Appendix D

Cost Analysis

PROJECT: **Upper Delaware River Watershed, Flood Risk Management and Ecosystem Restoration Study** **DISTRICT: Philadelphia District** **PREPARED: 12/7/2015**
PROJECT NO: P2 128021 **POC: CHIEF, COST ENGINEERING, Thomas E. Munyan**
LOCATION: Livingston Manor, NY - Selected Plan J: Widen LBK Floodplain and Stabilize 1-Mile of Stream

This Estimate reflects the scope and schedule in report; Upper Delaware River Watershed, Livingston Manor, NY Report September 2016

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)						TOTAL PROJECT COST (FULLY FUNDED)			
						Program Year (Budget EC): 2017									
						Effective Price Level Date: 1 OCT 16									
WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	Spent Thru: 7/31/2015 ($K)	TOTAL FIRST COST ($K)	INFLATED (%)	COST ($K)	CNTG ($K)	FULL ($K)
A	B	C	D	E	F	G	H	I	J		K	L	M	N	O
02	RELOCATIONS	$44.60	$12	26.1%	$56	2.2%	$46	$12	$57	$0	$57	2.3%	$47	$12	$59
04	DAMS	$0.00	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
05	LOCKS	$0.00	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
06	FISH & WILDLIFE FACILITIES	$228.30	$60	26.1%	$288	2.2%	$233	$61	$294	$0	$294	2.3%	$239	$62	$301
07	POWER PLANT	$0.00	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
08	ROADS, RAILROADS & BRIDGES	$0.00	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
16	BANK STABILIZATION	$4,771.10	$1,245	26.1%	$6,016	3.6%	$4,941	$1,290	$6,231	$0	$6,231	2.3%	$5,057	$1,320	$6,377
17	BEACH REPLENISHMENT	$0.00	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$5,044	$1,316		$6,360	3.5%	$5,220	$1,362	$6,582	$0	$6,582	2.3%	$5,342	$1,394	$6,737
01	LANDS AND DAMAGES	$500.00	$75	15.0%	$575	2.3%	$512	$77	$588	$0	$588	1.4%	$519	$78	$596
30	PLANNING, ENGINEERING & DESIGN	$485	$73	15.0%	$558	6.0%	$514	$77	$591	$1,100	$1,691	3.2%	$531	$80	$1,710
31	CONSTRUCTION MANAGEMENT	$549	$82	15.0%	$631	3.4%	$568	$85	$653	$0	$653	2.4%	$582	$87	$669
	PROJECT COST TOTALS:	$6,578	$1,547	23.5%	$8,125		$6,813	$1,601	**$8,415**	$1,100	**$9,515**	2.3%	$6,973	$1,639	$9,712
											ESTIMATED NON-FEDERAL OMRR&R COST ($K):				$140

signature required **CHIEF, COST ENGINEERING, Thomas E. Munyan**

signature required **PROJECT MANAGER, Mark D. Eberle**

signature required **CHIEF, REAL ESTATE, Craig R. Holmesley**

CHIEF, PLANNING, Peter R. Blum

CHIEF, ENGINEERING, Peter M. Tranchik

CHIEF, OPERATIONS, xxx

CHIEF, CONSTRUCTION, Christine D. Clapp

CHIEF, CONTRACTING, Kishayra J. Lambert

CHIEF, PM-PB, Daniel J. Caprioli

CHIEF, DPM, Nathan C. Barcomb

ESTIMATED FEDERAL COST:	**49%**	**$4,856**
ESTIMATED NON-FEDERAL COST:	**51%**	**$4,996**
ESTIMATED TOTAL PROJECT COST:		**$9,852**

****** CONTRACT COST SUMMARY ******

PROJECT: Upper Delaware River Watershed, Flood Risk Management and Ecosystem Restoration Study
DISTRICT: Philadelphia District
PREPARED: 12/7/2015
LOCATION: Livingston Manor, NY - Selected Plan J: Widen LBK Floodplain and Stabilize 1-Mile of Stream
POC: CHIEF, COST ENGINEERING, Thomas E. Munyan
This Estimate reflects the scope and schedule in report; Upper Delaware River Watershed, Livingston Manor, NY Report September 2016

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared:			4-Dec-15	Program Year (Budget EC):			2017					
		Effective Price Level:			1-Oct-14	Effective Price Level Date:			1 OCT 16					
				RISK BASED										
WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	Mid-Point Date	INFLATED (%)	COST ($K)	CNTG ($K)	FULL ($K)
A	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	*P*	*L*	*M*	*N*	*O*
	CONTRACT 1													
02	RELOCATIONS	$44.6	$12	26.1%	$56	2.2%	$46	$12	$57	2018Q2	2.3%	$47	$12	$59
04	DAMS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
05	LOCKS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
06	FISH & WILDLIFE FACILITIES	$228.3	$60	26.1%	$288	2.2%	$233	$61	$294	2018Q2	2.3%	$239	$62	$301
07	POWER PLANT	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
08	ROADS, RAILROADS & BRIDGES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
16	BANK STABILIZATION	$4,771.1	$1,245	26.1%	$6,016	3.6%	$4,941	$1,290	$6,231	2018Q2	2.3%	$5,057	$1,320	$6,377
17	BEACH REPLENISHMENT	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$5,044	$1,316	26.1%	**$6,360**		$5,220	$1,362	$6,582			$5,342	$1,394	$6,737
01	LANDS AND DAMAGES	$500	$75	15.0%	$575	2.3%	$512	$77	$588	2017Q4	1.4%	$519	$78	$596
30	PLANNING, ENGINEERING & DESIGN													
3.4%	Project Management	$170	$26	15.0%	$196	6.0%	$180	$27	$207	2017Q4	3.0%	$186	$28	$213
1.6%	Planning & Environmental Compliance	$80	$12	15.0%	$92	6.0%	$85	$13	$98	2017Q4	3.0%	$87	$13	$100
2.5%	Engineering & Design	$125	$19	15.0%	$144	6.0%	$132	$20	$152	2017Q4	3.0%	$136	$20	$157
0.6%	Reviews, ATRs, IEPRs, VE	$30	$5	15.0%	$35	6.0%	$32	$5	$37	2017Q4	3.0%	$33	$5	$38
0.0%	Life Cycle Updates (cost, schedule, risks)	$0	$0	15.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.4%	Contracting & Reprographics	$20	$3	15.0%	$23	6.0%	$21	$3	$24	2017Q4	3.0%	$22	$3	$25
1.0%	Engineering During Construction	$50	$8	15.0%	$58	6.0%	$53	$8	$61	2018Q2	5.0%	$56	$8	$64
0.2%	Planning During Construction	$10	$2	15.0%	$12	6.0%	$11	$2	$12	2018Q2	5.0%	$11	$2	$13
0.0%	Project Operations	$0	$0	15.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
31	CONSTRUCTION MANAGEMENT													
10.9%	Construction Management	$549.0	$82	15.0%	$631	3.4%	$568	$85	$653	2018Q2	2.4%	$582	$87	$669
0.0%	Project Operation:	$0	$0	15.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Management	$0	$0	15.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONTRACT COST TOTALS:	$6,578	$1,547		$8,125		$6,813	$1,601	$8,415			$6,973	$1,639	$8,612

UPPER DELAWARE RIVER WATERSHED, LIVINGSTON MANOR, NY
FLOOD RISK MANAGEMENT AND ECOSYSTEM RESTORATION STUDY

APPENDIX D – COST ANALYSIS

LIST OF TABLES

LIST OF TABLES (Continued)

APPENDIX D - COST ANALYSIS

INITIAL PROJECT CHARGES

1. General: This section presents Cycle 3 screening cost estimates for alternative plans resulting in total and annualized project costs for flood risk management and ecosystem restoration. The nine alternative plans include:

Plan	Description
A	No Action
B	Move ball field levee along the Willowemok Ck. 300 ft landward; the floodplain is not lowered
C	Main Street Bridge widened without pier
D	Plan C + Plan H
E	Plan C + Plan H + move ball field levee 50 ft relocation and floodplain lowering
F	Fulton Plan – Detention structure with open channel construction; existing channel
G	Plan F + Plan H
H	Widen Little Beaver Kill (LBK) floodplain below Main Street Bridge
I	Plan H + move ball field levee 50 ft relocation and floodplain lowering

Flooding is a major concern in the hamlet of Livingston Manor, New York. In the last several years, Livingston Manor has flooded five times, including three consecutive 100-year recurrence interval events. In addition, the quality of trout habitat in the LBK has declined as summer temperatures regularly exceed good growth for brown trout and exceed lethal thermal limits for brook trout. The Livingston Manor area can no longer support a successful summertime cold-water trout fishery. The initial construction for each of the above plans includes environmental monitoring. The plan layout of the NED Plan is shown in the section of the Feasibility Study, Main Report describing the NED Plan.

2. Basis of Cost: Cost estimates presented herein for the Cycle 3 analysis are based on February 2012 price level. The unit prices were developed in accordance with the construction procedures outlined herein. All initial construction costs presented in this appendix are NED costs.

3. Initial construction costs for the alternative plans are based on the following assumptions:

a. Readily available, land-based construction equipment will do the work.
b. Mobilization and demobilization costs are based on construction equipment located within 150 miles of the project site.
c. Construction access will be by local streets.
d. There will be no environmental construction windows for this project.
e. A permit will be obtained to do work in the stream.

f. There will be no severe weather events during construction.
g. Excavated material will not be contaminated.
h. Work will take place 5 days a week working 8-hour days.
i. Real estate (Lands and Damages), PE&D and S&A costs are placeholders and will change.

