0	0	0	1,000	0	1,000	1000.00
USR GC ALLOWANCE Hose		0.00	0.00	0.00	1000.00	0.00	1000.00	
	1.00 LS	0	0	0	1,000	0	1,000	1000.00
USR GC Misc. Daily Materials		0.00	0.00	0.00	200.00	0.00	200.00	
	5.00 DA	0	0	0	1,000	0	1,000	200.00
USR GC Misc. Electrical Materials		0.00	0.00	0.00	7500.00	0.00	7500.00	
	1.00 LS	0	0	0	7,500	0	7,500	7500.00
USR GC Misc. Plumbing Materials		0.00	0.00	0.00	7500.00	0.00	7500.00	
	1.00 LS	0	0	0	7,500	0	7,500	7500.00
USR GC Modular Tank		0.00	0.00	0.00	28815.00	0.00	28815.00	
	1.00 EA	0	0	0	28,815	0	28,815	28815.00
USR GC Electrician		0.00	30.62	0.00	0.00	0.00	30.62	
	40.00 HR	0	1,225	0	0	0	1,225	30.62
USR GC Pipefitter		0.00	30.85	0.00	0.00	0.00	30.85	
	40.00 HR	0	1,234	0	0	0	1,234	30.85
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	80.00 HR	0	1,886	0	0	0	1,886	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	80.00 HR	0	2,442	0	0	0	2,442	30.52

20.34. Temporary Dewatering Area WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
TOTAL Temporary Dewatering Area WTS			0	6,786	2,788	63,708	0	73,282	

20.50. Erosion & Sedimentation Control	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST

20.50. Erosion & Sedimentation Control

20.50.10. Install Silt Fence

MEANS Site Work and Landscape Cost Data 1999

Silt Fence Installation pg 58 and Excavating, Utility Trench pg 52

Trenching	$0.54/lf
Install silt fence	$0.88/lf
Backfill trench	$0.43/lf
TOTAL	$1.85/lf

TOTAL Install Silt Fence	15000 LF	0	0	0	0	27,750	27,750	1.85

20.50.30. Turbidity Barrier

Turbidity Barrier

Assume barriers placed across river every 100 lf, for entire EE/CA length.

7500 lf / 1/100 lf = 75 barriers x 50 ft/barrier = 3750 lf

USR GC Truck Crane		0.00	0.00	5400.00	0.00	0.00	5400.00	
	2.00 MO	0	0	10,800	0	0	10,800	5400.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	912.00 HR	0	21,496	0	0	0	21,496	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	304.00 HR	0	9,278	0	0	0	9,278	30.52
USR GC Misc. Daily Materials		0.00	0.00	0.00	200.00	0.00	200.00	
	38.00 DA	0	0	0	7,600	0	7,600	200.00
USR GC Turbidity Barrier		0.00	0.00	0.00	4.83	0.00	4.83	
	3750.00 LF	0	0	0	18,113	0	18,113	4.83
TOTAL Turbidity Barrier	3750.00 LF	0	30,774	10,800	25,713	0	67,286	17.94
TOTAL Erosion & Sedimentation Control		0	30,774	10,800	25,713	27,750	95,036	

20.60. Clearing	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.60. Clearing									
20.60.10. Clearing									
MEANS Site Work and Landscape Cost Data 1999									
Cut & Chip medium, trees to 12" dia. pg 39									
TOTAL Clearing	14.00	AC	0	0	0	0	75,600	75,600	5400.00
TOTAL Clearing			0	0	0	0	75,600	75,600	

20.70. Temporary Access Road	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST

20.70. Temporary Access Road

20.70.10. Construct Temporary Access Road
MEANS Site Work and Landscape Cost Data 1999
Roads, gravel fill, no surfacing, 8" depth, pg 15

Geotextile included in unit price, pg 57

Temporary Road $5.60 /sy
Geotextile $1.43 /sy
Total $7.03 /sy

TOTAL Construct Temporary Access Road	21700 SY	0	0	0	0	152,551	152,551	7.03

20.70.20. Remove Temporary Access Road
MEANS Site Work and Landscape Cost Data 1999
Pavement removal, bituminuous roads, 3" thick, pg 30

Assume remove during excavation activities.

TOTAL Remove Temporary Access Road	21700 SY	0	0	0	0	82,894	82,894	3.82

20.70.30. T & D of Access Road Materials
Access road assume to be 8" thick and cover 21700 sy

((21700 sy x 9 sf/sy x 0.67 ft) / 27 cf/cy) x 1.5 tn/cy = 7270 tn

Assume able to dispose of material as landfill cover.
Material loaded during removal activity.

USR GC Trans Landfill Cover		0.00	0.00	0.00	0.00	20.00	20.00	
	7270.00 TN	0	0	0	0	145,400	145,400	20.00
USR GC Disposal Landfill Cover		0.00	0.00	0.00	0.00	15.00	15.00	
	7270.00 TN	0	0	0	0	109,050	109,050	15.00
TOTAL T & D of Access Road Materials		0	0	0	0	254,450	254,450	
TOTAL Temporary Access Road		0	0	0	0	489,895	489,895	

20.72. Maint. & Protection of Traffic	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.72. Maint. & Protection of Traffic								
Assume maintenance and protection of traffic full time during excavation and backfill activities, two flagmen full time.								
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
894 x 12 x 2 = 21456	21456 HR	0	505,718	0	0	0	505,718	23.57
USR GC Misc. Signage		0.00	0.00	0.00	300.00	0.00	300.00	
	100.00 EA	0	0	0	30,000	0	30,000	300.00
TOTAL Maint. & Protection of Traffic		0	505,718	0	30,000	0	535,718	

20.74. Exc. Seepage WTS (equip & matl)	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST

20.74. Exc. Seepage WTS (equip & matl)

WTS for treatment of water seeping in bypassed cells after initial removal of bulk river water. Assume system to be 300 gpm and consist of frak tank, suction pump, bag filters, carbon units and misc. piping and accessories.

Assume setup at each sheetpiled cell along river, 18 setup/teardown events. Setup/teardown included in dewater river bed activity.

USR GC Bag Filters 160 gpm each		0.00	0.00	0.00	1266.00	0.00	1266.00	
	4.00 EA	0	0	0	5,064	0	5,064	1266.00
USR GC Carbon Units 100 gpm parallel		0.00	0.00	0.00	13217.00	0.00	13217.00	
	3.00 EA	0	0	0	39,651	0	39,651	13217.00
USR GC ALLOWANCE PVC Pipe		0.00	0.00	0.00	3000.00	0.00	3000.00	
	1.00 LS	0	0	0	3,000	0	3,000	3000.00
USR GC ALLOWANCE Hose		0.00	0.00	0.00	3000.00	0.00	3000.00	
	1.00 LS	0	0	0	3,000	0	3,000	3000.00
USR GC Misc. Electrical Materials		0.00	0.00	0.00	7500.00	0.00	7500.00	
	1.00 LS	0	0	0	7,500	0	7,500	7500.00
USR GC Misc. Plumbing Materials		0.00	0.00	0.00	7500.00	0.00	7500.00	
	1.00 LS	0	0	0	7,500	0	7,500	7500.00
TOTAL Exc. Seepage WTS (equip & matl)		0	0	0	65,715	0	65,715	

20.76. Truck Decon Facilites	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST

20.76. Truck Decon Facilites

Truck decon facilties includes construction of pads.
Assume decon pads constructed of asphalt with precast concrete inlets used as sumps.

20.76.10. Construct Truck Decon Pads

USR GC Backhoe		0.00	0.00	2850.00	0.00	0.00	2850.00	
	0.50 MO	0	0	1,425	0	0	1,425	2850.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	192.00 HR	0	4,525	0	0	0	4,525	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	192.00 HR	0	5,860	0	0	0	5,860	30.52
USR GC Concrete Inlet 4'dia. x 4' deep		0.00	0.00	0.00	315.00	0.00	315.00	
	6.00 EA	0	0	0	1,890	0	1,890	315.00
USR GC Concrete Inlet Cover		0.00	0.00	0.00	148.00	0.00	148.00	
	6.00 EA	0	0	0	888	0	888	148.00
USR GC PVC Liner		0.00	0.00	0.00	0.60	0.00	0.60	
	800.00 SY	0	0	0	480	0	480	0.60
USR GC 1000 gal HDPE Tank		0.00	0.00	0.00	800.00	0.00	800.00	
	6.00 EA	0	0	0	4,800	0	4,800	800.00
USR GC Asphalt Pads		0.00	0.00	0.00	0.00	14.76	14.76	
	800.00 SY	0	0	0	0	11,808	11,808	14.76
USR GC Asphalt Curbing		0.00	0.00	0.00	0.00	2.58	2.58	
MEANS Site Work and Landscape Cost Data 1999, pg 74	960.00 LF	0	0	0	0	2,477	2,477	2.58
TOTAL Construct Truck Decon Pads	6.00 EA	0	10,385	1,425	8,058	14,285	34,153	5692.18
TOTAL Truck Decon Facilites		0	10,385	1,425	8,058	14,285	34,153	

20.90. Demobilization	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.90. Demobilization									
TOTAL Demobilize Equipment	10.00	EA	0	0	0	0	3,000	3,000	300.00
20.90.20. Teardown Temporary Facilities									
Teardown Temporary Facilities include removal of trailers, removal of temporary utilites, removal of construction entrance, etc.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	2.00	MO	0	0	15,000	0	0	15,000	7500.00
USR GC Front End Loader (monthly)			0.00	0.00	3650.00	0.00	0.00	3650.00	
	2.00	MO	0	0	7,300	0	0	7,300	3650.00
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	704.00	HR	0	21,486	0	0	0	21,486	30.52
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	704.00	HR	0	16,593	0	0	0	16,593	23.57
USR GC Electrician			0.00	30.62	0.00	0.00	0.00	30.62	
	80.00	HR	0	2,450	0	0	0	2,450	30.62
USR GC Pipefitter			0.00	30.85	0.00	0.00	0.00	30.85	
	80.00	HR	0	2,468	0	0	0	2,468	30.85
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	44.00	DA	0	0	0	8,800	0	8,800	200.00
USR GC Misc. Electrical Materials			0.00	0.00	0.00	2500.00	0.00	2500.00	
	1.00	LS	0	0	0	2,500	0	2,500	2500.00
USR GC Misc. Plumbing Materials			0.00	0.00	0.00	0.00	2500.00	2500.00	
	1.00	LS	0	0	0	0	2,500	2,500	2500.00
TOTAL Teardown Temporary Facilities			0	42,997	22,300	11,300	2,500	79,097	
TOTAL Demobilization			0	42,997	22,300	11,300	5,500	82,097	

20.92. Pavement Restoration	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.92. Pavement Restoration									
MEANS Site Work and Landscape Cost Data 1999, pg 71									
TOTAL Pavement Restoration	8000.00	SY	0	0	0	0	118,080	118,080	14.76
TOTAL Mobilization			0	656,238	82,763	230,008	840,060	1,809,068	

30.10. Install & Remove Sheetpile	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST

30. Install Sheetpile

30.10. Install & Remove Sheetpile

Quotation from South Jersey Gas Project August, 1999.
Sheetpile river in 400' sections, each block assumed to be 40' wide by 400' long.

Sheetpile length of river except cobble reach section.
Total river length 7300 lf - cobble reach length 2100 lf = 5200 lf
Assume 28' sheetpile height x 5200 total length = 145,600 sf
Assume use sheetpile (3) times.

Cross sections assume reuse piles (3) times, 40' sides
2 ends x 40' each side x 28' depth = 2240 sf
# of setups 5200 lf / 400 sections = 13 + 1 = 14 setups
Total cross section sheetpile area required if do not reuse sheetpile
2240 sf x 14 setups x 2 sides = 62720 sf

Required quantity of sheetpile assuming install and remove 3X before requiring new sheetpile
145,600 sf + 62720 sf) / 3 uses = 69440 sf

Total sheetpile material quantity 69,440 sf
Total sheetpile installation and removal quantity = 208,320 sf

USR GC Sheet Pile Material			0.00	0.00	0.00	8.00	0.00	8.00	
	69440	SF	0	0	0	555,520	0	555,520	8.00
USR GC Sheet Pile Install (Subcontract)			0.00	0.00	0.00	0.00	6.00	6.00	
	208320	SF	0	0	0	0	1249920	1,249,920	6.00
USR GC Sheet Pile Remove (Subcontract)			0.00	0.00	0.00	0.00	3.23	3.23	
	208320	SF	0	0	0	0	672,874	672,874	3.23
TOTAL Install & Remove Sheetpile	69440	SF	0	0	0	555,520	1922794	2,478,314	35.69
TOTAL Install Sheetpile			0	0	0	555,520	1922794	2,478,314	

32.10. Setup & Teardown Pumping System	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
32. Pumping bypass at cobble reach								
32.10. Setup & Teardown Pumping System								
USR GC Godwin Pump Delivery		0.00	0.00	16150.00	0.00	0.00	16150.00	
	1.00 LS	0	0	16,150	0	0	16,150	16150.00
USR GC Pumps and Piping 1st Month Rent		0.00	0.00	121668	0.00	0.00	121667.50	
Godwin Quotation dated July 9, 1999.	1.00 MO	0	0	121,668	0	0	121,668	121667.50
USR GC Diesel Pump Enclosures		0.00	0.00	0.00	18000.00	0.00	18000.00	
	12.00 EA	0	0	0	216,000	0	216,000	18000.00
USR GC Truck Crane		0.00	0.00	435.00	0.00	0.00	435.00	
	10.00 DA	0	0	4,350	0	0	4,350	435.00
USR GC Front End Loader		0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.50 MO	0	0	1,825	0	0	1,825	3650.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	160.00 HR	0	3,771	0	0	0	3,771	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	160.00 HR	0	4,883	0	0	0	4,883	30.52
USR GC Godwin Pump Setup System		0.00	0.00	0.00	0.00	34235	34235.00	
Includes travel to site, labor, and service truck for assisting in setup of pump and piping system.	2.00 EA	0	0	0	0	68,470	68,470	34235.00
TOTAL Setup & Teardown Pumping System	2.00 EA	0	8,654	143,993	216,000	68,470	437,117	218558.45

32.15. Setup & Teardown Diversion Dams	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
32.15. Setup & Teardown Diversion Dams								
Assume reuse gravel material.								
USR GC Front End Loader		0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.50 MO	0	0	1,825	0	0	1,825	3650.00
USR GC Excavator		0.00	0.00	7500.00	0.00	0.00	7500.00	
	0.50 MO	0	0	3,750	0	0	3,750	7500.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	160.00 HR	0	3,771	0	0	0	3,771	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	160.00 HR	0	4,883	0	0	0	4,883	30.52
USR GC PVC Liner		0.00	0.00	0.00	0.60	0.00	0.60	
	920.00 SY	0	0	0	552	0	552	0.60
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
	100.00 CY	0	0	0	1,775	0	1,775	17.75
USR GC Fill Material		0.00	0.00	0.00	5.00	0.00	5.00	
	500.00 CY	0	0	0	2,500	0	2,500	5.00
TOTAL Setup & Teardown Diversion Dams	2.00 EA	0	8,654	5,575	4,827	0	19,056	9528.20

32.20. Operate and Maintain Bypass Sys.	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
32.20. Operate and Maintain Bypass Sys. Assume operate for 9 months.									
USR GC Pumps and Piping after 1st			0.00	0.00	109000	0.00	0.00	109000.00	
month rental, monthly rate	8.00	MO	0	0	872,000	0	0	872,000	109000.00
Godwin Quotation dated July 9, 1999.									
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
Assume 24 hour/day operation	6480.00	HR	0	152,734	0	0	0	152,734	23.57
USR GC Fuel			0.00	0.00	0.00	0.65	0.00	0.65	
Assume use off-road vehicle diesel fuel.	485220	GL	0	0	0	315,393	0	315,393	0.65
USR GC Misc. Materials (monthly)			0.00	0.00	0.00	500.00	0.00	500.00	
	9.00	MO	0	0	0	4,500	0	4,500	500.00
TOTAL Operate and Maintain Bypass Sys.	9.00	MO	0	152,734	872,000	319,893	0	1,344,627	149402.96
TOTAL Pumping bypass at cobble reach			0	170,042	1021568	540,720	68,470	1,800,800	

34.10. Dewatering of river bed	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST

34. Dewatering of river bed
Dewater bypassed sheet pile cells.

Assume 18 moves. Assume two days each move.
14 (400' sheet pile cells) + 4 (cobble reach) = 18 moves
34.10. Dewatering of river bed

34.10.10. Setup, Maintain, & Teardown

USR GC Front End Loader (monthly)		0.00	0.00	3650.00	0.00	0.00	3650.00	
	2.00 MO	0	0	7,300	0	0	7,300	3650.00
USR GC Godwin 8" Diesel Pump		0.00	0.00	0.00	59600.00	0.00	59600.00	
	1.00 EA	0	0	0	59,600	0	59,600	59600.00
USR GC Godwin Suction Hose 10 ft sect.		0.00	0.00	0.00	1413.00	0.00	1413.00	
	2.00 EA	0	0	0	2,826	0	2,826	1413.00
USR GC Godwin Discharge Hose $/lf		0.00	0.00	0.00	8.30	0.00	8.30	
	400.00 LF	0	0	0	3,320	0	3,320	8.30
USR GC Godwin Equipment Delivery		0.00	0.00	0.00	0.00	250.00	250.00	
	2.00 EA	0	0	0	0	500	500	250.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	576.00 HR	0	13,576	0	0	0	13,576	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	576.00 HR	0	17,580	0	0	0	17,580	30.52
USR GC 3/4" Gravel		0.00	0.00	0.00	16.50	0.00	16.50	
	257.00 CY	0	0	0	4,241	0	4,241	16.50
TOTAL Setup, Maintain, & Teardown	40.00 MO	0	31,156	7,300	69,987	500	108,942	2723.56
TOTAL Dewatering of river bed		0	31,156	7,300	69,987	500	108,942	

34.20. Setup/Teardown Seepage WTS	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
34.20. Setup/Teardown Seepage WTS								
Assume 18 setup/teardown events, two days each, total 36 days.								
USR GC Front End Loader (monthly)		0.00	0.00	3650.00	0.00	0.00	3650.00	
	2.00 MO	0	0	7,300	0	0	7,300	3650.00
USR GC Misc. Daily Materials		0.00	0.00	0.00	200.00	0.00	200.00	
	36.00 DA	0	0	0	7,200	0	7,200	200.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	576.00 HR	0	13,576	0	0	0	13,576	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	576.00 HR	0	17,580	0	0	0	17,580	30.52
USR GC Electrician		0.00	30.62	0.00	0.00	0.00	30.62	
	288.00 HR	0	8,819	0	0	0	8,819	30.62
USR GC Pipefitter		0.00	30.85	0.00	0.00	0.00	30.85	
	288.00 HR	0	8,885	0	0	0	8,885	30.85
USR GC Truck w/ Flatbed Trailer		0.00	0.00	0.00	0.00	750.00	750.00	
	36.00 DA	0	0	0	0	27,000	27,000	750.00
TOTAL Setup/Teardown Seepage WTS		0	48,859	7,300	7,200	27,000	90,359	

34.22. O & M of Seepage WTS

34.22. O & M of Seepage WTS
Electricity - ALLOWANCE $/mo assume $1500/mo

Carbon - Assume one change per month 1760# x 6 units x 40.5 months = 427680#

Bag Filter Bags - Assume 2 bags per filter per day x 4 filters x 1 shift x 3.4 years x 365 days/yr = 9928 bags.

	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
USR GC Frak Tank 21,000 gal (monthly)			0.00	0.00	0.00	1100.00	0.00	1100.00	
	121.50	MO	0	0	0	133,650	0	133,650	1100.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
Assume operation 12 hours per day. Operates pumping system and seepage WTS.	14580	HR	0	343,651	0	0	0	343,651	23.57
USR GC Carbon Replacement			0.00	0.00	0.00	1.28	0.00	1.28	
	427680	LB	0	0	0	547,430	0	547,430	1.28
USR GC Bag Filter Bags			0.00	0.00	0.00	4.56	0.00	4.56	
	9928.00	EA	0	0	0	45,272	0	45,272	4.56
USR GC ALLOWANCE Elec Svs for WTS #2			0.00	0.00	0.00	0.00	1500.00	1500.00	
	40.50	MO	0	0	0	0	60,750	60,750	1500.00
USR GC Spent Carbon Removal & Disposal			0.00	0.00	0.00	0.00	0.25	0.25	
	427680	LB	0	0	0	0	106,920	106,920	0.25
TOTAL O & M of Seepage WTS			0	343,651	0	726,352	167,670	1,237,673	
TOTAL Dewatering of river bed			0	423,666	14,600	803,539	195,170	1,436,974	

40.10. Excavate Bed Sediments	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40. Excavate & Transport Sed./Soils								
40.10. Excavate Bed Sediments								
Estimated duration to excavate 45,128 cy based on 125 cy per =16.5 months								
USR GC Excavator (monthly)		0.00	0.00	7500.00	0.00	0.00	7500.00	
	16.50 MO	0	0	123,750	0	0	123,750	7500.00
USR GC Dump Truck (2)		0.00	0.00	0.00	0.00	75.00	75.00	
	5776.00 HR	0	0	0	0	433,200	433,200	75.00
USR GC Excavator, Long Reach (monthly)		0.00	0.00	10200.00	0.00	0.00	10200.00	
	16.50 MO	0	0	168,300	0	0	168,300	10200.00
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	5776.00 HR	0	176,284	0	0	0	176,284	30.52
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	5776.00 HR	0	136,140	0	0	0	136,140	23.57
USR GC Misc. Daily Materials		0.00	0.00	0.00	200.00	0.00	200.00	
	361.00 DA	0	0	0	72,200	0	72,200	200.00
USR GC Foreman		0.00	31.52	0.00	0.00	0.00	31.52	
	2888.00 HR	0	91,030	0	0	0	91,030	31.52
USR GC Roll-Off Truck w/ Sludge Box (1)		0.00	0.00	0.00	0.00	750.00	750.00	
	361.00 DA	0	0	0	0	270,750	270,750	750.00
TOTAL Excavate Bed Sediments	45128 CY	0	403,454	292,050	72,200	703,950	1,471,654	32.61

40.15. ALLOWANCE Down Time Bed Exc.	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.15. ALLOWANCE Down Time Bed Exc.									
Assume down time 4 months x 30% (bypass excavation) = 1.2 months, say 1.25 months.									
Assume down time 12.5 months x 10% (sheet pile areas) = 1.25 months.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	2.50	MO	0	0	18,750	0	0	18,750	7500.00
USR GC Excavator, Long Reach(monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	2.50	MO	0	0	25,500	0	0	25,500	10200.00
TOTAL ALLOWANCE Down Time Bed Exc.			0	0	44,250	0	0	44,250	

40.20. Excavate Bank Soils	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.20. Excavate Bank Soils								
Estimated duration to excavate 50,274 cy based on 150 cy per =15.0 months								
Includes removal of concrete and misc. structures along river bank.								
USR GC Excavator (monthly)		0.00	0.00	7500.00	0.00	0.00	7500.00	
	15.00 MO	0	0	112,500	0	0	112,500	7500.00
USR GC Dump Truck (3)		0.00	0.00	0.00	0.00	75.00	75.00	
	7920.00 HR	0	0	0	0	594,000	594,000	75.00
USR GC Excavator w/ Breaker		0.00	0.00	0.00	0.00	8300.00	8300.00	
	1.00 MO	0	0	0	0	8,300	8,300	8300.00
USR GC Excavator, Long Reach (monthly)		0.00	0.00	10200.00	0.00	0.00	10200.00	
	15.00 MO	0	0	153,000	0	0	153,000	10200.00
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	5280.00 HR	0	161,146	0	0	0	161,146	30.52
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	5280.00 HR	0	124,450	0	0	0	124,450	23.57
USR GC Misc. Daily Materials		0.00	0.00	0.00	200.00	0.00	200.00	
	335.00 DA	0	0	0	67,000	0	67,000	200.00
USR GC Foreman		0.00	31.52	0.00	0.00	0.00	31.52	
	2640.00 HR	0	83,213	0	0	0	83,213	31.52
TOTAL Excavate Bank Soils	50274 CY	0	368,808	265,500	67,000	602,300	1,303,608	25.93

40.25. ALLOWANCE Down Time Bank Exc.	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.25. ALLOWANCE Down Time Bank Exc.									
Assume down time 15 months x 5% = 0.75 months.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	0.75	MO	0	0	5,625	0	0	5,625	7500.00
USR GC Excavator, Long Reach(monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	0.75	MO	0	0	7,650	0	0	7,650	10200.00
TOTAL ALLOWANCE Down Time Bank Exc.			0	0	13,275	0	0	13,275	

40.40. O & M Truck Decon Facilities	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.40. O & M Truck Decon Facilities									
USR GC Pressure Washer			0.00	0.00	3000.00	0.00	0.00	3000.00	
ALLOWANCE	2.00	EA	0	0	6,000	0	0	6,000	3000.00
USR GC Trash Pump w/ Suct. & Disch. Hse			0.00	0.00	5000.00	0.00	0.00	5000.00	
ALLOWANCE	2.00	EA	0	0	10,000	0	0	10,000	5000.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	7152.00	HR	0	168,573	0	0	0	168,573	23.57
TOTAL O & M Truck Decon Facilities	89700	CY	0	168,573	16,000	0	0	184,573	2.06
TOTAL Excavate & Transport Sed./Soils			0	940,834	631,075	139,200	1306250	3,017,359	

42.10. Manage Drying Area	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
42. Dewatering of Excavated Material								
42.10. Manage Drying Area								
USR GC Front End Loader (monthly)		0.00	0.00	3650.00	0.00	0.00	3650.00	
	40.50 MO	0	0	147,825	0	0	147,825	3650.00
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	7128.00 HR	0	217,547	0	0	0	217,547	30.52
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	7128.00 HR	0	168,007	0	0	0	168,007	23.57
USR GC Silt Sack		0.00	0.00	0.00	25.00	0.00	25.00	
	891.00 EA	0	0	0	22,275	0	22,275	25.00
TOTAL Manage Drying Area	40.50 MO	0	385,554	147,825	22,275	0	555,654	13719.84

42.20. O & M WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST

42.20. O & M WTS

Operation and Maintenance of water treatment system
Electricity - ALLOWANCE $/mo assume $500/mo

Carbon - Assume one change per month 1760# x 2 units x 40.5 months = 142560#

Bag Filter Bags - Assume 4 bags per filter per shift x 4 filters x 1 shifts per day x 3.4 years x 365 days per year = 19856 bags

Assume weekly sampling.

USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
Assume operation 12 hours per day.	14580	HR	0	343,651	0	0	0	343,651	23.57
USR GC Carbon Replacement			0.00	0.00	0.00	2.00	0.00	2.00	
	142560	LB	0	0	0	285,120	0	285,120	2.00
USR GC Bag Filter Bags			0.00	0.00	0.00	2.90	0.00	2.90	
	19856	EA	0	0	0	57,582	0	57,582	2.90
USR GC ALLOWANCE Elec Svc for WTS			0.00	0.00	0.00	0.00	500.00	500.00	
	40.50	MO	0	0	0	0	20,250	20,250	500.00
USR GC Spent Carbon Removal & Disposal			0.00	0.00	0.00	0.00	0.25	0.25	
	142560	LB	0	0	0	0	35,640	35,640	0.25
USR GC Anal. TSS			0.00	0.00	0.00	0.00	30.00	30.00	
	175.00	EA	0	0	0	0	5,250	5,250	30.00
USR GC Anal. O & G			0.00	0.00	0.00	0.00	30.00	30.00	
	175.00	EA	0	0	0	0	5,250	5,250	30.00
USR GC Anal. Phenol			0.00	0.00	0.00	0.00	30.00	30.00	
	175.00	EA	0	0	0	0	5,250	5,250	30.00
USR GC Anal. Settable Solids			0.00	0.00	0.00	0.00	30.00	30.00	
	175.00	EA	0	0	0	0	5,250	5,250	30.00
USR GC Anal. PCBs			0.00	0.00	0.00	0.00	132.50	132.50	
	175.00	EA	0	0	0	0	23,188	23,188	132.50
USR GC Anal. Iron (total)			0.00	0.00	0.00	0.00	30.00	30.00	
	175.00	EA	0	0	0	0	5,250	5,250	30.00
USR GC Anal. pH			0.00	0.00	0.00	0.00	8.00	8.00	
	175.00	EA	0	0	0	0	1,400	1,400	8.00
USR GC Anal. Temp. (field measurement)			0.00	0.00	0.00	0.00	0.00	0.00	
	175.00	EA	0	0	0	0	0	0	0.00

42. Dewatering of Excavated Material

42.20. O & M WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
TOTAL O & M WTS	40.50	MO	0	343,651	0	342,702	106,728	793,081	19582.23
TOTAL Dewatering of Excavated Material			0	729,204	147,825	364,977	106,728	1,348,734	

46.20. Characterization Sampling	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
46. Sampling									
46.20. Characterization Sampling									
USR GC PCB Analysis (1/150 tn)			0.00	0.00	0.00	0.00	132.50	132.50	
	885.00	EA	0	0	0	0	117,263	117,263	132.50
USR GC TCLP Analysis (1/2000 tn)			0.00	0.00	0.00	0.00	1095.00	1095.00	
	67.00	EA	0	0	0	0	73,365	73,365	1095.00
USR GC Dioxin Analysis (1/2000 tn)			0.00	0.00	0.00	0.00	400.00	400.00	
	67.00	EA	0	0	0	0	26,800	26,800	400.00
USR GC RCRA Characteristics (1/2000 tn)			0.00	0.00	0.00	0.00	215.00	215.00	
	67.00	EA	0	0	0	0	14,405	14,405	215.00
USR GC pH (1/2000 tn)			0.00	0.00	0.00	0.00	15.00	15.00	
	67.00	EA	0	0	0	0	1,005	1,005	15.00
USR GC Moisture Content (1/2000 tn)			0.00	0.00	0.00	0.00	10.00	10.00	
	67.00	EA	0	0	0	0	670	670	10.00
TOTAL Characterization Sampling			0	0	0	0	233,508	233,508	
TOTAL Sampling			0	0	0	0	233,508	233,508	

60.10. Import/Place River Bed Backfill	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
60. Restoration of River Bed								
60.10. Import/Place River Bed Backfill								
USR GC Dozer (monthly)		0.00	0.00	4500.00	0.00	0.00	4500.00	
	16.50 MO	0	0	74,250	0	0	74,250	4500.00
USR GC Compactor (monthly)		0.00	0.00	3900.00	0.00	0.00	3900.00	
	16.50 MO	0	0	64,350	0	0	64,350	3900.00
USR GC Excavator (monthly)		0.00	0.00	7500.00	0.00	0.00	7500.00	
	16.50 MO	0	0	123,750	0	0	123,750	7500.00
USR GC Excavator, Long Reach (monthly)		0.00	0.00	10200.00	0.00	0.00	10200.00	
	16.50 MO	0	0	168,300	0	0	168,300	10200.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	5808.00 HR	0	136,895	0	0	0	136,895	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	5808.00 HR	0	177,260	0	0	0	177,260	30.52
USR GC Misc. Daily Expenses		0.00	0.00	0.00	200.00	0.00	200.00	
	363.00 DA	0	0	0	72,600	0	72,600	200.00
USR GC Fill Material		0.00	0.00	0.00	5.00	0.00	5.00	
	9489.00 CY	0	0	0	47,445	0	47,445	5.00
USR GC 3/4" Gravel		0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 stone, 3/4" to 1/2" plus 10 miles transportation, pg 205	7444.00 CY	0	0	0	122,826	0	122,826	16.50
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
MEANS Site Work and Landscape Cost Data 1999 Rip-Rap, random broken stone pg 60	10932 CY	0	0	0	194,043	0	194,043	17.75
TOTAL Import/Place River Bed Backfill	1.00 TN	0	314,155	430,650	436,914	0	1,181,719	1181719

60.15. ALLOWANCE Down Time Bed Backfill	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
60.15. ALLOWANCE Down Time Bed Backfill									
Assume down time 4 months x 30% (bypass excavation)= 1.20 months, say 1.25 months.									
Assume down time 12.5 months x 10% (sheet pile areas)= 1.25 months.									
USR GC Dozer (monthly)			0.00	0.00	4500.00	0.00	0.00	4500.00	
	2.50	MO	0	0	11,250	0	0	11,250	4500.00
USR GC Compactor (monthly)			0.00	0.00	3900.00	0.00	0.00	3900.00	
	2.50	MO	0	0	9,750	0	0	9,750	3900.00
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	2.50	MO	0	0	18,750	0	0	18,750	7500.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	2.50	MO	0	0	25,500	0	0	25,500	10200.00
TOTAL ALLOWANCE Down Time Bed Backfill			0	0	65,250	0	0	65,250	
TOTAL Restoration of River Bed			0	314,155	495,900	436,914	0	1,246,969	

62.12. Import & Place Fill Material	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
62. Restoration of River Bank								
62.12. Import & Place Fill Material								
USR GC Dozer (monthly)		0.00	0.00	4500.00	0.00	0.00	4500.00	
	7.00 MO	0	0	31,500	0	0	31,500	4500.00
USR GC Compactor (monthly)		0.00	0.00	3900.00	0.00	0.00	3900.00	
	7.00 MO	0	0	27,300	0	0	27,300	3900.00
USR GC Excavator (monthly)		0.00	0.00	7500.00	0.00	0.00	7500.00	
	7.00 MO	0	0	52,500	0	0	52,500	7500.00
USR GC Excavator, Long Reach (monthly)		0.00	0.00	10200.00	0.00	0.00	10200.00	
	7.00 MO	0	0	71,400	0	0	71,400	10200.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	2464.00 HR	0	58,076	0	0	0	58,076	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	2464.00 HR	0	75,201	0	0	0	75,201	30.52
USR GC Misc. Daily Expenses		0.00	0.00	0.00	200.00	0.00	200.00	
	154.00 DA	0	0	0	30,800	0	30,800	200.00
USR GC Fill Material		0.00	0.00	0.00	5.00	0.00	5.00	
	32406 CY	0	0	0	162,030	0	162,030	5.00
USR GC 3/4" Gravel		0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 stone, 3/4" to 1/2" plus 10 miles transportation, pg 205	4413.00 CY	0	0	0	72,815	0	72,815	16.50
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
MEANS Site Work and Landscape Cost Data 1999 Rip-Rap, random broken stone pg 60	12843 CY	0	0	0	227,963	0	227,963	17.75
TOTAL Import & Place Fill Material		0	133,278	182,700	493,608	0	809,586	

62.15. ALLOWANCE Down Time Bank Backfil	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
62.15. ALLOWANCE Down Time Bank Backfil									
Assume down time 7 months x 5% = 0.35 months, say 0.5 months.									
USR GC Dozer (monthly)			0.00	0.00	4500.00	0.00	0.00	4500.00	
	0.50	MO	0	0	2,250	0	0	2,250	4500.00
USR GC Compactor (monthly)			0.00	0.00	3900.00	0.00	0.00	3900.00	
	0.50	MO	0	0	1,950	0	0	1,950	3900.00
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	0.50	MO	0	0	3,750	0	0	3,750	7500.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	0.50	MO	0	0	5,100	0	0	5,100	10200.00
TOTAL ALLOWANCE Down Time Bank Backfil			0	0	13,050	0	0	13,050	

62.20. Restoration	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
62.20. Restoration								
62.20.10. Revegetation								
USR GC Front End Loader		0.00	0.00	3650.00	0.00	0.00	3650.00	
	2.00 MO	0	0	7,300	0	0	7,300	3650.00
USR GC Dozer		0.00	0.00	4500.00	0.00	0.00	4500.00	
	2.00 MO	0	0	9,000	0	0	9,000	4500.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	704.00 HR	0	16,593	0	0	0	16,593	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	704.00 HR	0	21,486	0	0	0	21,486	30.52
USR GC Coir Blanket		0.00	0.00	0.00	1.21	0.00	1.21	
	5986.00 SY	0	0	0	7,243	0	7,243	1.21
USR GC Geotextile		0.00	0.00	0.00	0.42	0.00	0.42	
	47886 SY	0	0	0	20,112	0	20,112	0.42
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
	5986.00 CY	0	0	0	106,252	0	106,252	17.75
USR GC Seeding		0.00	0.00	0.00	0.00	0.05	0.05	
MEANS Site Work and Landscape Cost Data 1999 Rye fine textured hydro or air seeding pg 127	153648 SF	0	0	0	0	7,682	7,682	0.05
USR GC Shrubs		0.00	0.00	0.00	0.00	26.67	26.67	
MEANS Site Work and Landscape Cost Data 1999 Shrubs, Cornus mas, 2' to 3', pg 160 Planting, potted heavy or stoney soil, pg 130	2449.00 EA	0	0	0	0	65,315	65,315	26.67
USR GC Trees		0.00	0.00	0.00	0.00	166.00	166.00	
MEANS Site Work and Landscape Cost Data 1999 Populus nigra italica, 20 gal pg 137 Bagged and burlapped, 12" dia. ball, backhoe pg 130	6146.00 EA	0	0	0	0	1020236	1,020,236	166.00
USR GC Vines		0.00	0.00	0.00	0.00	2.49	2.49	
MEANS Site Work and Landscape Cost Data 1999 Ground covers, vines and	1007.00 EA	0	0	0	0	2,507	2,507	2.49

62.20. Restoration	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
climbing plants, pg 175								
Planting, plotted, 3" dia. pg 130								
TOTAL Revegetation	22750 SF	0	38,079	16,300	133,607	1095741	1,283,727	56.43
62.20.20. Bioengineering								
USR GC Front End Loader		0.00	0.00	3650.00	0.00	0.00	3650.00	
	2.00 MO	0	0	7,300	0	0	7,300	3650.00
USR GC Dozer		0.00	0.00	4500.00	0.00	0.00	4500.00	
	2.00 MO	0	0	9,000	0	0	9,000	4500.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	704.00 HR	0	16,593	0	0	0	16,593	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	704.00 HR	0	21,486	0	0	0	21,486	30.52
USR GC Geotextile		0.00	0.00	0.00	0.42	0.00	0.42	
	8409.00 SY	0	0	0	3,532	0	3,532	0.42
USR GC Misc. Daily Material		0.00	0.00	0.00	200.00	0.00	200.00	
	44.00 DA	0	0	0	8,800	0	8,800	200.00
USR GC 3/4" Gravel		0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 Stone, 3/4" to 1/2" plus 10 miles transportation, pg 205.	2702.00 CY	0	0	0	44,583	0	44,583	16.50
USR GC Geogrid		0.00	0.00	0.00	0.40	0.00	0.40	
	9948.00 SY	0	0	0	3,979	0	3,979	0.40
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
	2211.00 CY	0	0	0	39,245	0	39,245	17.75
USR GC Coir Blanket		0.00	0.00	0.00	1.21	0.00	1.21	
	56740 SY	0	0	0	68,655	0	68,655	1.21
USR GC Seeding		0.00	0.00	0.00	0.00	0.05	0.05	
MEANS Site Work and Landscape Cost Data 1999 Rye fine textured hydro or air seeding pg 71.	75677 SY	0	0	0	0	3,784	3,784	0.05
USR GC Shrubs		0.00	0.00	0.00	0.00	26.67	26.67	
MEANS Site Work and Landscape Cost Data 1999	2211.00 EA	0	0	0	0	58,967	58,967	26.67

62.20. Restoration	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
Shrubs, Cornus mas, 2' to 3' pg 160.								
USR GC Trees		0.00	0.00	0.00	0.00	166.00	166.00	
MEANS Site Work and Landscape Cost Data 1999, Populus nigra italica, 20 gal pg 137 Bagged and burlapped, 12" dia. ball backhoe pg 130	3027.00 EA	0	0	0	0	502,482	502,482	166.00
USR GC Vines		0.00	0.00	0.00	0.00	2.49	2.49	
MEANS Site Work and Landscape Cost Data, 1999, Ground covers, vines and climbing plants, pg 175 Planting, plotted, 3' dia. pg 130	466.00 EA	0	0	0	0	1,160	1,160	2.49
TOTAL Bioengineering	199925 SF	0	38,079	16,300	168,795	566,394	789,568	3.95
62.20.30. Hard Structures								
USR GC Front End Loader		0.00	0.00	3650.00	0.00	0.00	3650.00	
	2.00 MO	0	0	7,300	0	0	7,300	3650.00
USR GC Dozer		0.00	0.00	4500.00	0.00	0.00	4500.00	
	2.00 MO	0	0	9,000	0	0	9,000	4500.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	704.00 HR	0	16,593	0	0	0	16,593	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	704.00 HR	0	21,486	0	0	0	21,486	30.52
USR GC Geotextile		0.00	0.00	0.00	0.42	0.00	0.42	
	10951 SY	0	0	0	4,599	0	4,599	0.42
USR GC Misc. Daily Material		0.00	0.00	0.00	200.00	0.00	200.00	
	44.00 DA	0	0	0	8,800	0	8,800	200.00
USR GC 3/4" Gravel		0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 Stone, 3/4" to 1/2" plus 10 miles transportation, pg 205.	3356.00 CY	0	0	0	55,374	0	55,374	16.50
USR GC 6" dia. PE Perf. Pipe		0.00	0.00	0.00	0.51	0.00	0.51	
	4400.00 LF	0	0	0	2,244	0	2,244	0.51