A brief description of each alternative plan follows:

Plan A - No Action

Plan B - Move ball field levee along the Willowemok Ck. 300 ft landward; the floodplain is not lowered: Construct a new 6-foot high levee parallel to Willowemok Creek 300 ft from existing levee between Sta 77+04 and Sta 83+20 to be replaced. Approximately 2.22 acres of habitat would be improved by removing invasive plant species and reseeding.

Plan C - Main Street Bridge widened without pier: The existing bridge is 60 feet abutment-to-abutment. A new bridge with an 80 foot span will replace the existing bridge to allow an additional 20-foot wide flow channel.

Plan D - Main Street Bridge widened without pier (Plan C): The existing bridge is 60 feet abutment to abutment. A new bridge with an 80 foot span will replace the existing bridge to allow an additional 20-foot wide flow channel; Widen LBK floodplain below Main Street Bridge (Plan H): Excavate a 20-foot wide rip rap lined bench in the vicinity of the bridge to increase flow during flood events. Part of the existing parking lot at street level would be removed as part of this plan. Approximately 0.6 acres of habitat would be improved by removing invasive plant species and reseeding.

Plan E - Main Street Bridge widened without pier (Plan C): The existing bridge is 60 feet abutment to abutment. A new bridge with an 80 foot span will replace the existing bridge to allow an additional 20-foot wide flow channel.; Widen LBK floodplain below Main Street Bridge (Plan H): Excavate a 20-foot wide rip rap lined bench in the vicinity of the bridge to increase flow during flood events. Part of the existing parking lot at street level would be removed as part of this plan. Approximately 0.6 acres of habitat would be improved by removing invasive plant species and reseeding; Move ball field levee 50 ft relocation and floodplain lowering: Construct a new 6-foot high levee parallel to Willowemok Creek 50 ft from existing levee between Sta 77+04 and Sta 83+20 to be replaced. Excavation would take place in the floodplain to lower it. Approximately 2.45 acres of habitat would be improved by removing invasive plant species and reseeding.

Plan F - Fulton Plan – Detention structure with open channel constriction using existing channel: Modify the airport ponds with berms around the circumference and gates on the outlets designed to release maximum of 1,600 cfs in order for the detention basin to act as a dam during flooding. The existing channel would be kept in place. Approximately 8.02 acres of habitat would be improved by removing invasive plant species and reseeding. In addition, nine acres of wetlands would be created.

Plan G - Fulton Plan – Detention structure with open channel constriction using existing channel (Plan F): Modify the airport ponds with berms around the circumference and gates on the outletsdesigned to release maximum of 1,600 cfs in order for the detention basin to act as a dam during flooding events. The existing channel would be kept in place. Approximately 8.02 acres of habitat would be improved by removing invasive plant species and reseeding. In addition, nine acres of wetlands would be created; Widen LBK floodplain below Main Street Bridge (Plan H): Excavate a 20-foot wide rip rap lined bench in the vicinity of the bridge to increase flow during flood events. Part of the existing parking lot at street level would be removed as part of this plan. Approximately 0.6 acres of habitat would be improved by removing invasive plant species and reseeding.

Plan H - Widen LBK floodplain below Main Street Bridge: Excavate a 20-foot wide rip rap lined bench in the vicinity of the bridge to increase flow during flood events. Part of the existing parking lot at street level would be removed as part of this plan. Approximately 0.6 acres of habitat would be improved by removing invasive plant species and reseeding.

Plan I - Widen LBK floodplain below Main Street Bridge (Plan H): Excavate a 20-foot wide rip rap lined bench in the vicinity of the bridge to increase flow during flood events. Part of the existing parking lot at street level would be removed as part of this plan. Approximately 0.6 acres of habitat would be improved by removing invasive plant species and reseeding; Move ball field levee 50 ft relocation and floodplain lowering: Construct a new 6-foot high levee parallel to Willowemok Creek 50 ft from existing levee between Sta 77+04 and Sta 83+20 to be replaced. Excavation would take place in the floodplain to lower it. Approximately 2.45 acres of habitat would be improved by removing invasive plant species and reseeding.

4. Real estate costs for the nine alternative plans included in the Cycle 3 screening were based on five percent of construction costs and are based on an order of magnitude placeholder since the real estate footprint for the alternative plans were not well defined. Real estate costs as shown in Table 1 are included as NED costs and reflect acquisition of easements on private properties and include surveys, appraisal, and administrative costs between the limits of construction. For more information refer to the Real Estate Appendix.

5. Alternatives Considered: Alternative plans were developed in two phases for the plan selection process. In the first phase the alternative plans were compared during the Cycle 1 and Cycle 2 screening process. For more information on these plans, refer to the section of the Feasibility Study, Main Report describing the NED Plan. Based on an analysis of these annual costs with their associated benefits, alternative plan Plan G was selected for the second phase for final plan optimization and selection.

6. The costs for the nine alternative plans as described in paragraph 1 for this second phase of plan selection are shown in Tables Plan B through Plan I.

7. Total First Cost for Selected Plan: The estimated project first cost is for the selected plan – Plan J: Widen LBK Floodplain and Stabilize 1-Mile of Stream Upstream of Main St Bridge. Initial construction costs for the Selected Plan are based on the following assumptions:

a. Readily available, land-based construction equipment will do the work.
b. Mobilization and demobilization costs are based on construction equipment located within 150 miles of the project site.
c. Construction access will be by local streets.
d. There will be seasonal in-water environmental construction windows during trout spawning season.
e. A permit will be obtained to do work in the stream for the stream stability and sediment transport area.
f. There will be no severe weather events during construction.
g. Excavated material will not be contaminated.
h. Work will take place 5 days a week working 8-hour days.
i. Earthwork will be done by the prime contractor and all other work will be done by subcontractors.
j. Construction duration is 12 months including one month for work plans and submittals review.
k. Material costs include 4% State sales tax.
l. Work in the floodway expansion area will be done in the dry.
m. Buried water line utility in the stream stability and sediment transport area and sewer line utility attached to bottom of Main St. bridge will be relocated by the Sponsor prior to start of construction.
n. Access roads and staging areas will be temporary.
o. This job will be awarded 8A Small Business (sole source) since it is an earthwork job.
p. Sponsor and support by others (TNC, Catskill Invasive Species Management and local support will be provided in-kind for detailed wetland and riparian design and planting plan.
q. Vegetation plantings will be secured through the State nursery if possible.
r. Enough funding will be obtained to complete work on the two areas under the same contract.
s. Prime contractor will be local, within a 150 mile radius, and no travel and per diem costs have been included.
t. Areas with invasive species (Knotweed) will need to be excavated 4-feet deep to remove the root system.
u. Trees for toe wood structures will be obtained from off site.
v. This feasibility study will be converted to a CAP Section 566 study.

NED real estate acquisition costs and pertinent contingency, engineering and design and construction management costs are also included. Details of the initial construction cost estimate are shown in Table 1.

ANNUAL CHARGES FOR THE SELECTED PLAN

8. General: The estimate of annual charges for the selected plan is based on an economic project life of 50 years and an interest rate of 3.125%. The annual charges include annualized first cost and interest during construction, post construction monitoring costs, and OMRR&R costs. It is noted that interest during construction was developed for the first cost of the project constructed over a 12-month period. For the selected plan, the total annualized cost is $317,000.

9. OMRR&R Costs: OMRR&R costs for the selected plan were estimated to be $10.000 annually for the first 5 years of the project and covers removal of invasive Knotweed plant species.

10. Monitoring Costs: Post construction monitoring costs include monitoring stream stability for the Years 1, 3 and 5 of the project life. Total annualized monitoring costs are $30,000 per year.

CONTINGENCIES, PRECONSTRUCTION ENGINEERING & DESIGN, AND CONSTRUCTION MANAGEMENT FOR THE SELECTED PLAN

11. Contingencies: The estimated cost for each major subdivision or feature of the recommended project includes an item for "contingencies". The item for "contingencies" is an allowance against some adverse or unanticipated condition not susceptible to exact evaluation from the data at hand but which must be expressed or represented in the cost estimate. The contingency allowances used in the development of the cost estimate for the selected project were estimated as an appropriate percentage using Crystal Ball software for preparing risk analysis. 26.1 percent was applied to all construction work to account for concerns about increases in fuel costs, labor costs and materials and to account for future preconstruction deterioration of the site.

12. Preconstruction Engineering & Design (P, E & D): Preconstruction Engineering and Design costs include local cooperative agreements, environmental and regulatory activities, general design memorandum, preparation of plans and specifications, engineering during construction, A/E liability actions, cost engineering, construction and supply contract award activities, project management, and the development of the PCA. P, E & D costs were estimated as lump sum of $557,750 and is based on similar Corps of Engineers projects of the same magnitude. A contingency factor of 15% is included in the P, E & D costs.

13. Construction Management (S&A): Construction Management costs includes contract administration, review of shop drawings, inspection and quality assurance, project office operation, contractor initiated claims and litigations, and government initiated claims and litigations. S&A related costs were estimated as lump sum of $632,297 and is based on ER415-1-16, Table E-1 using similar Corps of Engineers projects of the same magnitude. A contingency factor of 15% was included in S&A costs.

CONSTRUCTION AND FUNDING SCHEDULE FOR THE SELECTED PLAN

14. General: The construction and project schedules of the selected plan are shown in Tables 2 and 3 of this Engineering Technical Appendix. The schedule is based on the timeliness of the report's approval and allocation of funds by Congress, the foregoing construction procedures, and the ability of local interests to implement the necessary items of local cooperation.