62.20. Restoration	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
USR GC 6" dia. PE Pipe Cplg.		0.00	0.00	0.00	1.65	0.00	1.65	
	8.00 EA	0	0	0	13	0	13	1.65
USR GC Geogrid		0.00	0.00	0.00	0.40	0.00	0.40	
	22954 SY	0	0	0	9,182	0	9,182	0.40
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
	725.00 CY	0	0	0	12,869	0	12,869	17.75
USR GC Coir Blanket		0.00	0.00	0.00	1.21	0.00	1.21	
	3300.00 SY	0	0	0	3,993	0	3,993	1.21
USR GC Concrete Foundation		0.00	0.00	0.00	0.00	168.00	168.00	
MEANS Site Work and Landscape Cost Data 1999 Concrete in place including forms and reinforcing, footings strip, 36" x 12", reinforced pg 207	644.00 CY	0	0	0	0	108,192	108,192	168.00
USR GC Interlock. Segmental Block Wall		0.00	0.00	0.00	0.00	12.05	12.05	
MEANS Site Work and Landscape Cost Data 1999 Retaining walls, segmental wall system, interlocking including installation, pg 59.	68861 SF	0	0	0	0	829,775	829,775	12.05
USR GC Seeding		0.00	0.00	0.00	0.00	0.05	0.05	
MEANS Site Work and Landscape Cost Data 1999 Rye fine textured hydro or air seeding pg 71.	39150 SY	0	0	0	0	1,958	1,958	0.05
USR GC Shrubs		0.00	0.00	0.00	0.00	26.67	26.67	
MEANS Site Work and Landscape Cost Data 1999 Shrubs, Cornus mas, 2' to 3' pg 160.	1263.00 EA	0	0	0	0	33,684	33,684	26.67
USR GC Trees		0.00	0.00	0.00	0.00	166.00	166.00	
MEANS Site Work and Landscape Cost Data 1999, Populus nigra italica, 20 gal pg 137 Bagged and burlapped, 12" dia. ball backhoe pg 130	522.00 EA	0	0	0	0	86,652	86,652	166.00

62.20. Restoration	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
USR GC Vines		0.00	0.00	0.00	0.00	2.49	2.49	
MEANS Site Work and Landscape Cost Data, 1999, Ground covers, vines and climbing plants, pg 175 Planting, plotted, 3' dia. pg 130	612.00 EA	0	0	0	0	1,524	1,524	2.49
TOTAL Hard Structures	29700 SF	0	38,079	16,300	97,074	1061785	1,213,238	40.85
TOTAL Restoration		0	114,238	48,900	399,475	2723919	3,286,532	
TOTAL Restoration of River Bank		0	247,516	244,650	893,083	2723919	4,109,168	
TOTAL GE-Pittsfield EE/CA Alt. #02	1.00 EA	0	3481655	2638380	3963961	7806897	17,890,893	17890893

APPENDIX D.3

ALTERNATIVE 3

GE-Pittsfield EE/CA Alt. #03
EE/CA Addendum

Designed By: Roy F. Weston Inc.
Estimated By: Dan Moretz

Prepared By: Roy F. Weston Inc.
West Chester, PA.

Preparation Date: 09/14/00
Effective Date of Pricing: 09/14/00

Sales Tax: 0.00%

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GE-Pittsfield Alternative No. 3 - EE/CA Addendum

Dry excavation to meet cleanup criteria. Diversion of flow from the river channel by pumping through a piping bypass along the entire length of EE/CA Reach. Riverbank and riverbed restoration.

See section 5.4 of EE/CA report for written description of activities. Cost includes reduced productivity and revised volumes.

Project Information	
Escalation	0.00%
Contingency	25.00%
Engineering and Design	6.00%
USACE Construction Management	8.00%
General Contractor	
Contractor Management	10.00%
Field Overhead	6.00%
Office Overhead	15.00%
Profit	5.00%
Bond	0.00%

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** PROJECT OWNER SUMMARY - Scope **

		QUANTITY	UOM	CONTRACT	ESCLATIN	CONTINGN	ENG&DES	CONST MT		TOTAL COST	UNIT COST
10	Additional Bank			577,257	0	144,314	43,294	61,189	0	826,055	
20	Mobilization			2,288,797	0	572,199	171,660	242,612	0	3,275,268	
32	Pumping bypass			4,308,208	0	1,077,052	323,116	456,670	0	6,165,045	
34	Dewatering of r			1,386,599	0	346,650	103,995	146,979	0	1,984,223	
40	Excavate & Tran			3,608,238	0	902,059	270,618	382,473	0	5,163,388	
42	Dewatering of E			1,238,876	0	309,719	92,916	131,321	0	1,772,831	
46	Sampling			328,766	0	82,191	24,657	34,849	0	470,464	
60	Restoration of			1,911,474	0	477,868	143,361	202,616	0	2,735,319	
62	Restoration of			6,371,824	0	1,592,956	477,887	675,413	0	9,118,080	
	GE-Pittsfield E	1.00	EA	22,020,038	0	5,505,009	1,651,503	2,334,124	0	31,510,674	31510674

** PROJECT OWNER SUMMARY - Facility **

	QUANTITY UOM	CONTRACT	ESCLATIN	CONTINGN	ENG&DES	CONST MT		TOTAL COST	UNIT COST
10 Additional Bank		577,257	0	144,314	43,294	61,189	0	826,055	
20 Mobilization									
20.10 Mobilize Equ	10.00 EA	4,224	0	1,056	317	448	0	6,044	604.43
20.20 Setup Tempor		101,300	0	25,325	7,597	10,738	0	144,960	
20.30 Install Temp	15000.00 LF	97,782	0	24,445	7,334	10,365	0	139,926	9.33
20.32 Construct Te	12.00 EA	113,753	0	28,438	8,531	12,058	0	162,780	13565.00
20.34 Temporary De		103,176	0	25,794	7,738	10,937	0	147,645	
20.50 Erosion & Se		133,806	0	33,452	10,035	14,183	0	191,476	
20.60 Clearing		106,441	0	26,610	7,983	11,283	0	152,317	
20.70 Temporary Ac		689,745	0	172,436	51,731	73,113	0	987,025	
20.72 Maint. & Pro		516,124	0	129,031	38,709	54,709	0	738,573	
20.74 Exc. Seepage		92,523	0	23,131	6,939	9,807	0	132,401	
20.76 Truck Decon	6.00 EA	48,086	0	12,021	3,606	5,097	0	68,811	11468.43
20.90 Demobilizati		115,588	0	28,897	8,669	12,252	0	165,406	
20.92 Pavement Res	8000.00 SY	166,250	0	41,563	12,469	17,623	0	237,904	29.74
TOTAL Mobilization		2,288,797	0	572,199	171,660	242,612	0	3,275,268	
32 Pumping bypass									
32.10 Setup & Tear		2,253,273	0	563,318	168,995	238,847	0	3,224,434	
32.15 Setup & Tear	5.00 EA	58,630	0	14,658	4,397	6,215	0	83,900	16780.01
32.20 Operate and	27.00 MO	1,996,304	0	499,076	149,723	211,608	0	2,856,711	105804.12
TOTAL Pumping bypa		4,308,208	0	1,077,052	323,116	456,670	0	6,165,045	
34 Dewatering of r									
34.10 Dewatering o		120,034	0	30,008	9,003	12,724	0	171,769	
34.20 Setup/Teardo		105,161	0	26,290	7,887	11,147	0	150,485	
34.22 O & M of See		1,161,404	0	290,351	87,105	123,109	0	1,661,969	
TOTAL Dewatering o		1,386,599	0	346,650	103,995	146,979	0	1,984,223	
40 Excavate & Tran									
40.10 Excavate Bed	45128.00 CY	1,563,200	0	390,800	117,240	165,699	0	2,236,939	49.57
40.15 ALLOWANCE Do		105,913	0	26,478	7,943	11,227	0	151,561	
40.20 Excavate Ban	50247.00 CY	1,733,715	0	433,429	130,029	183,774	0	2,480,947	49.38
40.25 ALLOWANCE Do		24,921	0	6,230	1,869	2,642	0	35,661	
40.40 O & M Truck	89700.00 CY	180,489	0	45,122	13,537	19,132	0	258,280	2.88
TOTAL Excavate & T		3,608,238	0	902,059	270,618	382,473	0	5,163,388	
42 Dewatering of E									

** PROJECT OWNER SUMMARY - Facility **

	QUANTITY UOM	CONTRACT	ESCLATIN	CONTINGN	ENG&DES	CONST MT		TOTAL COST	UNIT COST
42.10 Manage Dryin	27.00 MO	521,553	0	130,388	39,116	55,285	0	746,342	27642.31
42.20 O & M WTS	27.00 MO	717,322	0	179,331	53,799	76,036	0	1,026,488	38018.09
TOTAL Dewatering o		1,238,876	0	309,719	92,916	131,321	0	1,772,831	
46 Sampling									
46.20 Characteriza		328,766	0	82,191	24,657	34,849	0	470,464	
TOTAL Sampling		328,766	0	82,191	24,657	34,849	0	470,464	
60 Restoration of									
60.10 Import/Place		1,755,298	0	438,824	131,647	186,062	0	2,511,831	
60.15 ALLOWANCE Do		156,176	0	39,044	11,713	16,555	0	223,488	
TOTAL Restoration		1,911,474	0	477,868	143,361	202,616	0	2,735,319	
62 Restoration of									
62.12 Import & Pla		1,741,752	0	435,438	130,631	184,626	0	2,492,447	
62.15 ALLOWANCE Do		36,747	0	9,187	2,756	3,895	0	52,585	
62.20 Restoration		4,593,325	0	1,148,331	344,499	486,892	0	6,573,048	
TOTAL Restoration		6,371,824	0	1,592,956	477,887	675,413	0	9,118,080	
TOTAL GE-Pittsfiel	1.00 EA	22,020,038	0	5,505,009	1,651,503	2,334,124	0	31,510,674	31510674

** PROJECT INDIRECT SUMMARY - Scope **

	QUANTITY UOM	DIRECT	Contr Mt	Field OH	Home OH	Profit	Bond	TOTAL COST	UNIT COST
10 Additional Bank		410,000	41,000	27,060	71,709	27,488	0	577,257	
20 Mobilization		1,625,629	162,563	107,292	284,323	108,990	0	2,288,797	
32 Pumping bypass		3,059,926	305,993	201,955	535,181	205,153	0	4,308,208	
34 Dewatering of r		984,839	98,484	64,999	172,248	66,029	0	1,386,599	
40 Excavate & Tran		2,562,769	256,277	169,143	448,228	171,821	0	3,608,238	
42 Dewatering of E		879,918	87,992	58,075	153,898	58,994	0	1,238,876	
46 Sampling		233,508	23,351	15,411	40,840	15,656	0	328,766	
60 Restoration of		1,357,634	135,763	89,604	237,450	91,023	0	1,911,474	
62 Restoration of		4,525,620	452,562	298,691	791,531	303,420	0	6,371,824	
GE-Pittsfield E	1.00 EA	15,639,842	1,563,984	1,032,230	2,735,408	1,048,573	0	22,020,038	22020038
Contingency								5,505,009	
SUBTOTAL								27,525,047	
Engineering and Design								1,651,503	
SUBTOTAL								29,176,550	
USACE Construction Management								2,334,124	
TOTAL INCL OWNER COSTS								31,510,674	

** PROJECT INDIRECT SUMMARY - Facility **

	QUANTITY UOM	DIRECT	Contr Mt	Field OH	Home OH	Profit	Bond	TOTAL COST	UNIT COST
10 Additional Bank		410,000	41,000	27,060	71,709	27,488	0	577,257	
20 Mobilization									
20.10 Mobilize Equ	10.00 EA	3,000	300	198	525	201	0	4,224	422.38
20.20 Setup Tempor		71,948	7,195	4,749	12,584	4,824	0	101,300	
20.30 Install Temp	15000.00 LF	69,450	6,945	4,584	12,147	4,656	0	97,782	6.52
20.32 Construct Te	12.00 EA	80,793	8,079	5,332	14,131	5,417	0	113,753	9479.38
20.34 Temporary De		73,282	7,328	4,837	12,817	4,913	0	103,176	
20.50 Erosion & Se		95,036	9,504	6,272	16,622	6,372	0	133,806	
20.60 Clearing		75,600	7,560	4,990	13,222	5,069	0	106,441	
20.70 Temporary Ac		489,895	48,990	32,333	85,683	32,845	0	689,745	
20.72 Maint. & Pro		366,580	36,658	24,194	64,115	24,577	0	516,124	
20.74 Exc. Seepage		65,715	6,572	4,337	11,494	4,406	0	92,523	
20.76 Truck Decon	6.00 EA	34,153	3,415	2,254	5,973	2,290	0	48,086	8014.28
20.90 Demobilizati		82,097	8,210	5,418	14,359	5,504	0	115,588	
20.92 Pavement Res	8000.00 SY	118,080	11,808	7,793	20,652	7,917	0	166,250	20.78
TOTAL Mobilization		1,625,629	162,563	107,292	284,323	108,990	0	2,288,797	
32 Pumping bypass									
32.10 Setup & Tear		1,600,399	160,040	105,626	279,910	107,299	0	2,253,273	
32.15 Setup & Tear	5.00 EA	41,643	4,164	2,748	7,283	2,792	0	58,630	11726.07
32.20 Operate and	27.00 MO	1,417,885	141,789	93,580	247,988	95,062	0	1,996,304	73937.19
TOTAL Pumping bypa		3,059,926	305,993	201,955	535,181	205,153	0	4,308,208	
34 Dewatering of r									
34.10 Dewatering o		85,255	8,525	5,627	14,911	5,716	0	120,034	
34.20 Setup/Teardo		74,691	7,469	4,930	13,063	5,008	0	105,161	
34.22 O & M of See		824,893	82,489	54,443	144,274	55,305	0	1,161,404	
TOTAL Dewatering o		984,839	98,484	64,999	172,248	66,029	0	1,386,599	
40 Excavate & Tran									
40.10 Excavate Bed	45128.00 CY	1,110,271	111,027	73,278	194,186	74,438	0	1,563,200	34.64
40.15 ALLOWANCE Do		75,225	7,523	4,965	13,157	5,043	0	105,913	
40.20 Excavate Ban	50247.00 CY	1,231,380	123,138	81,271	215,368	82,558	0	1,733,715	34.50
40.25 ALLOWANCE Do		17,700	1,770	1,168	3,096	1,187	0	24,921	
40.40 O & M Truck	89700.00 CY	128,193	12,819	8,461	22,421	8,595	0	180,489	2.01
TOTAL Excavate & T		2,562,769	256,277	169,143	448,228	171,821	0	3,608,238	
42 Dewatering of E									

** PROJECT INDIRECT SUMMARY - Facility **

	QUANTITY	UOM	DIRECT	Contr Mt	Field OH	Home OH	Profit	Bond	TOTAL COST	UNIT COST
42.10 Manage Dryin	27.00	MO	370,436	37,044	24,449	64,789	24,836	0	521,553	19316.78
42.20 O & M WTS	27.00	MO	509,482	50,948	33,626	89,108	34,158	0	717,322	26567.50
TOTAL Dewatering o			879,918	87,992	58,075	153,898	58,994	0	1,238,876	
46 Sampling										
46.20 Characteriza			233,508	23,351	15,411	40,840	15,656	0	328,766	
TOTAL Sampling			233,508	23,351	15,411	40,840	15,656	0	328,766	
60 Restoration of										
60.10 Import/Place			1,246,709	124,671	82,283	218,049	83,586	0	1,755,298	
60.15 ALLOWANCE Do			110,925	11,093	7,321	19,401	7,437	0	156,176	
TOTAL Restoration			1,357,634	135,763	89,604	237,450	91,023	0	1,911,474	
62 Restoration of										
62.12 Import & Pla			1,237,088	123,709	81,648	216,367	82,941	0	1,741,752	
62.15 ALLOWANCE Do			26,100	2,610	1,723	4,565	1,750	0	36,747	
62.20 Restoration			3,262,432	326,243	215,321	570,599	218,730	0	4,593,325	
TOTAL Restoration			4,525,620	452,562	298,691	791,531	303,420	0	6,371,824	
TOTAL GE-Pittsfiel	1.00	EA	15,639,842	1,563,984	1,032,230	2,735,408	1,048,573	0	22,020,038	22020038
Contingency									5,505,009	
SUBTOTAL									27,525,047	
Engineering and Design									1,651,503	
SUBTOTAL									29,176,550	
USACE Construction Management									2,334,124	
TOTAL INCL OWNER COSTS									31,510,674	

** PROJECT DIRECT SUMMARY - Scope **

		QUANTITY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
10	Additional Bank Sampling		0	0	0	0	410,000	410,000	
20	Mobilization		0	487,100	79,463	230,008	829,060	1,625,629	
32	Pumping bypass entire 1.5 miles		0	501,473	1205525	1181753	171,175	3,059,926	
34	Dewatering of river bed		0	295,780	53,880	500,399	134,780	984,839	
40	Excavate & Transport Sed./Soils		0	664,344	622,225	127,800	1148400	2,562,769	
42	Dewatering of Excavated Material		0	486,136	98,550	223,983	71,249	879,918	
46	Sampling		0	0	0	0	233,508	233,508	
60	Restoration of River Bed		0	262,877	469,800	624,957	0	1,357,634	
62	Restoration of River Bank		0	404,593	473,025	948,183	2699819	4,525,620	
TOTAL	GE-Pittsfield EE/CA Alt. #03	1.00 EA	0	3102303	3002468	3837083	5697990	15,639,842	15639842

Contractor Management	1,563,984
SUBTOTAL	17,203,827
Field Overhead	1,032,230
SUBTOTAL	18,236,056
Home Office Overhead	2,735,408
SUBTOTAL	20,971,465
Profit	1,048,573
TOTAL INCL INDIRECTS	22,020,038
Contingency	5,505,009
SUBTOTAL	27,525,047
Engineering and Design	1,651,503
SUBTOTAL	29,176,550
USACE Construction Management	2,334,124
TOTAL INCL OWNER COSTS	31,510,674

** PROJECT DIRECT SUMMARY - Facility **

	QUANTITY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
10 Additional Bank Sampling		0	0	0	0	410,000	410,000	
20 Mobilization								
20.10 Mobilize Equipment	10.00 EA	0	0	0	0	3,000	3,000	300.00
20.20 Setup Temporary Facilities		0	21,498	18,050	6,900	25,500	71,948	
20.30 Install Temporary Fence	15000.00 LF	0	0	0	0	69,450	69,450	4.63
20.32 Construct Temp. Dewatering Area	12.00 EA	0	38,079	24,100	18,614	0	80,793	6732.78
20.34 Temporary Dewatering Area WTS		0	6,786	2,788	63,708	0	73,282	
20.50 Erosion & Sedimentation Control		0	30,774	10,800	25,713	27,750	95,036	
20.60 Clearing		0	0	0	0	75,600	75,600	
20.70 Temporary Access Road		0	0	0	0	489,895	489,895	
20.72 Maint. & Protection of Traffic		0	336,580	0	30,000	0	366,580	
20.74 Exc. Seepage WTS (equip & matl)		0	0	0	65,715	0	65,715	
20.76 Truck Decon Facilities	6.00 EA	0	10,385	1,425	8,058	14,285	34,153	5692.18
20.90 Demobilization		0	42,997	22,300	11,300	5,500	82,097	
20.92 Pavement Restoration	8000.00 SY	0	0	0	0	118,080	118,080	14.76
TOTAL Mobilization		0	487,100	79,463	230,008	829,060	1,625,629	
32 Pumping bypass entire 1.5 miles								
32.10 Setup & Teardown Pumping System		0	21,636	1191588	216,000	171,175	1,600,399	
32.15 Setup & Teardown Diversion Dams	5.00 EA	0	21,636	13,938	6,069	0	41,643	8328.50
32.20 Operate and Maintain Bypass Sys.	27.00 MO	0	458,201	0	959,684	0	1,417,885	52514.26
TOTAL Pumping bypass entire 1.5 miles		0	501,473	1205525	1181753	171,175	3,059,926	
34 Dewatering of river bed								
34.10 Dewatering of river bed		0	25,963	48,405	10,387	500	85,255	
34.20 Setup/Teardown Seepage WTS		0	40,716	5,475	6,000	22,500	74,691	
34.22 O & M of Seepage WTS		0	229,100	0	484,013	111,780	824,893	
TOTAL Dewatering of river bed		0	295,780	53,880	500,399	134,780	984,839	
40 Excavate & Transport Sed./Soils								
40.10 Excavate Bed Sediments	45128.00 CY	0	261,796	243,375	60,600	544,500	1,110,271	24.60
40.15 ALLOWANCE Down Time Bed Exc.		0	0	75,225	0	0	75,225	
40.20 Excavate Bank Soils	50247.00 CY	0	290,355	269,925	67,200	603,900	1,231,380	24.51
40.25 ALLOWANCE Down Time Bank Exc.		0	0	17,700	0	0	17,700	
40.40 O & M Truck Decon Facilities	89700.00 CY	0	112,193	16,000	0	0	128,193	1.43
TOTAL Excavate & Transport Sed./Soils		0	664,344	622,225	127,800	1148400	2,562,769	
42 Dewatering of Excavated Material								

** PROJECT DIRECT SUMMARY - Facility **

	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
42.10 Manage Drying Area	27.00	MO	0	257,036	98,550	14,850	0	370,436	13719.84
42.20 O & M WTS	27.00	MO	0	229,100	0	209,133	71,249	509,482	18869.70
TOTAL Dewatering of Excavated Material			0	486,136	98,550	223,983	71,249	879,918	
46 Sampling									
46.20 Characterization Sampling			0	0	0	0	233,508	233,508	
TOTAL Sampling			0	0	0	0	233,508	233,508	
60 Restoration of River Bed									
60.10 Import/Place River Bed Backfill			0	262,877	358,875	624,957	0	1,246,709	
60.15 ALLOWANCE Down Time Bed Backfill			0	0	110,925	0	0	110,925	
TOTAL Restoration of River Bed			0	262,877	469,800	624,957	0	1,357,634	
62 Restoration of River Bank									
62.12 Import & Place Fill Material			0	290,355	398,025	548,708	0	1,237,088	
62.15 ALLOWANCE Down Time Bank Backfil			0	0	26,100	0	0	26,100	
62.20 Restoration			0	114,238	48,900	399,475	2699819	3,262,432	
TOTAL Restoration of River Bank			0	404,593	473,025	948,183	2699819	4,525,620	
TOTAL GE-Pittsfield EE/CA Alt. #03	1.00	EA	0	3102303	3002468	3837083	5697990	15,639,842	15639842
Contractor Management								1,563,984	
SUBTOTAL								17,203,827	
Field Overhead								1,032,230	
SUBTOTAL								18,236,056	
Home Office Overhead								2,735,408	
SUBTOTAL								20,971,465	
Profit								1,048,573	
TOTAL INCL INDIRECTS								22,020,038	
Contingency								5,505,009	
SUBTOTAL								27,525,047	
Engineering and Design								1,651,503	
SUBTOTAL								29,176,550	
USACE Construction Management								2,334,124	

** PROJECT DIRECT SUMMARY - Facility **

	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
TOTAL INCL OWNER COSTS								31,510,674	

	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
10. Additional Bank Sampling									
USR GC Additional Bank Sampling @ Depth			0.00	0.00	0.00	0.00	60000	60000.00	
	1.00	LS	0	0	0	0	60,000	60,000	60000.00
USR GC Appendix IX Sampling @ Depth			0.00	0.00	0.00	0.00	100000	100000.00	
	1.00	LS	0	0	0	0	100,000	100,000	100000.00
USR GC Detailed Sampling of River			0.00	0.00	0.00	0.00	100000	100000.00	
	1.00	LS	0	0	0	0	100,000	100,000	100000.00
USR GC Geotech Investigation & Analysis			0.00	0.00	0.00	0.00	150000	150000.00	
	1.00	LS	0	0	0	0	150,000	150,000	150000.00
TOTAL Additional Bank Sampling			0	0	0	0	410,000	410,000	

20.10. Mobilize Equipment	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20. Mobilization									
20.10. Mobilize Equipment									
Mobilize equipment									
Excavator 2									
Front End Loader 1									
Dozer 2									
Compactor 2									
Trencher 2									
Truck Crane 1									
TOTAL Mobilize Equipment	10.00	EA	0	0	0	0	3,000	3,000	300.00

20.20. Setup Temporary Facilities	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.20. Setup Temporary Facilities								
Setup Temporary Facilities includes setup of trailers, installation of temporary utilities, install construction entrance, etc.								
USR GC Excavator (2)		0.00	0.00	7500.00	0.00	0.00	7500.00	
	1.00 MO	0	0	7,500	0	0	7,500	7500.00
USR GC Front End Loader (monthly)		0.00	0.00	3650.00	0.00	0.00	3650.00	
	1.00 MO	0	0	3,650	0	0	3,650	3650.00
USR GC Office Trailer Rental		0.00	0.00	300.00	0.00	0.00	300.00	
	23.00 MO	0	0	6,900	0	0	6,900	300.00
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	352.00 HR	0	10,743	0	0	0	10,743	30.52
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	352.00 HR	0	8,297	0	0	0	8,297	23.57
USR GC Electrician		0.00	30.62	0.00	0.00	0.00	30.62	
	40.00 HR	0	1,225	0	0	0	1,225	30.62
USR GC Pipefitter		0.00	30.85	0.00	0.00	0.00	30.85	
	40.00 HR	0	1,234	0	0	0	1,234	30.85
USR GC Misc. Daily Materials		0.00	0.00	0.00	200.00	0.00	200.00	
	22.00 DA	0	0	0	4,400	0	4,400	200.00
USR GC Misc. Electrical Materials		0.00	0.00	0.00	2500.00	0.00	2500.00	
	1.00 LS	0	0	0	2,500	0	2,500	2500.00
USR GC Misc. Plumbing Materials		0.00	0.00	0.00	0.00	2500.00	2500.00	
	1.00 LS	0	0	0	0	2,500	2,500	2500.00
USR GC Office Trailer Utilities		0.00	0.00	0.00	0.00	1000.00	1000.00	
	23.00 MO	0	0	0	0	23,000	23,000	1000.00
TOTAL Setup Temporary Facilities		0	21,498	18,050	6,900	25,500	71,948	

20.30. Install Temporary Fence	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.30. Install Temporary Fence MEANS Site Work and Landscape Cost Data 1999 Install temporary fence pg 118								
USR GC Temporary Fence		0.00	0.00	0.00	0.00	3.38	3.38	
MEANS Site Work and Landscape Cost Data 1999 Temporary fence page 118	15000 LF	0	0	0	0	50,700	50,700	3.38
USR GC Remove wood fence		0.00	0.00	0.00	0.00	1.25	1.25	
MEANS Site Work and Landscape Cost Data 1999 Remove wood fence page 29	15000 LF	0	0	0	0	18,750	18,750	1.25
TOTAL Install Temporary Fence	15000 LF	0	0	0	0	69,450	69,450	4.63

20.32. Construct Temp. Dewatering Area	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.32. Construct Temp. Dewatering Area Assume 12 areas 40'x 40' each with earthen berms, lined with PVC liner, layer of geotextile, layer of sand and layer of stone, precast concret inlet used as sump.								
USR GC Inlet Grate		0.00	0.00	0.00	214.00	0.00	214.00	
	12.00 EA	0	0	0	2,568	0	2,568	214.00
USR GC Front End Loader (monthly)		0.00	0.00	3650.00	0.00	0.00	3650.00	
	2.00 MO	0	0	7,300	0	0	7,300	3650.00
USR GC Dozer (monthly)		0.00	0.00	4500.00	0.00	0.00	4500.00	
	2.00 MO	0	0	9,000	0	0	9,000	4500.00
USR GC Compactor (monthly)		0.00	0.00	3900.00	0.00	0.00	3900.00	
	2.00 MO	0	0	7,800	0	0	7,800	3900.00
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	704.00 HR	0	21,486	0	0	0	21,486	30.52
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	704.00 HR	0	16,593	0	0	0	16,593	23.57
USR GC PVC Liner		0.00	0.00	0.00	0.60	0.00	0.60	
	4300.00 SY	0	0	0	2,580	0	2,580	0.60
USR GC Concrete Inlet 4'dia. 4' deep		0.00	0.00	0.00	315.00	0.00	315.00	
	12.00 EA	0	0	0	3,780	0	3,780	315.00
USR GC Concrete Inlet Cover		0.00	0.00	0.00	148.00	0.00	148.00	
	12.00 EA	0	0	0	1,776	0	1,776	148.00
USR GC 3/4" Gravel		0.00	0.00	0.00	16.50	0.00	16.50	
	240.00 CY	0	0	0	3,960	0	3,960	16.50
USR GC Sand		0.00	0.00	0.00	7.50	0.00	7.50	
	240.00 CY	0	0	0	1,800	0	1,800	7.50
USR GC Fill Material		0.00	0.00	0.00	5.00	0.00	5.00	
	430.00 CY	0	0	0	2,150	0	2,150	5.00
TOTAL Construct Temp. Dewatering Area	12.00 EA	0	38,079	24,100	18,614	0	80,793	6732.78