Table 1: Total First Cost - Upper Delaware River Watershed, Livingston Manor, NY							
Selected Plan: Plan J - Widen LBK Floodplain and Stabilize 1-Mile of Stream Upstream of Main Street Bridge							
Price Level: July 2015						Construction Duration: 12 months	
ACCOUNT NUMBER	DESCRIPTION OF ITEM	QUANTITY	UOM	UNIT PRICE	ESTIMATED AMOUNT	CONTIN-GENCY	TOTAL COST
						@ 15%	
01.	Lands and Damages						
01.02	Acquisitions	1	Job	LS	$500,000	$75,000	$575,000
	Total Lands and Damages				$500,000	$75,000	$575,000
02.	Relocations					**@ 26.1%**	
02.A	Floodway Expansion Area						
02.A.01	Roads, Construction Activities						
02.A.01.19	Construct Roadbed to Subgrade						
	Removal and Disposal of Parking Area and Road Pavement	3,282	SF	$6.27	$20,578	$5,371	$25,949
	Sidewalk Replacement	527	SF	$17.61	$9,280	$2,422	$11,703
	Curb Replacement	45	LF	$42.11	$1,895	$495	$2,390
	Repave Street for Drainage Pipe System	340	SF	$14.33	$4,872	$1,272	$6,144
02.A.03	Cemeteries, Utilities and Structures						
02.A.03.18	Utilities						
	Light Pole Relocation	1	Ea	$7,983.00	$7,983	$2,084	$10,067
			Total Relocations		$44,609	$11,643	$56,252
06.	Fish and Wildlife Facilities					**@ 26.1%**	
06.A.03	Wildlife Facilities and Sanctuaries (Floodway						
	Expansion Area Mitigation)						
06.A.03.74	Scrub/Shrub Site Restoration						
	Earthwork for Planting	0.45	Acre	$830.36	$374	$98	$471
	Planting Trees and Shrubs	40	Ea	$1.00	$40	$10	$50
06.B.03	Wildlife Facilities and Sanctuaries (Stream Stability and						
	Sediment Transport Area Mitigation)						
06.B.03.75	Riparian Stream Buffer Site Restoration						
	Earthwork for Planting	20.0	Acre	$4,649.00	$92,980	$24,268	$117,248
	Planting Trees and Shrubs	30,000.0	Ea	$0.98	$29,400	$7,673	$37,073
	Seeding	20.0	Acre	$5,274.00	$105,480	$27,530	$133,010
	Total Fish and Wildlife Facilities				$228,274	$59,579	$287,853
16.	Bank Stabilization					**@ 26.1%**	
16.A	Floodway Expansion Area						
16.A.01	Mobilization, Demob. And Preparatory Work						
16.A.01.01	Mobilization						
	Prime Contractor Mobilization	1	Job	LS	$35,659	$9,307	$44,966
	Site Work Subcontractor Mobilization	1	Job	LS	$17,708	$4,622	$22,330
	Survey Subcontractor Mobilization	1	Job	LS	$1,818	$474	$2,292
16.A.01.02	Preparatory Work						
	Before and After Srveys	2	Day	$3,637.00	$7,274	$1,899	$9,173
	Traffic Control (Flagperson)	1	Job	LS	$30,997	$8,090	$39,087
16.A.31	Earthwork						
16.A.31.02	Site Work						
	Clearing and Grubbing	0.45	Acre	$20,935.00	$9,421	$2,459	$11,880
	Excavation	2,667	CY	$8.73	$23,283	$6,077	$29,360
	Haul Excavated Material To Stream Stability and Sediment						
	Transport Area for Reuse As Deepm Fill Material	2,667	CY	$4.70	$12,535	$3,272	$15,807
	Vehicle Guide Rail	224	LF	$53.32	$11,944	$3,117	$15,061
	6" Topsoil, Imported	2,158	SY	$13.34	$28,788	$7,514	$36,301
	Seeding and Mulching	2,158	SY	$4.85	$10,466	$2,732	$13,198
16.A.81	Riprap Slope Treatment						
16.A.81.02	Site Work						
	Smooth Grading	1,117	CY	$4.48	$5,004	$1,306	$6,310
	Geotextile	1,117	SY	$6.40	$7,149	$1,866	$9,015
	Purchase R6 Riprap	878	CY	$43.05	$37,798	$9,865	$47,663
	Haul Stone (R6 Riprap)	878	CY	$7.52	$6,603	$1,723	$8,326
	Place R6 Riprap	878	CY	$43.88	$38,527	$10,055	$48,582
16.A.86	Storm Utility Drainage Pipe System						
16.A.86.02	Site Work						
	Rehabilitation of Existing Retaining Wall (Shotcrete)	483	SF	$25.22	$12,181	$3,179	$15,361
	Excavation	198	CY	$18.36	$3,635	$949	$4,584
	Concrete Drainage Pipe	77	LF	$956.29	$73,634	$19,219	$92,853
	Pipe Backfill/ Compaction	94	CY	$68.34	$6,424	$1,677	$8,101
	Concrete End Walls and Apron	8.7	CY	$2,393.00	$20,819	$5,434	$26,253
16.A.99	Associated General Items						
16.A.99.03	Care and Diversion of Water						
	Construction Dewatering	5	Day	$1,636.00	$8,180	$2,135	$10,315
16.A.99.04	Soil Erosion and Sediment Control						
	Construct/ Maintain/ Remove Silt Fence	625	LF	$19.05	$11,906	$3,108	$15,014
	Construct/ Remove Hay Bales	20	LF	$32.80	$656	$171	$827
	Subtotal Bank Stabilization - Floodway Expansion Area				$422,409	$110,249	$532,657

Table 1: Total First Cost (Continued)

ACCOUNT NUMBER	DESCRIPTION OF ITEM	QUANTITY	UOM	UNIT PRICE	ESTIMATED AMOUNT	CONTIN-GENCY	TOTAL COST
16.B	Stream Stability and Sediment Transport Area					**@ 26.1%**	
16.B.01	Mobilization, Demob. And Preparatory Work						
16.B.01.01	Demobilization						
	Prime Contractor Demobilization	1	Job	LS	$31,971	$8,344	$40,315
	Site Work Subcontractor Demobilization	1	Job	LS	$17,708	$4,622	$22,330
	Survey Subcontractor Demobilization	1	Job	LS	$1,818	$474	$2,292
16.B.01.02	Preparatory Work						
	Before and After Srveys	4	Day	$3,637.00	$14,548	$3,797	$18,345
	Install 6' High Chain Link Fencing	350	LF	$66.53	$23,286	$6,078	$29,363
	Remove 6' High Chain Link Fencing	350	LF	$12.06	$4,221	$1,102	$5,323
	Construct/ Remove Staging Area	7,500	SF	$6.12	$45,900	$11,980	$57,880
	Construct/ Remove Access Roads	1,438	LF	$119.62	$172,014	$44,896	$216,909
	Install/ Remove Electric Hookup	3	Day	$2,238.00	$6,714	$1,752	$8,466
16.B.31	Earthwork						
16.B.31.02	Site Work						
	Clearing and Grubbing	4.0	Acre	$14,507.00	$58,028	$15,145	$73,173
	Excavate, Proposed Stream	57,155	CY	$7.51	$429,234	$112,030	$541,264
	Excavate, Additional 4' Cut to Remove Knotweed Roots	2,020	CY	$7.11	$14,362	$3,749	$18,111
	Haul, Reused Fill (cut that can be used anywhere on site)	57,155	CY	$4.70	$268,629	$70,112	$338,741
	Haul, Reused Fill (cut from restoration area with knotweed that can only be placed in deep fill areas)	2,020	CY	$4.70	$9,494	$2,478	$11,972
	Backfill/ Compaction of Reused Fill Material	61,722	CY	$11.55	$712,889	$186,064	$898,953
	Toe Wood Structures	3,290	LF	$100.00	$329,000	$85,869	$414,869
	Rock Cross Vanes	2.0	Ea	$10,380.00	$20,760	$5,418	$26,178
	6" Topsoil, Imported	156,314	SY	$12.03	$1,880,457	$490,799	$2,371,257
	Seeding and Mulching	58,080	SY	$4.22	$245,098	$63,970	$309,068
	Erosion Control Mat	2,893	SY	$2.57	$7,435	$1,941	$9,376
16.B.99	Associated General Items						
16.B.99.04	Soil Erosion and Sediment Control						
	Construct/ Maintain/ Remove Silt Fence	6,500	LF	$5.88	$38,220	$9,975	$48,195
	Construct/ Remove Stabilized Construction Entrances	2	Ea	$8,435.00	$16,870	$4,403	$21,273
	Subtotal Bank Stabilization - Stream Stability and Sediment Transport Area				$4,348,655	$1,134,999	$5,483,654
	Total Bank Stabilization				$4,771,063	$1,245,248	$6,016,311
						@ 15%	
30	Planning, Engineering and Design (P, E & D)	1	Job	LS	$485,000	$72,750	$557,750
31	Construction Management (S & A)	1	Job	LS	$549,823	$82,473	$632,297
	Total Project First Cost				$6,578,769	$1,546,693	$8,125,462
	(Rounded)				$6,579,000	$1,547,000	$8,125,000

Table Plan B - Move Ball Field Levee Along the Willowemok Ck. 300 Ft. Landward; the floodplain is not lowered