20.34. Temporary Dewatering Area WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.34. Temporary Dewatering Area WTS									
Temporary dewatering area water treatment system. One WTS for all dewatering areas.									
Assume 100 gpm using (1) modular tank, (4) bag filters, (1) dual carbon unit, submersible pumps and one efffluent pump, PVC pipe and flexible hose.									
Assume discharge returns water into river.									
USR GC Front End Loader (monthly)			0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.25	MO	0	0	913	0	0	913	3650.00
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	0.25	MO	0	0	1,875	0	0	1,875	7500.00
USR GC Carbon Units 100 gpm			0.00	0.00	0.00	13217.00	0.00	13217.00	
	1.00	EA	0	0	0	13,217	0	13,217	13217.00
USR GC Bag Filters			0.00	0.00	0.00	919.00	0.00	919.00	
	4.00	EA	0	0	0	3,676	0	3,676	919.00
USR GC ALLOWANCE PVC Pipe			0.00	0.00	0.00	1000.00	0.00	1000.00	
	1.00	LS	0	0	0	1,000	0	1,000	1000.00
USR GC ALLOWANCE Hose			0.00	0.00	0.00	1000.00	0.00	1000.00	
	1.00	LS	0	0	0	1,000	0	1,000	1000.00
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	5.00	DA	0	0	0	1,000	0	1,000	200.00
USR GC Misc. Electrical Materials			0.00	0.00	0.00	7500.00	0.00	7500.00	
	1.00	LS	0	0	0	7,500	0	7,500	7500.00
USR GC Misc. Plumbing Materials			0.00	0.00	0.00	7500.00	0.00	7500.00	
	1.00	LS	0	0	0	7,500	0	7,500	7500.00
USR GC Modular Tank			0.00	0.00	0.00	28815.00	0.00	28815.00	
	1.00	EA	0	0	0	28,815	0	28,815	28815.00
USR GC Electrician			0.00	30.62	0.00	0.00	0.00	30.62	
	40.00	HR	0	1,225	0	0	0	1,225	30.62
USR GC Pipefitter			0.00	30.85	0.00	0.00	0.00	30.85	
	40.00	HR	0	1,234	0	0	0	1,234	30.85
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	80.00	HR	0	1,886	0	0	0	1,886	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	80.00	HR	0	2,442	0	0	0	2,442	30.52

20. Mobilization

20.34. Temporary Dewatering Area WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
TOTAL Temporary Dewatering Area WTS			0	6,786	2,788	63,708	0	73,282	

20.50. Erosion & Sedimentation Control	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.50. Erosion & Sedimentation Control								
20.50.10. Install Silt Fence								
MEANS Site Work and Landscape Cost Data 1999								
Silt Fence Installation pg 58 and Excavating, Utility Trench pg 52								
Trenching $0.54/lf								
Install silt fence $0.88/lf								
Backfill trench $0.43/lf								
TOTAL $1.85/lf								
TOTAL Install Silt Fence	15000 LF	0	0	0	0	27,750	27,750	1.85
20.50.30. Turbidty Barrier								
USR GC Truck Crane		0.00	0.00	5400.00	0.00	0.00	5400.00	
	2.00 MO	0	0	10,800	0	0	10,800	5400.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	912.00 HR	0	21,496	0	0	0	21,496	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	304.00 HR	0	9,278	0	0	0	9,278	30.52
USR GC Misc. Daily Materials		0.00	0.00	0.00	200.00	0.00	200.00	
	38.00 DA	0	0	0	7,600	0	7,600	200.00
USR GC Turbidity Barrier		0.00	0.00	0.00	4.83	0.00	4.83	
	3750.00 LF	0	0	0	18,113	0	18,113	4.83
TOTAL Turbidty Barrier		0	30,774	10,800	25,713	0	67,286	
TOTAL Erosion & Sedimentation Control		0	30,774	10,800	25,713	27,750	95,036	

20.60. Clearing	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.60. Clearing									
20.60.10. Clearing									
MEANS Site Work and Landscape Cost Data 1999									
Cut & Chip medium, trees to 12" dia. pg 39									
TOTAL Clearing	14.00	AC	0	0	0	0	75,600	75,600	5400.00
TOTAL Clearing			0	0	0	0	75,600	75,600	

20.70. Temporary Access Road	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST

20.70. Temporary Access Road

20.70.10. Construct Temporary Access Road
MEANS Site Work and Landscape Cost Data 1999
Roads, gravel fill, no surfacing, 8" depth, pg 15

Geotextile included in unit price, pg 57

Temporary Road $5.60 /sy
Geotextile $1.43 /sy
Total $7.03 /sy

TOTAL Construct Temporary Access Road	21700	SY	0	0	0	0	152,551	152,551	7.03

20.70.20. Remove Temporary Access Road
MEANS Site Work and Landscape Cost Data 1999
Pavement removal, bituminuous roads, 3" thick, pg 30

Assume remove during excavation activities.

TOTAL Remove Temporary Access Road	21700	SY	0	0	0	0	82,894	82,894	3.82

20.70.30. T & D of Access Road Materials
Access road assumed to be 8" thick and cover 21700 sy

((21700 sy x 9 sf/sy x 0.67 ft) / 27 cf/cy) x 1.5 tn/cy = 7270 tn

Assume able to dispose of material as landfill cover.
Material loaded during removal activity.

USR GC Trans Landfill Cover			0.00	0.00	0.00	0.00	20.00	20.00	
	7270.00	TN	0	0	0	0	145,400	145,400	20.00
USR GC Disposal Landfill Cover			0.00	0.00	0.00	0.00	15.00	15.00	
	7270.00	TN	0	0	0	0	109,050	109,050	15.00
TOTAL T & D of Access Road Materials			0	0	0	0	254,450	254,450	
TOTAL Temporary Access Road			0	0	0	0	489,895	489,895	

20.72. Maint. & Protection of Traffic	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.72. Maint. & Protection of Traffic								
Assume maintenance and protection of traffic full time during excavation and backfill activities, two flagmen full time.								
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
595 x 12 x 2 = 14280	14280 HR	0	336,580	0	0	0	336,580	23.57
USR GC Misc. Signage		0.00	0.00	0.00	300.00	0.00	300.00	
	100.00 EA	0	0	0	30,000	0	30,000	300.00
TOTAL Maint. & Protection of Traffic		0	336,580	0	30,000	0	366,580	

20.74. Exc. Seepage WTS (equip & matl)	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST

20.74. Exc. Seepage WTS (equip & matl)

WTS for treatment of water seeping in bypassed cells after initial removal of bulk river water. Assume system to be 300 gpm and consist of frak tank, suction pump, bag filters, carbon units and misc. piping and accessories.

Assume setup at each cell along river, 15 setup/teardown events. Setup/teardown included in dewater river bed activity.

USR GC Bag Filters 160 gpm each		0.00	0.00	0.00	1266.00	0.00	1266.00	
	4.00 EA	0	0	0	5,064	0	5,064	1266.00
USR GC Carbon Units 100 gpm parallel		0.00	0.00	0.00	13217.00	0.00	13217.00	
	3.00 EA	0	0	0	39,651	0	39,651	13217.00
USR GC ALLOWANCE PVC Pipe		0.00	0.00	0.00	3000.00	0.00	3000.00	
	1.00 LS	0	0	0	3,000	0	3,000	3000.00
USR GC ALLOWANCE Hose		0.00	0.00	0.00	3000.00	0.00	3000.00	
	1.00 LS	0	0	0	3,000	0	3,000	3000.00
USR GC Misc. Electrical Materials		0.00	0.00	0.00	7500.00	0.00	7500.00	
	1.00 LS	0	0	0	7,500	0	7,500	7500.00
USR GC Misc. Plumbing Materials		0.00	0.00	0.00	7500.00	0.00	7500.00	
	1.00 LS	0	0	0	7,500	0	7,500	7500.00
TOTAL Exc. Seepage WTS (equip & matl)		0	0	0	65,715	0	65,715	

20.76. Truck Decon Facilities	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.76. Truck Decon Facilities									
Truck decon facilities includes construction of pads, pads assumed to be asphalt with precast concrete inlet sumps.									
USR GC Backhoe			0.00	0.00	2850.00	0.00	0.00	2850.00	
	0.50	MO	0	0	1,425	0	0	1,425	2850.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	192.00	HR	0	4,525	0	0	0	4,525	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	192.00	HR	0	5,860	0	0	0	5,860	30.52
USR GC Concrete Inlet 4' dia. x 4' deep			0.00	0.00	0.00	315.00	0.00	315.00	
	6.00	EA	0	0	0	1,890	0	1,890	315.00
USR GC Concrete Inlet Cover			0.00	0.00	0.00	148.00	0.00	148.00	
	6.00	EA	0	0	0	888	0	888	148.00
USR GC PVC Liner			0.00	0.00	0.00	0.60	0.00	0.60	
	800.00	SY	0	0	0	480	0	480	0.60
USR GC 1000 gal HDPE Tank			0.00	0.00	0.00	800.00	0.00	800.00	
	6.00	EA	0	0	0	4,800	0	4,800	800.00
USR GC Asphalt Pads			0.00	0.00	0.00	0.00	14.76	14.76	
	800.00	SY	0	0	0	0	11,808	11,808	14.76
USR GC Asphalt Curbing			0.00	0.00	0.00	0.00	2.58	2.58	
	960.00	LF	0	0	0	0	2,477	2,477	2.58
TOTAL Truck Decon Facilities	6.00	EA	0	10,385	1,425	8,058	14,285	34,153	5692.18

20.90. Demobilization	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.90. Demobilization								
TOTAL Demobilize Equipment	10.00 EA	0	0	0	0	3,000	3,000	300.00
20.90.20. Teardown Temporary Facilities								
Teardown Temporary Facilities include removal of trailers, removal of temporary utilites, removal of construction entrance, etc.								
USR GC Excavator (monthly)		0.00	0.00	7500.00	0.00	0.00	7500.00	
	2.00 MO	0	0	15,000	0	0	15,000	7500.00
USR GC Front End Loader (monthly)		0.00	0.00	3650.00	0.00	0.00	3650.00	
	2.00 MO	0	0	7,300	0	0	7,300	3650.00
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	704.00 HR	0	21,486	0	0	0	21,486	30.52
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	704.00 HR	0	16,593	0	0	0	16,593	23.57
USR GC Electrician		0.00	30.62	0.00	0.00	0.00	30.62	
	80.00 HR	0	2,450	0	0	0	2,450	30.62
USR GC Pipefitter		0.00	30.85	0.00	0.00	0.00	30.85	
	80.00 HR	0	2,468	0	0	0	2,468	30.85
USR GC Misc. Daily Materials		0.00	0.00	0.00	200.00	0.00	200.00	
	44.00 DA	0	0	0	8,800	0	8,800	200.00
USR GC Misc. Electrical Materials		0.00	0.00	0.00	2500.00	0.00	2500.00	
	1.00 LS	0	0	0	2,500	0	2,500	2500.00
USR GC Misc. Plumbing Materials		0.00	0.00	0.00	0.00	2500.00	2500.00	
	1.00 LS	0	0	0	0	2,500	2,500	2500.00
TOTAL Teardown Temporary Facilities		0	42,997	22,300	11,300	2,500	79,097	
TOTAL Demobilization		0	42,997	22,300	11,300	5,500	82,097	

20.92. Pavement Restoration	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.92. Pavement Restoration									
MEANS Site Work and Landscape Cost Data 1999, pg 71									
TOTAL Pavement Restoration	8000.00	SY	0	0	0	0	118,080	118,080	14.76
TOTAL Mobilization			0	487,100	79,463	230,008	829,060	1,625,629	

32.10. Setup & Teardown Pumping System	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
32. Pumping bypass entire 1.5 miles								
32.10. Setup & Teardown Pumping System								
Assume setup and teardown system five times.								
USR GC Godwin Pump Delivery		0.00	0.00	16150.00	0.00	0.00	16150.00	
	1.00 LS	0	0	16,150	0	0	16,150	16150.00
USR GC Purchase Pumps and Piping		0.00	0.00	1160000	0.00	0.00	1160000.00	
Godwin Quotation dated July 9, 1999.	1.00 LS	0	0	1160000	0	0	1,160,000	1160000
USR GC Diesel Pump Enclosures		0.00	0.00	0.00	18000.00	0.00	18000.00	
	12.00 EA	0	0	0	216,000	0	216,000	18000.00
USR GC Off-Road Crane		0.00	0.00	435.00	0.00	0.00	435.00	
	25.00 DA	0	0	10,875	0	0	10,875	435.00
USR GC Front End Loader		0.00	0.00	3650.00	0.00	0.00	3650.00	
	1.25 MO	0	0	4,563	0	0	4,563	3650.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	400.00 HR	0	9,428	0	0	0	9,428	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	400.00 HR	0	12,208	0	0	0	12,208	30.52
USR GC Godwin Pump Setup System		0.00	0.00	0.00	0.00	34235	34235.00	
Includes travel to site, labor, and service truck for assisting in setup of pump and piping system.	5.00 EA	0	0	0	0	171,175	171,175	34235.00
TOTAL Setup & Teardown Pumping System		0	21,636	1191588	216,000	171,175	1,600,399	

32. Pumping bypass entire 1.5 miles

32.15. Setup & Teardown Diversion Dams	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
32.15. Setup & Teardown Diversion Dams								
Assume reuse gravel material.								
USR GC Front End Loader		0.00	0.00	3650.00	0.00	0.00	3650.00	
	1.25 MO	0	0	4,563	0	0	4,563	3650.00
USR GC Excavator		0.00	0.00	7500.00	0.00	0.00	7500.00	
	1.25 MO	0	0	9,375	0	0	9,375	7500.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	400.00 HR	0	9,428	0	0	0	9,428	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	400.00 HR	0	12,208	0	0	0	12,208	30.52
USR GC PVC Liner		0.00	0.00	0.00	0.60	0.00	0.60	
	2990.00 SY	0	0	0	1,794	0	1,794	0.60
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
	100.00 CY	0	0	0	1,775	0	1,775	17.75
USR GC Fill Material		0.00	0.00	0.00	5.00	0.00	5.00	
	500.00 CY	0	0	0	2,500	0	2,500	5.00
TOTAL Setup & Teardown Diversion Dams	5.00 EA	0	21,636	13,938	6,069	0	41,643	8328.50

32. Pumping bypass entire 1.5 miles

32.20. Operate and Maintain Bypass Sys.	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
32.20. Operate and Maintain Bypass Sys.								
Assume operate for 27 months.								
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
Assume 24 hour/day operation	19440 HR	0	458,201	0	0	0	458,201	23.57
USR GC Fuel		0.00	0.00	0.00	0.65	0.00	0.65	
Assume use off-road vehicle diesel fuel.	1455668 GL	0	0	0	946,184	0	946,184	0.65
USR GC Misc. Materials (monthly)		0.00	0.00	0.00	500.00	0.00	500.00	
	27.00 MO	0	0	0	13,500	0	13,500	500.00
TOTAL Operate and Maintain Bypass Sys.	27.00 MO	0	458,201	0	959,684	0	1,417,885	52514.26
TOTAL Pumping bypass entire 1.5 miles		0	501,473	1205525	1181753	171,175	3,059,926	

34.10. Dewatering of river bed	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST

34. Dewatering of river bed

Dewater bypassed cells. System on-site full time for duration of project.