Construction Duration: 5 mo. Price Level: Jan 12

ACCOUNT NUMBER	DESCRIPTION OF ITEM	QUANTITY	UOM	UNIT PRICE**	ESTIMATED AMOUNT	CONTIN-GENCY	TOTAL COST
01.	Lands and Damages	1	Job	LS	$24,179	$0	$24,179
06.	Fish and Wildlife Facilities						
06.03.	Wildlife Facilities and Sanctuaries						
06.03.73.	Habitat and Feeding Facility						
06.03.73.01	Mob, Demob & Preparatory Work					@ 30%	
	Mobilization and Demobilization	1	Job	LS	$80,000	$24,000	$104,000
	Contractor Staging Area and Removal	1	Job	LS	$30,000	$9,000	$39,000
06.03.73.02	Site Work						
	Clearing and Grubbing, Heavy	0.25	Acre	$37,240	$9,310	$2,793	$12,103
	Clearing and Grubbing, Medium	0.20	Acre	$16,800	$3,360	$1,008	$4,368
	Surveys	38	Day	$2,100	$79,800	$23,940	$103,740
	Soil Erosion and Sediment Control	1	Job	LS	$15,000	$4,500	$19,500
	Stockpile Topsoil, 6" thk.	1,790	CY	$8.40	$15,036	$4,511	$19,547
	Excavation, Remove Levee	3,250	CY	$11.00	$35,750	$10,725	$46,475
	Levee Soil Disposal to Airport Ponds, 1.8 Mile Haul	1,625	CY	$4.00	$6,500	$1,950	$8,450
	Levee Fill, 50% New Material	4,125	CY	$27.60	$113,850	$34,155	$148,005
	Haul, 6 Miles	4,125	CY	$5.10	$21,038	$6,311	$27,349
	Levee Fill, 50% Reused Material	1,625	CY	$8.40	$13,650	$4,095	$17,745
	Compaction	5,750	CY	$3.30	$18,975	$5,693	$24,668
	Place Reused Topsoil, 4" thk.	2.22	Acre	$4,370	$9,701	$2,910	$12,612
	Seed and Mulch	2.22	Acre	$5,320	$11,810	$3,543	$15,354
06.03.73.04	Traffic Control						
	Flag Person for Dump Trucks	264	Hr	$75.00	$19,800	$5,940	$25,740
		Total Fish and Wildlife Facilities			$483,580	$145,074	$628,654
29.	Environmental Monitoring (@ 1%)	1	Job	LS	$4,836	$725	$5,561
30.	Planning, Engineering and Design (P,E & D)	1	Job	LS	$325,000	$48,750	$373,750
31.	Construction Management* (S & A)	1	Job	LS	$155,520	$23,328	$178,848
				Total Project First Cost	$993,115	$217,877	$1,210,993
				(Rounded)	$993,000	$218,000	$1,211,000

Notes:

* Construction management (S & A) based on $100,000 minimum.

** Unit costs based on RS Means 2012, vendor price quotes and historic data.

Table Plan C - Main Street Bridge Widened Without Pier							
Construction Duration: 8 mo.						Price Level: Jan 12	
ACCOUNT NUMBER	DESCRIPTION OF ITEM	QUANTITY	UOM	UNIT PRICE**	ESTIMATED AMOUNT	CONTIN-GENCY	TOTAL COST
01.	Lands and Damages (@ 5%)	1	Job	LS	$108,210	$0	$108,210
06.	Fish and Wildlife Facilities						
06.03.	Wildlife Facilities and Sanctuaries						
06.03.73.	Habitat and Feeding Facility						
06.03.73.01	Mob, Demob & Preparatory Work					@ 30%	
	Mobilization and Demobilization	1	Job	LS	$100,000	$30,000	$130,000
	Contractor Staging Area and Removal	1	Job	LS	$30,000	$9,000	$39,000
06.03.73.02	Site Work						
	Clearing and Grubbing, Medium	0.20	Acre	$16,800	$3,360	$1,008	$4,368
	Surveys	10	Day	$2,100	$21,000	$6,300	$27,300
	Structure Monitoring	3	Ea.	$15,000	$45,000	$13,500	$58,500
	Soil Erosion and Sediment Control	1	Job	LS	$5,000	$1,500	$6,500
	Riprap Protection, R6	55	CY	$85.00	$4,675	$1,403	$6,078
	Place New Topsoil, 4" thk.	0.40	Acre	$21,800	$8,720	$2,616	$11,336
	Seed and Mulch	0.40	Acre	$5,320	$2,128	$638	$2,766
06.03.73.04	Traffic Control						
	Detour Signs, Place and Remove (3 mile detour)	24	Ea.	$197.00	$4,728	$1,418	$6,146
	Maintain Detour	176	Hr	$159.00	$27,984	$8,395	$36,379
	Flag Person for Delivery/Dump Trucks	264	Hr	$70.00	$18,480	$5,544	$24,024
	Coordination With Local Police Department	1	Job	LS	$33,500	$10,050	$43,550
06.03.73.06	Building Demolition - 2 ea.						
	Building DC Demolition, Wood	131,000	CF	$0.43	$56,608	$16,982	$73,590
	Building DC, Transportation and Disposal of Waste	540	Ton	$120.00	$64,800	$19,440	$84,240
	Building US Demolition, Wood	63,000	CF	$0.43	$27,224	$8,167	$35,391
	Building US, Transportation and Disposal of Waste	260	Ton	$120.00	$31,200	$9,360	$40,560
06.03.73.07	Bridge Demolition						
	Bridge Demolition, Concrete	291	CY	$386.00	$112,326	$33,698	$146,024
	Bridge Demolition, Railing	160	LF	$24.00	$3,840	$1,152	$4,992
	Bridge, Transportation and Disposal of Waste	629	Ton	$120.00	$75,480	$22,644	$98,124
	West Abutment Demolition, Concrete (Relocated 20'	137	CY	$194.00	$26,578	$7,973	$34,551
	West Abutment, Transportation and Disposal of Wa	296	Ton	$65.00	$19,240	$5,772	$25,012
	East Abutment Demolition, Concrete						
	(Loading Uncertainties***)	137	CY	$194.00	$26,578	$7,973	$34,551
	East Abutment, Transportation and Disposal						
	of Waste (Loading Uncertainties***)	296	Ton	$65.00	$19,240	$5,772	$25,012
06.03.73.12	New Retaining Walls - 80 LF x 13' high						
	Excavation****	700	CY	$11.30	$7,910	$2,373	$10,283
	Stockpile Reused Backfill	262	CY	$8.40	$2,201	$660	$2,861
	Retaining Walls, Concrete	175	CY	$405.00	$70,875	$21,263	$92,138
	Dewatering and Pumping	20	Day	$1,100	$22,000	$6,600	$28,600
	Embankment Fill, New	1,150	CY	$27.80	$31,970	$9,591	$41,561
	Backfill, 50% New	263	CY	$27.80	$7,311	$2,193	$9,505
	Gravel Drainage Fill	82	CY	$61.70	$5,059	$1,518	$6,577
	Haul, 6 Miles	1,495	CY	$4.80	$7,176	$2,153	$9,329
	Backfill, 50% Reused	262	CY	$7.80	$2,044	$613	$2,657
	Compaction	1,757	CY	$3.00	$5,271	$1,581	$6,852
	Railing	100	LF	$170.00	$17,000	$5,100	$22,100

Table Plan C - Main Street Bridge Widened Without Pier (Continued)

ACCOUNT NUMBER	DESCRIPTION OF ITEM	QUANTITY	UOM	UNIT PRICE**	ESTIMATED AMOUNT	CONTIN-GENCY	TOTAL COST
06.03.73.14	New West Abutment (Relocated 20')						
	Excavation****	680	CY	$11.30	$7,684	$2,305	$9,989
	Stockpile Reused Backfill	135	CY	$8.40	$1,134	$340	$1,474
	Abutment, Concrete	137	CY	$386.00	$52,882	$15,865	$68,747
	Dewatering and Pumping	15	Day	$1,100	$16,500	$4,950	$21,450
	Piles, Timber, 40' Long	1,200	LF	$47.00	$56,400	$16,920	$73,320
	Backfill, 50% New	135	CY	$27.80	$3,753	$1,126	$4,879
	Gravel Drainage Fill	39	CY	$61.70	$2,406	$722	$3,128
	Haul, 6 Miles	174	CY	$4.80	$835	$251	$1,086
	Backfill,50% Reused	135	CY	$7.80	$1,053	$316	$1,369
	Compaction	309	CY	$3.00	$927	$278	$1,205
06.03.73.16	New East Abutment (Loading Uncertainties***)						
	Excavation****	210	CY	$11.30	$2,373	$712	$3,085
	Stockpile Reused Backfill	35	CY	$8.40	$294	$88	$382
	Abutment, Concrete	137	CY	$386.00	$52,882	$15,865	$68,747
	Dewatering and Pumping	15	Day	$1,100	$16,500	$4,950	$21,450
	Piles, Timber, 40' Long	1,200	LF	$47.00	$56,400	$16,920	$73,320
	Backfill, 50% New	35	CY	$27.80	$973	$292	$1,265
	Gravel Drainage Fill	39	CY	$61.70	$2,406	$722	$3,128
	Haul, 6 Miles	74	CY	$4.80	$355	$107	$462
	Backfill, 50% Reused	35	CY	$7.80	$273	$82	$355
	Compaction	109	CY	$3.00	$327	$98	$425
06.03.73.18	New Bridge Span (80' Length)						
	Bridge Beams, Concrete (3.5' Deep)	415	CY	$1,497.00	$621,255	$186,377	$807,632
	Bridge Deck, Concrete (1.6' Thick)	175	CY	$1,034.00	$180,950	$54,285	$235,235
	Bridge Railing, Aluminum	220	LF	$189.00	$41,580	$12,474	$54,054
	Bridge Signs, Welcome and Directions	2	Ea.	$162.00	$324	$97	$421
06.03.73.99	Utilities						
	Overhead Electrical Temporary Relocation	1	Job	LS	$50,000	$15,000	$65,000
	Sewer Pipe Temporary Relocation	1	Job	LS	$20,000	$6,000	$26,000
	Sewer Pipe, 12" Dia., Cast Iron, Extra Heavy	85	LF	$252.00	$21,420	$6,426	$27,846
	Storm Water Pipe, 24" Dia., 14 ga., Corrugated	100	LF	$58.00	$5,800	$1,740	$7,540
	Total Fish and Wildlife Facilities				$2,164,192	$649,258	$2,813,450
29.	Environmental Monitoring (@ 1%)	1	Job	LS	$21,642	$3,246	$24,888
30.	Planning, Engineering and Design (P,E & D)	1	Job	LS	$400,000	$60,000	$460,000
31.	Construction Management* (@ 11.78%) (S & A)	1	Job	LS	$254,942	$38,241	$293,183
	Total Project First Cost				$2,948,986	$750,745	$3,699,731
	(Rounded)				$2,949,000	$751,000	$3,700,000

Notes:

* Construction management (S & A) based on percentages in ER 415-1-16 Table E-1, Performance Bands for Civil Works Construction Supervision and Administration Costs

** Unit costs based on RS Means 2012, vendor price quotes and historic data.

*** Costs for new east abutment (and demo of existing) have been included due to loading uncertainty from additional 20 foot bridge span increase.

**** Excavation costs include soil excavation only (no bedrock or boulders).

Table Plan D - Widen LBK Floodplain Below Main Street Bridge (Plan H); and Main Street Bridge Widened Without Pier (Plan C)

Construction Duration: 12 mo. Price Level: Jan 12

ACCOUNT NUMBER	DESCRIPTION OF ITEM	QUANTITY	UOM	UNIT PRICE**	ESTIMATED AMOUNT	CONTIN-GENCY	TOTAL COST
Widen LBK Floodplain Below Main Street Bridge (Plan H)					$529,000	$128,000	$657,000
Main Street Bridge Widened Without Pier (Plan C)					$2,949,000	$751,000	$3,700,000
	Total Project First Cost (Rounded)				$3,478,000	$879,000	$4,357,000

Table Plan E - Widen LBK Floodplain Below Main Street Bridge (Plan H); Main Street Bridge Widened Without Pier (Plan C); and Ball Field Levee 50 Ft Relocation and Floodplain Lowering

Construction Duration: 16 mo. — Price Level: Jan 12

ACCOUNT NUMBER	DESCRIPTION OF ITEM	QUANTITY	UOM	UNIT PRICE**	ESTIMATED AMOUNT	CONTIN-GENCY	TOTAL COST
Widen LBK Floodplain Below Main Street Bridge (Plan H)					$529,000	$128,000	$657,000
Main Street Bridge Widened Without Pier (Plan C)					$2,949,000	$751,000	$3,700,000
Ball Field Levee 50 Ft Relocation and Floodplain Lowering							
Construction Duration: 5 mo.							
01.	Lands and Damages	1	Job	LS	$27,147	$0	$27,147
06.	Fish and Wildlife Facilities						
06.03.	Wildlife Facilities and Sanctuaries						
06.03.73.	Habitat and Feeding Facility						
06.03.73.01	Mob, Demob & Preparatory Work					@ 30%	
	Mobilization and Demobilization	1	Job	LS	$70,000	$21,000	$91,000
	Contractor Staging Area and Removal	1	Job	LS	$30,000	$9,000	$39,000
06.03.73.02	Site Work						
	Clearing and Grubbing, Heavy	0.25	Acre	$37,240	$9,310	$2,793	$12,103
	Clearing and Grubbing, Medium	0.20	Acre	$16,800	$3,360	$1,008	$4,368
	Surveys	38	Day	$2,100	$79,800	$23,940	$103,740
	Soil Erosion and Sediment Control	1	Job	LS	$15,000	$4,500	$19,500
	Stockpile Topsoil, 6" thk.	1,975	CY	$8.40	$16,590	$4,977	$21,567
	Excavation, Floodplain***	3,550	CY	$11.00	$39,050	$11,715	$50,765
	Stockpile Reused Backfill	1,625	CY	$8.40	$13,650	$4,095	$17,745
	Floodplain Soil Disposal to Airport Ponds,						
	1.8-Mile Haul	3,550	CY	$4.00	$14,200	$4,260	$18,460
	Excavation, Remove Levee	3,250	CY	$11.00	$35,750	$10,725	$46,475
	Levee Soil Disposal to Airport Ponds, 1.8 Mile Haul	1,625	CY	$4.00	$6,500	$1,950	$8,450
	Levee Fill, 50% New Material	4,125	CY	$27.60	$113,850	$34,155	$148,005
	Haul, 6 Miles	4,125	CY	$5.10	$21,038	$6,311	$27,349
	Levee Fill, 50% Reused Material	1,625	CY	$8.40	$13,650	$4,095	$17,745
	Compaction	5,750	CY	$3.30	$18,975	$5,693	$24,668
	Place Reused Topsoil, 4" thk.	2.45	Acre	$4,370	$10,707	$3,212	$13,918
	Seed and Mulch	2.45	Acre	$5,320	$13,034	$3,910	$16,944
06.03.73.04	Traffic Control						
	Flag Person for Dump Trucks	264	Hr	$70.00	$18,480	$5,544	$24,024
Total Fish and Wildlife Facilities for Ball Field Levee 50 Ft Relocation and Floodplain Lowering					$542,943	$162,883	$705,826
29.	Environmental Monitoring (@ 1%)	1	Job	LS	$5,429	$814	$6,244
30.	Planning, Engineering and Design (P,E & D)	1	Job	LS	$250,000	$37,500	$287,500
31.	Construction Management* (S & A)	1	Job	LS	$86,957	$13,043	$100,000
	Total First Cost for Ball Field Levee 50 Ft Relocation and Floodplain Lowering				$912,476	$214,241	$1,126,717
				(Rounded)	$912,000	$214,000	$1,127,000
	Total Project First Cost (Rounded)				$4,390,000	$ 1,093,000	$5,484,000

Notes:

* Construction management (S & A) based on $100,000 minimum.

** Unit costs based on RS Means 2012, vendor price quotes and historic data.

*** Excavation costs include soil excavation only (no bedrock or boulders).

Table Plan F - Fulton Plan: Detention Structure With Open Channel Constriction; existing channel

Construction Duration: 8 mo. Price Level: Jan 12

ACCOUNT NUMBER	DESCRIPTION OF ITEM	QUANTITY	UOM	UNIT PRICE**	ESTIMATED AMOUNT	CONTIN-GENCY	TOTAL COST
01.	Lands and Damages	1	Job	LS	$96,553	$0	$96,553
06.	Fish and Wildlife Facilities						
06.03.	Wildlife Facilities and Sanctuaries						
06.03.73.	Habitat and Feeding Facility						
06.03.73.01	Mob, Demob & Preparatory Work					@ 30%	
	Mobilization and Demobilization	1	Job	LS	$70,000	$21,000	$91,000
	Contractor Staging Area and Removal	1	Job	LS	$30,000	$9,000	$39,000
06.03.73.02	Site Work						
	Clearing and Grubbing, Heavy	0.34	Acre	$37,240	$12,662	$3,798	$16,460
	Clearing and Grubbing, Medium	2.21	Acre	$16,800	$37,128	$11,138	$48,266
	Clearing and Grubbing, Light	4.41	Acre	$9,520	$41,983	$12,595	$54,578
	Clearing and Grubbing, Wetland Area	9.00	Acre	$9,520	$85,680	$25,704	$111,384
	Surveys	75	Day	$2,100	$157,500	$47,250	$204,750
	Soil Erosion and Sediment Control	1	Job	LS	$20,000	$6,000	$26,000
	Stockpile Topsoil (all areas except wetlands), 6" thk.	5,620	CY	$8.40	$47,208	$14,162	$61,370
	Stockpile Wetland Topsoil, 4" thk.	4,840	CY	$8.40	$40,656	$12,197	$52,853
	Excavation, Wetland***	43,560	CY	$11.00	$479,160	$143,748	$622,908
	Embankment Fill, 0% New Material	0	CY	$27.60	$0	$0	$0
	Haul, 6 Miles	0	CY	$5.10	$0	$0	$0
	Embankment Fill, 100% Reused Material	33,520	CY	$8.40	$281,568	$84,470	$366,038
	Compaction	33,520	CY	$3.30	$110,616	$33,185	$143,801
	Wetland Excess Soil Disposal to ????, 1.8 Mile Haul	10,040	CY	$4.00	$40,160	$12,048	$52,208
	Riprap Protection, R7	620	CY	$91.00	$56,420	$16,926	$73,346
	Jute Mesh Erosion Control Mat, Exterior						
	Slopes Only	23,750	SY	$2.50	$59,375	$17,813	$77,188
	Place Reused Topsoil, (all areas except wetlands), 4" thk.	8.02	Acre	$4,370	$35,047	$10,514	$45,562
	Place Reused Topsoil (wetlands), 3" thk.	9.00	Acre	$4,370	$39,330	$11,799	$51,129
	Seed and Mulch (all areas except wetlands)	8.02	Acre	$5,320	$42,666	$12,800	$55,466
	Wetland Planting and Seeding	9.00	Acre	$22,700	$204,300	$61,290	$265,590
06.03.73.04	Traffic Control						
	Flag Person for Dump Trucks	528	Hr	$75.00	$39,600	$11,880	$51,480
		Total Fish and Wildlife Facilities			$1,931,060	$579,318	$2,510,377
29.	Environmental Monitoring (@ 1%)	1	Job	LS	$19,311	$2,897	$22,207
30.	Planning, Engineering and Design (P,E & D)	1	Job	LS	$250,000	$37,500	$287,500
31.	Construction Management* (@ 12.22%) (S & A)	1	Job	LS	$235,975	$35,396	$271,372
		Total Project First Cost			$2,532,899	$655,111	$3,188,009
				(Rounded)	$2,533,000	$655,000	$3,188,000