Assume 15 cells @ 500 ft/cell, two days per move

Assume excavation to be 18 months.

34.10. Dewatering of river bed

34.10.10. Setup, Maintain, & Teardown

USR GC Front End Loader (monthly)		0.00	0.00	3650.00	0.00	0.00	3650.00	
	1.50 MO	0	0	5,475	0	0	5,475	3650.00
USR GC Godwin 8" Diesel Pump		0.00	0.00	2385.00	0.00	0.00	2385.00	
	18.00 MO	0	0	42,930	0	0	42,930	2385.00
USR GC Godwin Suction Hose 10 ft sect.		0.00	0.00	0.00	1413.00	0.00	1413.00	
	2.00 EA	0	0	0	2,826	0	2,826	1413.00
USR GC Godwin Discharge Hose $/lf		0.00	0.00	0.00	8.30	0.00	8.30	
	400.00 LF	0	0	0	3,320	0	3,320	8.30
USR GC Godwin Equipment Delivery'		0.00	0.00	0.00	0.00	250.00	250.00	
	2.00 EA	0	0	0	0	500	500	250.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	480.00 HR	0	11,314	0	0	0	11,314	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	480.00 HR	0	14,650	0	0	0	14,650	30.52
USR GC 3/4" Gravel		0.00	0.00	0.00	16.50	0.00	16.50	
	257.00 CY	0	0	0	4,241	0	4,241	16.50
TOTAL Setup, Maintain, & Teardown	40.00 MO	0	25,963	48,405	10,387	500	85,255	2131.37
TOTAL Dewatering of river bed		0	25,963	48,405	10,387	500	85,255	

34.20. Setup/Teardown Seepage WTS	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
34.20. Setup/Teardown Seepage WTS								
Assume 15 setup/teardown events, two days each, total 30 days.								
USR GC Front End Loader (monthly)		0.00	0.00	3650.00	0.00	0.00	3650.00	
	1.50 MO	0	0	5,475	0	0	5,475	3650.00
USR GC Misc. Daily Materials		0.00	0.00	0.00	200.00	0.00	200.00	
	30.00 DA	0	0	0	6,000	0	6,000	200.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	480.00 HR	0	11,314	0	0	0	11,314	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	480.00 HR	0	14,650	0	0	0	14,650	30.52
USR GC Electrician		0.00	30.62	0.00	0.00	0.00	30.62	
	240.00 HR	0	7,349	0	0	0	7,349	30.62
USR GC Pipefitter		0.00	30.85	0.00	0.00	0.00	30.85	
	240.00 HR	0	7,404	0	0	0	7,404	30.85
USR GC Truck w/ Flatbed Trailer		0.00	0.00	0.00	0.00	750.00	750.00	
	30.00 DA	0	0	0	0	22,500	22,500	750.00
TOTAL Setup/Teardown Seepage WTS		0	40,716	5,475	6,000	22,500	74,691	

34.22. O & M of Seepage WTS	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
34.22. O & M of Seepage WTS								
Electricity - ALLOWANCE $/mo assume $1500/mo								
Carbon - Assume one change per month 1760 # x 6 units x 27 months = 285120#								
Bag Filter Bags - Assume 2 bags per filter per day x 4 filters x 1 shift x 2.25 years 365 days/yr = 6570 bags.								
USR GC Frank Tank 21,000 gal (monthly)		0.00	0.00	0.00	1100.00	0.00	1100.00	
	81.00 MO	0	0	0	89,100	0	89,100	1100.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
Assume operation 12 hours per day.	9720.00 HR	0	229,100	0	0	0	229,100	23.57
Operates pumping system and seepage WTS.								
USR GC Carbon Replacement		0.00	0.00	0.00	1.28	0.00	1.28	
	285120 LB	0	0	0	364,954	0	364,954	1.28
USR GC Bag Filter Bags		0.00	0.00	0.00	4.56	0.00	4.56	
	6570.00 EA	0	0	0	29,959	0	29,959	4.56
USR GC ALLOWANCE Elec Svs for WTS #2		0.00	0.00	0.00	0.00	1500.00	1500.00	
	27.00 MO	0	0	0	0	40,500	40,500	1500.00
USR GC Spent Carbon Removal & Disposal		0.00	0.00	0.00	0.00	0.25	0.25	
	285120 LB	0	0	0	0	71,280	71,280	0.25
TOTAL O & M of Seepage WTS		0	229,100	0	484,013	111,780	824,893	
TOTAL Dewatering of river bed		0	295,780	53,880	500,399	134,780	984,839	

40.10. Excavate Bed Sediments	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40. Excavate & Transport Sed./Soils									
40.10. Excavate Bed Sediments									
Estimated duration to excavate 45,128 cy based on 150 cy per day = 13.75 months.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	13.75	MO	0	0	103,125	0	0	103,125	7500.00
USR GC Dump Truck (3)			0.00	0.00	0.00	0.00	75.00	75.00	
	7260.00	HR	0	0	0	0	544,500	544,500	75.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	13.75	MO	0	0	140,250	0	0	140,250	10200.00
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	4840.00	HR	0	147,717	0	0	0	147,717	30.52
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	4840.00	HR	0	114,079	0	0	0	114,079	23.57
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	303.00	DA	0	0	0	60,600	0	60,600	200.00
TOTAL Excavate Bed Sediments	45128	CY	0	261,796	243,375	60,600	544,500	1,110,271	24.60

40.15. ALLOWANCE Down Time Bed Exc.	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.15. ALLOWANCE Down Time Bed Exc.									
Assume down time 13.75 months x 30% = 4.125 months, say 4.25 months.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	4.25	MO	0	0	31,875	0	0	31,875	7500.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	4.25	MO	0	0	43,350	0	0	43,350	10200.00
TOTAL ALLOWANCE Down Time Bed Exc.			0	0	75,225	0	0	75,225	

40.20. Excavate Bank Soils	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.20. Excavate Bank Soils									
Estimated duration to excavate and backfill 50,247 cy based on 150 cy per day =15.25 months.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	15.25	MO	0	0	114,375	0	0	114,375	7500.00
USR GC Dump Truck (3)			0.00	0.00	0.00	0.00	75.00	75.00	
	8052.00	HR	0	0	0	0	603,900	603,900	75.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	15.25	MO	0	0	155,550	0	0	155,550	10200.00
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	5368.00	HR	0	163,831	0	0	0	163,831	30.52
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	5368.00	HR	0	126,524	0	0	0	126,524	23.57
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	336.00	DA	0	0	0	67,200	0	67,200	200.00
TOTAL Excavate Bank Soils	50247	CY	0	290,355	269,925	67,200	603,900	1,231,380	24.51

40.25. ALLOWANCE Down Time Bank Exc.	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.25. ALLOWANCE Down Time Bank Exc.									
Assume down time 15.25 months x 5% = 0.76 months, say 1 month.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	1.00	MO	0	0	7,500	0	0	7,500	7500.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	1.00	MO	0	0	10,200	0	0	10,200	10200.00
TOTAL ALLOWANCE Down Time Bank Exc.			0	0	17,700	0	0	17,700	

40.40. O & M Truck Decon Facilities	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.40. O & M Truck Decon Facilities								
USR GC Pressure Washer		0.00	0.00	3000.00	0.00	0.00	3000.00	
	2.00 EA	0	0	6,000	0	0	6,000	3000.00
USR GC Trash Pump w/ Suct. & Disch. Hse		0.00	0.00	5000.00	0.00	0.00	5000.00	
	2.00 EA	0	0	10,000	0	0	10,000	5000.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
595 x 8 = 4760	4760.00 HR	0	112,193	0	0	0	112,193	23.57
TOTAL O & M Truck Decon Facilities	89700 CY	0	112,193	16,000	0	0	128,193	1.43
TOTAL Excavate & Transport Sed./Soils		0	664,344	622,225	127,800	1148400	2,562,769	

42.10. Manage Drying Area	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
42. Dewatering of Excavated Material								
42.10. Manage Drying Area								
USR GC Front End Loader (monthly)		0.00	0.00	3650.00	0.00	0.00	3650.00	
	27.00 MO	0	0	98,550	0	0	98,550	3650.00
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	4752.00 HR	0	145,031	0	0	0	145,031	30.52
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	4752.00 HR	0	112,005	0	0	0	112,005	23.57
USR GC Silt Sack		0.00	0.00	0.00	25.00	0.00	25.00	
	594.00 EA	0	0	0	14,850	0	14,850	25.00
TOTAL Manage Drying Area	27.00 MO	0	257,036	98,550	14,850	0	370,436	13719.84

42.20. O & M WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
42.20. O & M WTS									
Operation and Maintenance of water treatment system									
Electricity - ALLOWANCE $/mo assume $500/mo									
Carbon - Assume one change per month 1760# x 2 units x 27 months = 95040#									
Bag Filter Bags - Assume 2 bags per filter per shift x 4 filters x 1 shifts per day x 2.25 years x 365 days per year = 6570 bags									
Assume weekly sampling									
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
Assume operation 12 hours per day.	9720.00	HR	0	229,100	0	0	0	229,100	23.57
USR GC Carbon Replacement			0.00	0.00	0.00	2.00	0.00	2.00	
	95040	LB	0	0	0	190,080	0	190,080	2.00
USR GC Bag Filter Bags			0.00	0.00	0.00	2.90	0.00	2.90	
	6570.00	EA	0	0	0	19,053	0	19,053	2.90
USR GC ALLOWANCE Elec Svc for WTS			0.00	0.00	0.00	0.00	500.00	500.00	
	27.00	MO	0	0	0	0	13,500	13,500	500.00
USR GC Spent Carbon Removal & Disposal			0.00	0.00	0.00	0.00	0.25	0.25	
	95040	LB	0	0	0	0	23,760	23,760	0.25
USR GC Anal. TSS			0.00	0.00	0.00	0.00	30.00	30.00	
	117.00	EA	0	0	0	0	3,510	3,510	30.00
USR GC Anal. O & G			0.00	0.00	0.00	0.00	30.00	30.00	
	117.00	EA	0	0	0	0	3,510	3,510	30.00
USR GC Anal. Phenol			0.00	0.00	0.00	0.00	30.00	30.00	
	117.00	EA	0	0	0	0	3,510	3,510	30.00
USR GC Anal. Settable Solids			0.00	0.00	0.00	0.00	30.00	30.00	
	117.00	EA	0	0	0	0	3,510	3,510	30.00
USR GC Anal. PCBs			0.00	0.00	0.00	0.00	132.50	132.50	
	117.00	EA	0	0	0	0	15,503	15,503	132.50
USR GC Anal. Iron (total)			0.00	0.00	0.00	0.00	30.00	30.00	
	117.00	EA	0	0	0	0	3,510	3,510	30.00
USR GC Anal. pH			0.00	0.00	0.00	0.00	8.00	8.00	
	117.00	EA	0	0	0	0	936	936	8.00
USR GC Anal. Temp. (field measurement)			0.00	0.00	0.00	0.00	0.00	0.00	
	117.00	EA	0	0	0	0	0	0	0.00

42.20. O & M WTS	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
TOTAL O & M WTS	27.00 MO	0	229,100	0	209,133	71,249	509,482	18869.70
TOTAL Dewatering of Excavated Material		0	486,136	98,550	223,983	71,249	879,918	

46.20. Characterization Sampling	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
46. Sampling									
46.20. Characterization Sampling									
USR GC PCB Analysis (1/150 tn)			0.00	0.00	0.00	0.00	132.50	132.50	
	885.00	EA	0	0	0	0	117,263	117,263	132.50
USR GC TCLP Analysis (1/2000 tn)			0.00	0.00	0.00	0.00	1095.00	1095.00	
	67.00	EA	0	0	0	0	73,365	73,365	1095.00
USR GC Dioxin Analysis (1/2000 tn)			0.00	0.00	0.00	0.00	400.00	400.00	
	67.00	EA	0	0	0	0	26,800	26,800	400.00
USR GC RCRA Characteristics (1/2000 tn)			0.00	0.00	0.00	0.00	215.00	215.00	
	67.00	EA	0	0	0	0	14,405	14,405	215.00
USR GC pH (1/2000 tn)			0.00	0.00	0.00	0.00	15.00	15.00	
	67.00	EA	0	0	0	0	1,005	1,005	15.00
USR GC Moisture Content (1/2000 tn)			0.00	0.00	0.00	0.00	10.00	10.00	
	67.00	EA	0	0	0	0	670	670	10.00
TOTAL Characterization Sampling			0	0	0	0	233,508	233,508	
TOTAL Sampling			0	0	0	0	233,508	233,508	