Notes:

* Construction management (S & A) based on percentages in ER 415-1-16 Table E-1, Performance Bands for Civil Works Construction Supervision and Administration Costs

** Unit costs based on RS Means 2012, vendor price quotes and historic data.

*** Excavation costs include soil excavation only (no bedrock or boulders)

Table Plan G - Fulton Plan: Detention Structure With Open Channel Constriction; existing channel (Plan F); and Widen LBK Floodplain Below Main Street Bridge (Plan H)

Construction Duration: 12 mo. Price Level: Jan 12

ACCOUNT NUMBER	DESCRIPTION OF ITEM	QUANTITY	UOM	UNIT PRICE**	ESTIMATED AMOUNT	CONTIN-GENCY	TOTAL COST
Fulton Plan: Detention Structure With Open Channel Constriction; existing channel (Plan F)					$2,533,000	$655,000	$3,188,000
Widen LBK Floodplain Below Main Street Bridge (Plan H)					$529,000	$128,000	$657,000
	Total Project First Cost (Rounded)				$3,062,000	$783,000	$3,845,000

Table Plan H - Widen LBK Floodplain Below Existing Main Street Brige

Construction Duration: 4 mo. — Price Level: Jan 12

ACCOUNT NUMBER	DESCRIPTION OF ITEM	QUANTITY	UOM	UNIT PRICE**	ESTIMATED AMOUNT	CONTIN-GENCY	TOTAL COST
01.	Lands and Damages	1	Job	LS	$12,002	$0	$12,002
06.	Fish and Wildlife Facilities						
06.03.	Wildlife Facilities and Sanctuaries						
06.03.73.	Habitat and Feeding Facility						
06.03.73.01	Mob, Demob & Preparatory Work					@ 30%	
	Mobilization and Demobilization	1	Job	LS	$50,000	$15,000	$65,000
	Contractor Staging Area and Removal	1	Job	LS	$30,000	$9,000	$39,000
06.03.73.02	Site Work						
	Clearing and Grubbing, Heavy	0.45	Acre	$37,240	$16,758	$5,027	$21,785
	Clearing and Grubbing, Light	0.15	Acre	$9,520	$1,428	$428	$1,856
	Surveys	10	Day	$2,100	$21,000	$6,300	$27,300
	Soil Erosion and Sediment Control	1	Job	LS	$12,000	$3,600	$15,600
	Stockpile Topsoil, 6" thk.	480	CY	$8.40	$4,032	$1,210	$5,242
	Remove Parking Area Pavement	2,380	SF	$0.88	$2,094	$628	$2,723
	Pavement, Transportation and Disposal of Waste	16	Ton	$129.00	$2,064	$619	$2,683
	Excavation****	2,850	CY	$11.00	$31,350	$9,405	$40,755
	Soil Disposal to Airport Ponds, 1-Mile Haul***	2,850	CY	$3.60	$10,260	$3,078	$13,338
	Riprap Protection, R6	25	CY	$115.00	$2,875	$863	$3,738
	Railing	150	LF	$220.00	$33,000	$9,900	$42,900
	Place Reused Topsoil, 4" thk.	0.60	Acre	$4,370	$2,622	$787	$3,409
	Seed and Mulch	0.60	Acre	$5,320	$3,192	$958	$4,150
	Planting, Trees, 5 gal., 10' spacing	53	Ea	$141.00	$7,473	$2,242	$9,715
06.03.73.04	Traffic Control						
	Flag Person for Dump Trucks	132	Hr	$75.00	$9,900	$2,970	$12,870
		Total Fish and Wildlife Facilities			$240,048	$72,015	$312,063
						@ 15%	
29.	Environmental Monitoring (@ 1%)	1	Job	LS	$2,400	$360	$2,761
30.	Planning, Engineering and Design (P,E & D)	1	Job	LS	$200,000	$30,000	$230,000
31.	Construction Management* (S & A)	1	Job	LS	$86,957	$13,043	$100,000
				Total Project First Cost	$541,408	$115,418	$656,826
				(Rounded)	$541,000	$115,000	$657,000

Notes:

* Construction management (S & A) based on $100,000 minimum.

** Unit costs based on RS Means 2012, vendor price quotes and historic data.

*** Soil disposal to airport ponds includes gravel from parking area.

**** Excavation costs include soil excavation only (no bedrock or boulders)

Table Plan I - Widen LBK Floodplain Below Main Street Bridge (Plan H); and Ball Field Levee 50 Ft Relocation and Floodplain Lowering

Construction Duration: 9 mo. — Price Level: Jan 12

ACCOUNT NUMBER	DESCRIPTION OF ITEM	QUANTITY	UOM	UNIT PRICE**	ESTIMATED AMOUNT	CONTIN-GENCY	TOTAL COST
Widen LBK Floodplain Below Main Street Bridge (Plan H)					$529,000	$128,000	$657,000
Ball Field Levee 50 Ft Relocation and Floodplain Lowering							
Construction Duration: 5 mo.							
01.	Lands and Damages	1	Job	LS	$27,147	$0	$27,147
06.	Fish and Wildlife Facilities						
06.03.	Wildlife Facilities and Sanctuaries						
06.03.73.	Habitat and Feeding Facility						
06.03.73.01	Mob, Demob & Preparatory Work					@ 30%	
	Mobilization and Demobilization	1	Job	LS	$70,000	$21,000	$91,000
	Contractor Staging Area and Removal	1	Job	LS	$30,000	$9,000	$39,000
06.03.73.02	Site Work						
	Clearing and Grubbing, Heavy	0.25	Acre	$37,240	$9,310	$2,793	$12,103
	Clearing and Grubbing, Medium	0.20	Acre	$16,800	$3,360	$1,008	$4,368
	Surveys	38	Day	$2,100	$79,800	$23,940	$103,740
	Soil Erosion and Sediment Control	1	Job	LS	$15,000	$4,500	$19,500
	Stockpile Topsoil, 6" thk.	1,975	CY	$8.40	$16,590	$4,977	$21,567
	Excavation, Floodplain***	3,550	CY	$11.00	$39,050	$11,715	$50,765
	Stockpile Reused Backfill	1,625	CY	$8.40	$13,650	$4,095	$17,745
	Floodplain Soil Disposal to Airport Ponds,						
	1.8-Mile Haul	3,550	CY	$4.00	$14,200	$4,260	$18,460
	Excavation, Remove Levee	3,250	CY	$11.00	$35,750	$10,725	$46,475
	Levee Soil Disposal to Airport Ponds, 1.8 Mile Haul	1,625	CY	$4.00	$6,500	$1,950	$8,450
	Levee Fill, 50% New Material	4,125	CY	$27.60	$113,850	$34,155	$148,005
	Haul, 6 Miles	4,125	CY	$5.10	$21,038	$6,311	$27,349
	Levee Fill, 50% Reused Material	1,625	CY	$8.40	$13,650	$4,095	$17,745
	Compaction	5,750	CY	$3.30	$18,975	$5,693	$24,668
	Place Reused Topsoil, 4" thk.	2.45	Acre	$4,370	$10,707	$3,212	$13,918
	Seed and Mulch	2.45	Acre	$5,320	$13,034	$3,910	$16,944
06.03.73.04	Traffic Control						
	Flag Person for Dump Trucks	264	Hr	$70.00	$18,480	$5,544	$24,024
Total Fish and Wildlife Facilities for Ball Field Levee 50 Ft Relocation and Floodplain Lowering					$542,943	$162,883	$705,826
						@ 15%	
29.	Environmental Monitoring (@ 1%)	1	Job	LS	$5,429	$814	$6,244
30.	Planning, Engineering and Design (P,E & D)	1	Job	LS	$250,000	$37,500	$287,500
31.	Construction Management* (S & A)	1	Job	LS	$86,957	$13,043	$100,000
Total First Cost for Ball Field Levee 50 Ft Relocation and Floodplain Lowering					$912,476	$214,241	$1,126,717
				(Rounded)	$912,000	$214,000	$1,127,000
Total Project First Cost (Rounded)					$ 1,441,000	$ 342,000	$ 1,784,000

Notes:

* Construction management (S & A) based on $100,000 minimum.

** Unit costs based on RS Means 2012, vendor price quotes and historic data.

*** Excavation costs include soil excavation only (no bedrock or boulders).

Table 2 - Construction Schedule

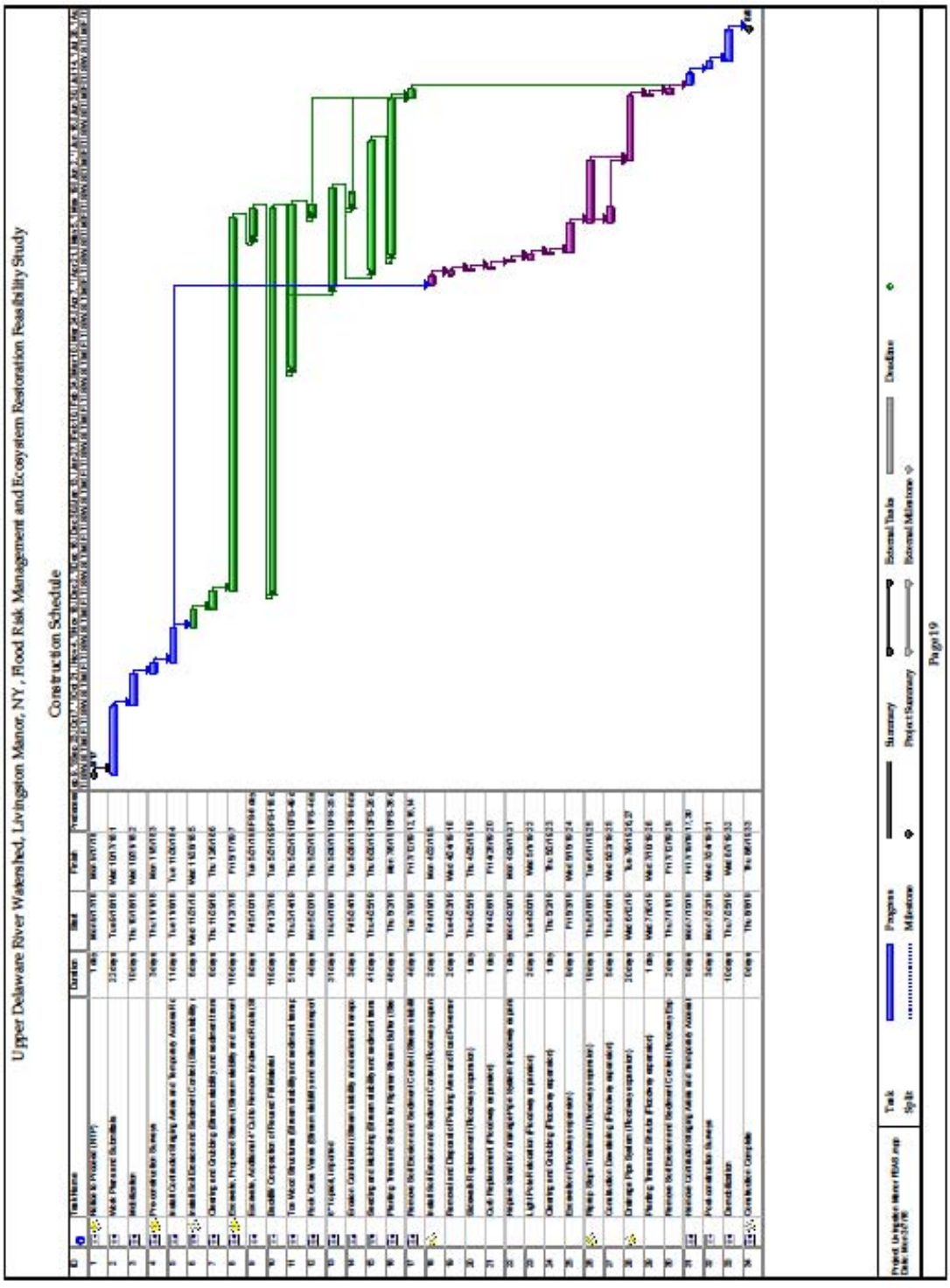

Table 3: Project Schedule

Activity ID	Type of Funds	Activity Name	Pr…..	Date
128021 Livingston Manor, NY				
128021 CW Standard Civil Works Project				
FEAS2680		Complete Feasibility Report		September 2016
FEAS2720		Award Contract		September 2017

MII PRINTOUT OF SELECTED PLAN

PLAN J – WIDEN LBK FLOODPLAIN AND STABILIZE
1-MILE OF STREAM UPSTREAM OF MAIN STREET BRIDGE

LM FEAS-SelectedPlan♥v4-2

Upper Delaware River Watershed,
Livingston Manor, NY
Flood Risk Management and Ecosystem
Restoration Feasibility Study

Selected Plan: Plan J - Widen LBK Floodplain and Stabilize 1-Mile of Stream Upstream of Main Street Bridge

Estimated by	Cost Engineering Section, EC-EE
Designed by	EC-EC, Alyssa Dunlap
Prepared by	William Welk
Preparation Date	3/8/2016
Effective Date of Pricing	7/28/2015
Estimated Construction Time	365 Days

Designed by
EC-EC, Alyssa Dunlap
Estimated by
Cost Engineering Section, EC-EE
Prepared by
William Welk

Design Document	30% Design
Document Date	12/4/2015
District	Philadelphia District
Contact	William Welk
Budget Year	2017
UOM System	Original

Direct Costs
LaborCost
EQCost
MatlCost
SubBidCost
Lump Sum

Timeline/Currency

Preparation Date	3/8/2016
Escalation Date	3/8/2016
Eff. Pricing Date	7/28/2015
Estimated Duration	365 Day(s)
Currency	US dollars
Exchange Rate	1.000000

Costbook CB12EB-b: MII English Cost Book 2012-b

Labor Region 1: Labor Region 1 -2014

Labor Rates
LaborCost1
LaborCost2
LaborCost3
LaborCost4

Equipment EP14R01: MII Equipment 2014 Region 01

01 NORTHEAST

Sales Tax	4.00
Working Hours per Year	1,360
Labor Adjustment Factor	1.15
Cost of Money	2.13
Cost of Money Discount	25.00
Tire Recap Cost Factor	1.50
Tire Recap Wear Factor	1.80
Tire Repair Factor	0.15
Equipment Cost Factor	1.00
Standby Depreciation Factor	0.50

Fuel

Electricity	0.190
Gas	2.800
Diesel Off-Road	2.610
Diesel On-Road	3.070

Shipping Rates

Over 0 CWT	19.34
Over 240 CWT	17.80
Over 300 CWT	15.56
Over 400 CWT	13.43
Over 500 CWT	6.79
Over 700 CWT	6.79
Over 800 CWT	11.41

Currency in US dollars

Date	Author	Note
8/25/2009	Bill Welk	1. Prepared by the U.S. Army Corps of Engineers, Philadelphia District, Wanamaker Building, 100 Penn Square East, Philadelphia, PA 19107-3391.
7/28/2015		2. SUMMARY OF WORK: Work includes, but is not limited to -
7/28/2015		a) Floodway Expansion: Widening of the Little Beaver Kill floodplain below the Main Street Bridge in Livingston Manor by constructing a 4-foot by 10-foot culvert.
7/28/2015		b) Stream Stability and Sediment Transport:: The project will lower the water surface elevation in the downtown area durinng storms below the COE 10% Floodplain (10-year storm). The selected plan will provide stabilization of a one mile reach of stream to allow for appropriate sediment transport in the stream through the downtown area, which is necessary to avoid sediment build up in the stream downtown and subsequent flooding from that. A 75 -foot riparian buffer on either side of the stream channel at the old airport site will be created to provide long term stream stability.
7/28/2015		3. Construction schedule:
7/28/2015		- Report completion (Program Year) - September 2016
7/28/2015		- Estimated start of construction - September 2017
7/28/2015		- Mid-point of construction - April 2018 based on 12-month construction duration.
7/28/2015		4. Used Sullivan County, NY labor rates, General Decision Number NY150007, Mod. No. 8 dated 06/26/15.
7/28/2015		5. Real estate costs (project feature 01) provided by CENAB-RE.
7/28/2015		6. P,E&D costs (project feature 30) and S&A costs (project feature 31) provided by PL-PB.
7/28/2015		7. Price level: July 2015
7/28/2015		8. Contingencies are based on Crystal Ball software for preparing risk analysis and are:
7/28/2015		- Initial construction work - 26.1%;
7/28/2015		- Real estate costs - 15%
7/28/2015		- S&A and P,E&D - 15%
7/28/2015	∞	9. Critical assumptions:
7/28/2015		a) There will be seasonal in-water environmental construction windows during trout spawning season.
7/28/2015		b) Construction duration is 12 months including one month for work plans and submittals review.
7/28/2015		c) Material costs include 4% State sales tax.
7/28/2015		d) A permit will be obtained to do work in the stream for the stream stability and sediment transport area.
7/28/2015		e) Work in the floodway expansion area will be done in the dry.
7/28/2015		f) Buried water line utility in the stream stability and sediment transport area will be relocated by the Sponsor prior to construction.

Labor ID: Region 1 EQ ID: EP14R01 Currency in US dollars TRACES MII Version 4.2

Date	Author	Note
7/28/2015		g) Sewer line utility attached to bottom of Main St. bridge will be relocated by the Sponsor prior to construction.
7/28/2015		h) Access roads and staging areas will be temporary.
7/28/2015		i) There will be no severe weather events during construction.
7/28/2015		j) Excavated material will not be contaminated.
7/28/2015		k) Sponsor and support by others (TNC, Catskill Invasive Species Management and local support) will be provided in-kind for detailed wetland and riparian design and planting plan.
7/28/2015		l) Vegetation plantings will be secured through the State nursery if possible.
7/28/2015		m) Enough funding will be obtained to complete work on the two areas under the same contract.
7/28/2015		n) Prime contractor will be local, within a 150 mile radius, and no travel and per diem costs have been included.
7/28/2015		o) Areas with invasive plant species (Japanese Knotweed) will need to be excavated 4-feet deep to remove the root system.
7/28/2015		p) Work will take place 5 days a week working 8-hour days.
7/28/2015		q) Trees for toe wood structures will be obtained from off site.
7/28/2015		r) This feasibility study will be converted to a CAP Section 205 study.
7/28/2015		s) Readily available, land-based construction equipment will do the work.
7/28/2015		t) Construction access will be via local streets.
7/28/2015		u) Mob and demob costs are based on construction equipment located within 150 miles from the project site.
7/28/2015		v) This job will be awarded 8a small business (sole source) since it is an earthwork job.
7/28/2015		w) Earthwork will be done by the prime contractor and all other work will be done by subcontractors.
7/28/2015		10. Used R.S. Means, MII Cost Book, price quotes and historic data for material costs as noted.