60.10. Import/Place River Bed Backfill	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
60. Restoration of River Bed								
60.10. Import/Place River Bed Backfill								
USR GC Dozer (monthly)		0.00	0.00	4500.00	0.00	0.00	4500.00	
	13.75 MO	0	0	61,875	0	0	61,875	4500.00
USR GC Compactor (monthly)		0.00	0.00	3900.00	0.00	0.00	3900.00	
	13.75 MO	0	0	53,625	0	0	53,625	3900.00
USR GC Excavator (monthly)		0.00	0.00	7500.00	0.00	0.00	7500.00	
	13.75 MO	0	0	103,125	0	0	103,125	7500.00
USR GC Excavator, Long Reach (monthly)		0.00	0.00	10200.00	0.00	0.00	10200.00	
	13.75 MO	0	0	140,250	0	0	140,250	10200.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	4860.00 HR	0	114,550	0	0	0	114,550	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	4860.00 HR	0	148,327	0	0	0	148,327	30.52
USR GC Misc. Daily Expenses		0.00	0.00	0.00	200.00	0.00	200.00	
	303.00 DA	0	0	0	60,600	0	60,600	200.00
USR GC Fill Material		0.00	0.00	0.00	5.00	0.00	5.00	
	9489.00 CY	0	0	0	47,445	0	47,445	5.00
USR GC 3/4" Gravel		0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 stone, 3/4" to 1/2" plus 10 miles transportation, pg 205	7444.00 CY	0	0	0	122,826	0	122,826	16.50
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
MEANS Site Work and Landscape Cost Data 1999 Rip-Rap, random broken stone pg 60	22202 CY	0	0	0	394,086	0	394,086	17.75
TOTAL Import/Place River Bed Backfill		0	262,877	358,875	624,957	0	1,246,709	

60.15. ALLOWANCE Down Time Bed Backfill	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
60.15. ALLOWANCE Down Time Bed Backfill									
Assume down time 13.75 months x 30% = 4.125 months, say 4.25 months.									
USR GC Dozer (monthly)			0.00	0.00	4500.00	0.00	0.00	4500.00	
	4.25	MO	0	0	19,125	0	0	19,125	4500.00
USR GC Compactor (monthly)			0.00	0.00	3900.00	0.00	0.00	3900.00	
	4.25	MO	0	0	16,575	0	0	16,575	3900.00
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	4.25	MO	0	0	31,875	0	0	31,875	7500.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	4.25	MO	0	0	43,350	0	0	43,350	10200.00
TOTAL ALLOWANCE Down Time Bed Backfill			0	0	110,925	0	0	110,925	
TOTAL Restoration of River Bed			0	262,877	469,800	624,957	0	1,357,634	

62.12. Import & Place Fill Material	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
62. Restoration of River Bank								
62.12. Import & Place Fill Material								
USR GC Dozer (monthly)		0.00	0.00	4500.00	0.00	0.00	4500.00	
	15.25 MO	0	0	68,625	0	0	68,625	4500.00
USR GC Compactor (monthly)		0.00	0.00	3900.00	0.00	0.00	3900.00	
	15.25 MO	0	0	59,475	0	0	59,475	3900.00
USR GC Excavator (monthly)		0.00	0.00	7500.00	0.00	0.00	7500.00	
	15.25 MO	0	0	114,375	0	0	114,375	7500.00
USR GC Excavator, Long Reach (monthly)		0.00	0.00	10200.00	0.00	0.00	10200.00	
	15.25 MO	0	0	155,550	0	0	155,550	10200.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	5368.00 HR	0	126,524	0	0	0	126,524	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	5368.00 HR	0	163,831	0	0	0	163,831	30.52
USR GC Misc. Daily Expenses		0.00	0.00	0.00	200.00	0.00	200.00	
	336.00 DA	0	0	0	67,200	0	67,200	200.00
USR GC Fill Material		0.00	0.00	0.00	5.00	0.00	5.00	
	36146 CY	0	0	0	180,730	0	180,730	5.00
USR GC 3/4" Gravel		0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 stone, 3/4" to 1/2" plus 10 miles transportation, pg 205	4413.00 CY	0	0	0	72,815	0	72,815	16.50
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
MEANS Site Work and Landscape Cost Data 1999 Rip-Rap, random broken stone pg 60	12843 CY	0	0	0	227,963	0	227,963	17.75
TOTAL Import & Place Fill Material		0	290,355	398,025	548,708	0	1,237,088	

62.15. ALLOWANCE Down Time Bank Backfil	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
62.15. ALLOWANCE Down Time Bank Backfil									
Assume 5% down time x 15.25 months = 0.76 months, say 1 month.									
USR GC Dozer (monthly)			0.00	0.00	4500.00	0.00	0.00	4500.00	
	1.00	MO	0	0	4,500	0	0	4,500	4500.00
USR GC Compactor (monthly)			0.00	0.00	3900.00	0.00	0.00	3900.00	
	1.00	MO	0	0	3,900	0	0	3,900	3900.00
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	1.00	MO	0	0	7,500	0	0	7,500	7500.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	1.00	MO	0	0	10,200	0	0	10,200	10200.00
TOTAL ALLOWANCE Down Time Bank Backfil			0	0	26,100	0	0	26,100	

62.20. Restoration	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
62.20. Restoration								
62.20.10. Revegetation								
USR GC Front End Loader		0.00	0.00	3650.00	0.00	0.00	3650.00	
	2.00 MO	0	0	7,300	0	0	7,300	3650.00
USR GC Dozer		0.00	0.00	4500.00	0.00	0.00	4500.00	
	2.00 MO	0	0	9,000	0	0	9,000	4500.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	704.00 HR	0	16,593	0	0	0	16,593	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	704.00 HR	0	21,486	0	0	0	21,486	30.52
USR GC Geotextile		0.00	0.00	0.00	0.42	0.00	0.42	
	47886 SY	0	0	0	20,112	0	20,112	0.42
USR GC Coir Blanket		0.00	0.00	0.00	1.21	0.00	1.21	
	5986.00 SY	0	0	0	7,243	0	7,243	1.21
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
	5986.00 CY	0	0	0	106,252	0	106,252	17.75
USR GC Seeding		0.00	0.00	0.00	0.00	0.05	0.05	
MEANS Site Work and Landscape Cost Data 1999 Rye fine textured hydro or air seeding pg 127	153648 SF	0	0	0	0	7,682	7,682	0.05
USR GC Shrubs		0.00	0.00	0.00	0.00	26.67	26.67	
MEANS Site Work and Landscape Cost Data 1999 Shrubs, Cornus mas, 2' to 3', pg 160 Planting, potted heavy or stoney soil, pg 130	2449.00 EA	0	0	0	0	65,315	65,315	26.67
USR GC Trees		0.00	0.00	0.00	0.00	166.00	166.00	
MEANS Site Work and Landscape Cost Data 1999 Populus nigra italica, 20 gal pg 137 Bagged and burlapped, 12" dia. ball, backhoe pg 130	6146.00 EA	0	0	0	0	1020236	1,020,236	166.00
USR GC Vines		0.00	0.00	0.00	0.00	2.49	2.49	
MEANS Site Work and Landscape Cost Data 1999 Ground covers, vines and	1007.00 EA	0	0	0	0	2,507	2,507	2.49

62.20. Restoration	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
climbing plants, pg 175								
Planting, plotted, 3" dia. pg 130								
TOTAL Revegetation	22750 SF	0	38,079	16,300	133,607	1095741	1,283,727	56.43
62.20.20. Bioengineering								
USR GC Front End Loader		0.00	0.00	3650.00	0.00	0.00	3650.00	
	2.00 MO	0	0	7,300	0	0	7,300	3650.00
USR GC Dozer		0.00	0.00	4500.00	0.00	0.00	4500.00	
	2.00 MO	0	0	9,000	0	0	9,000	4500.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	704.00 HR	0	16,593	0	0	0	16,593	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	704.00 HR	0	21,486	0	0	0	21,486	30.52
USR GC Geotextile		0.00	0.00	0.00	0.42	0.00	0.42	
	8409.00 SY	0	0	0	3,532	0	3,532	0.42
USR GC Misc. Daily Material		0.00	0.00	0.00	200.00	0.00	200.00	
	44.00 DA	0	0	0	8,800	0	8,800	200.00
USR GC 3/4" Gravel		0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 Stone, 3/4" to 1/2" plus 10 miles transportation, pg 205.	2702.00 CY	0	0	0	44,583	0	44,583	16.50
USR GC Geogrid		0.00	0.00	0.00	0.40	0.00	0.40	
	9948.00 SY	0	0	0	3,979	0	3,979	0.40
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
	2211.00 CY	0	0	0	39,245	0	39,245	17.75
USR GC Coir Blanket		0.00	0.00	0.00	1.21	0.00	1.21	
	56740 SY	0	0	0	68,655	0	68,655	1.21
USR GC Seeding		0.00	0.00	0.00	0.00	0.05	0.05	
MEANS Site Work and Landscape Cost Data 1999 Rye fine tectured hyrdor or air seeding pg 71.	75677 SF	0	0	0	0	3,784	3,784	0.05
USR GC Shrubs		0.00	0.00	0.00	0.00	26.67	26.67	
MEANS Site Work and Landscape Cost Data 1999	2211.00 EA	0	0	0	0	58,967	58,967	26.67

62.20. Restoration	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
Shrubs, Cornus mas, 2' to 3' pg 160.								
USR GC Trees		0.00	0.00	0.00	0.00	166.00	166.00	
MEANS Site Work and Landscape Cost Data 1999, Populus nigra italica, 20 gal pg 137 Bagged and burlapped, 12" dia. ball backhoe pg 130	3027.00 EA	0	0	0	0	502,482	502,482	166.00
USR GC Vines		0.00	0.00	0.00	0.00	2.49	2.49	
MEANS Site Work and Landscape Cost Data 1999, Ground covers, vines and climbing plants, pg 175 Planting, plotted 3' dia. pg 130	466.00 EA	0	0	0	0	1,160	1,160	2.49
TOTAL Bioengineering	199925 SF	0	38,079	16,300	168,795	566,394	789,568	3.95
62.20.30. Hard Structures								
USR GC Front End Loader		0.00	0.00	3650.00	0.00	0.00	3650.00	
	2.00 MO	0	0	7,300	0	0	7,300	3650.00
USR GC Dozer		0.00	0.00	4500.00	0.00	0.00	4500.00	
	2.00 MO	0	0	9,000	0	0	9,000	4500.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	704.00 HR	0	16,593	0	0	0	16,593	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	704.00 HR	0	21,486	0	0	0	21,486	30.52
USR GC Geotextile		0.00	0.00	0.00	0.42	0.00	0.42	
	10951 SY	0	0	0	4,599	0	4,599	0.42
USR GC Misc. Daily Material		0.00	0.00	0.00	200.00	0.00	200.00	
	44.00 DA	0	0	0	8,800	0	8,800	200.00
USR GC 3/4" Gravel		0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 Stone, 3/4" to 1/2" plus 10 miles transportation, pg 205.	3356.00 CY	0	0	0	55,374	0	55,374	16.50
USR GC 6" dia. PE Perf. Pipe		0.00	0.00	0.00	0.51	0.00	0.51	
	4400.00 LF	0	0	0	2,244	0	2,244	0.51

62.20. Restoration	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
USR GC 6" dia. PE Pipe Cplg.		0.00	0.00	0.00	1.65	0.00	1.65	
	8.00 EA	0	0	0	13	0	13	1.65
USR GC Geogrid		0.00	0.00	0.00	0.40	0.00	0.40	
	22954 SY	0	0	0	9,182	0	9,182	0.40
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
	725.00 CY	0	0	0	12,869	0	12,869	17.75
USR GC Coir Blanket		0.00	0.00	0.00	1.21	0.00	1.21	
	3300.00 SY	0	0	0	3,993	0	3,993	1.21
USR GC Concrete Foundation		0.00	0.00	0.00	0.00	168.00	168.00	
MEANS Site Work and Landscape Cost Data 1999 Concrete in place including forms and reinforcing, footings strip, 36" x 12", reinforced pg 207	644.00 CY	0	0	0	0	108,192	108,192	168.00
USR GC Interlock. Segmental Block Wall		0.00	0.00	0.00	0.00	12.05	12.05	
MEANS Site Work and Landscape Cost Data 1999	66861 SF	0	0	0	0	805,675	805,675	12.05
Retaining walls, segmental wall system, interlocking including installation, pg 59.								
USR GC Seeding		0.00	0.00	0.00	0.00	0.05	0.05	
MEANS Site Work and Landscape Cost Data 1999 Rye fine tectured hyrdor or air seeding pg 71.	39150 SF	0	0	0	0	1,958	1,958	0.05
USR GC Shrubs		0.00	0.00	0.00	0.00	26.67	26.67	
MEANS Site Work and Landscape Cost Data 1999 Shrubs, Cornus mas, 2' to 3' pg 160.	1263.00 EA	0	0	0	0	33,684	33,684	26.67
USR GC Trees		0.00	0.00	0.00	0.00	166.00	166.00	
MEANS Site Work and Landscape Cost Data 1999, Populus nigra italica, 20 gal pg 137 Bagged and burlapped, 12" dia. ball backhoe pg 130	522.00 EA	0	0	0	0	86,652	86,652	166.00

62.20. Restoration	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
USR GC Vines		0.00	0.00	0.00	0.00	2.49	2.49	
MEANS Site Work and Landscape Cost Data 1999, Ground covers, vines and climbing plants, pg 175 Planting, plotted 3' dia. pg 130	612.00 EA	0	0	0	0	1,524	1,524	2.49
TOTAL Hard Structures	29700 SF	0	38,079	16,300	97,074	1037685	1,189,138	40.04
TOTAL Restoration		0	114,238	48,900	399,475	2699819	3,262,432	
TOTAL Restoration of River Bank		0	404,593	473,025	948,183	2699819	4,525,620	
TOTAL GE-Pittsfield EE/CA Alt. #03	1.00 EA	0	3102303	3002468	3837083	5697990	15,639,842	15639842