Labor ID: Region 1 EQ ID: EP14R01 Currency in US dollars TRACES MII Version 4.2

Direct Cost Markups

Category

Productivity

Overtime

	Days/Week	Hours/Shift	Shifts/Day
Standard	5.00	8.00	1.00
Actual	5.00	8.00	1.00

Day	OT Factor	Working
Monday	1.50	Yes
Tuesday	1.50	Yes
Wednesday	1.50	Yes
Thursday	1.50	Yes
Friday	1.50	Yes
Saturday	1.50	No
Sunday	2.00	No

Sales Tax

MatlCost

Method

Productivity

Overtime

1st Shift	2nd Shift	3rd Shift
8.00	0.00	0.00
8.00	0.00	0.00

OT Percent	FCCM Percent
0.00	0.00

TaxAdj

Running % on Selected Costs

Contractor Markups

Category

JOOH Calc (Small Tools) — JOOH

JOOH Calc (Small Tools) — JOOH

JOOH Calc — JOOH

JOOH % — JOOH

HOOH — HOOH

Profit % — Profit

Profit PWG — Profit

Guideline	Value
Risk	0.095
Difficulty	0.090
Size	0.040
Period	0.064
Invest (Contractor's)	0.090
Assist (Assistance by)	0.120
SubContracting	0.085
Total	

Bond — Bond

Method

% of Labor

% of Labor

JOOH (Calculated)

Running %

Running %

Running %

Profit Weighted Guidelines

Weight	Percentage
20	1.90
15	1.35
15	0.60
15	0.96
5	0.45
5	0.60
25	2.13
100	7.98

Running %

Owner Markups

Category

Escalation

StartDate	StartIndex	EndDate
12/16/2004	0.00	12/16/2004

Method

Escalation

EndIndex	Escalation
0.00	0.00

Labor ID: Region 1 EQ ID: EP14R01 Currency in US dollars TRACES MII Version 4.2

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Contractor Markups Report

[5] LM FEAS-SelectedPlanâ™¥v4-2

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Prime Contractor

Markup	Own Work	Sub Work
JOOH Calc (Small Tools) [Small Tools]	0.00%	0.00%
JOOH Calc (Small Tools) [Small Tools]	2.00%	0.00%
JOOH Calc [JOOH]	19.91%	19.91%
HOOH [Running %]	10.00%	10.00%
Profit PWG [Profit]	7.98%	7.98%

Desc	Value	Weight	Percentage
Risk	0.095	20	1.90%
Difficulty	0.09	15	1.35%
Size	0.04	15	0.60%
Period	0.064	15	0.96%
Invest (Contractor's)	0.09	5	0.45%
Assist (Assistance by)	0.12	5	0.60%
SubContracting	0.085	25	2.13%
Total		100	7.99%

Bond [Running %]	2.50%	2.50%

Site Work Sub

Markup	Own Work	Sub Work
JOOH % [Running %]	10.00%	10.00%
HOOH [Running %]	8.00%	8.00%
Profit % [Running %]	8.50%	8.50%
Bond [Running %]	0.00%	0.00%

Survey Sub

Markup	Own Work	Sub Work

JOOH [Running %]	10.00%	10.00%
HOOH [Running %]	8.00%	8.00%
Profit % [Running %]	8.50%	8.50%
Bond [Running %]	0.00%	0.00%

Electrical Sub

Markup	Own Work	Sub Work
JOOH % [Running %]	10.00%	10.00%
HOOH [Running %]	8.00%	8.00%
Profit % [Running %]	9.00%	9.00%
Bond [Running %]	0.00%	0.00%

Concrete Sub

Markup	Own Work	Sub Work
JOOH % [Running %]	10.00%	10.00%
HOOH [Running %]	8.00%	8.00%
Profit % [Running %]	8.75%	8.75%
Bond [Running %]	0.00%	0.00%

Prime Contractor - No markups

Markup	Own Work	Sub Work
JOOH % [Running %]	0.00%	0.00%
HOOH [Running %]	0.00%	0.00%
Profit % [Running %]	0.00%	0.00%
Bond [Running %]	0.00%	0.00%

Description	Quantity	UOM	ContractCost	Escalation	Contingency	SIOH	ProjectCost
Project Cost Summary			6,578,769	0	0	0	6,578,769
Selected Plan Costs - Floodway Expansion Area & Stream Stability and Sediment Transport Area (w/o wetlands)	1.0	LS	6,578,769	0	0	0	6,578,769
01. Lands and Damages	1.0	LS	500,000	0	0	0	500,000
01.02. Acquisitions	1.0	LS	500,000	0	0	0	500,000
01.02.02. By Local Sponsor	1.0	LS	500,000	0	0	0	500,000
01.02.02.01. Acquisitions	1.0	LS	500,000	0	0	0	500,000
02. Relocations	1.0	LS	44,615	0	0	0	44,615
02.A. Floodway Expansion Area	1.0	LS	44,615	0	0	0	44,615
02.A.01. Roads, Construction Activities	1.0	LS	36,631	0	0	0	36,631
02.A.01.19 Construct Roadbed to Subgrade	1.0	LS	36,631	0	0	0	36,631
02.A.03. Cemeteries, Utilities and Structures	1.0	LS	7,983	0	0	0	7,983
02.A.03.18 Utilities	1.0	LS	7,983	0	0	0	7,983
06. Fish and Wildlife Facilities	1.0	LS	228,271	0	0	0	228,271
06.A.03 Floodplain Planting (Floodway Expansion Area Mitigation)	1.0	LS	455	0	0	0	455
06.A.03.74 Scrub/Shrub Site Restoration	0.5	ACR	*910.60* 455	0	0	0	*910.60* 455
Earthwork for Planting▼	0.5	ACR	*830.36* 415	0	0	0	*830.36* 415
Planting Trees and Shrubs▼	40.0	EA	*1.00* 40	0	0	0	*1.00* 40
06.B.03 Floodplain Planting (Stream Stability and Sediment Transport Area Mitigation)	1.0	LS	227,816	0	0	0	227,816
06.B.03.75 Riparian Stream Buffer Site Restoration	20.0	ACR	*11,390.78* 227,816	0	0	0	*11,390.78* 227,816
Work Plans & Submittals▼	1.0	EA	*1.32-* 1-	0	0	0	*1.32-* 1-

Labor ID: Region 1 EQ ID: EP14R01 Currency in US dollars TRACES MII Version 4.2

Description	Quantity	UOM	ContractCost	Escalation	Contingency	SIOH	ProjectCost
			4,648.96				*4,648.96*
Earthwork for Planting▼	20.0	ACR	92,979	0	0	0	92,979
			0.98				*0.98*
Planting Trees and Shrubs▼	30,000.0	EA	29,355	0	0	0	29,355
			5,274.14				*5,274.14*
Seeding▼	20.0	ACR	105,483	0	0	0	105,483
16. Bank Stabilization	1.0	LS	4,771,061	0	0	0	4,771,061
16.A. Floodway Expansion Area	1.0	LS	422,425	0	0	0	422,425
16.A.01. Mobilization, Demobilization and Preparatory Work	1.0	LS	93,457	0	0	0	93,457
16.A.01.01 Mobilization	1.0	LS	55,186	0	0	0	55,186
16.A.01.02 Preparatory Work	1.0	LS	38,271	0	0	0	38,271
16.A.31. Earthwork	1.0	LS	96,463	0	0	0	96,463
16.A.31.02. Site Work	1.0	LS	96,463	0	0	0	96,463
			63.68				*63.68*
16.A.81. Riprap Slope Treatment	1,493.0	TON	95,069	0	0	0	95,069
16.A.81.02 Site Work	1.0	LS	95,069	0	0	0	95,069
			1,515.47				*1,515.47*
16.A.86 Storm Utility Drainage Pipe System	77.0	LF	116,691	0	0	0	116,691
16.A.86.02 Site Work	1.0	LS	116,691	0	0	0	116,691
16.A.99. Associated General Items	1.0	LS	20,744	0	0	0	20,744
16.A.99.03 Care and Diversion of Water	1.0	LS	8,181	0	0	0	8,181
16.A.99.04 Soil Erosion and Sediment Control	1.0	LS	12,563	0	0	0	12,563
16.B. Stream Stability and Sediment Transport Area	1.0	LS	4,348,582	0	0	0	4,348,582
16.B.01. Mobilization, Demobilization and Preparatory Work	1.0	LS	318,170	0	0	0	318,170
16.B.01.01 Demobilization	1.0	LS	51,498	0	0	0	51,498
16.B.01.02 Preparatory Work	1.0	LS	266,673	0	0	0	266,673
16.B.31. Earthwork	1.0	LS	3,975,351	0	0	0	3,975,351

Labor ID: Region 1 EQ ID: EP14R01 Currency in US dollars TRACES MII Version 4.2

Description	Quantity	UOM	ContractCost	Escalation	Contingency	SIOH	ProjectCost
16.B.31.02 Site Work	1.0	LS	3,975,351	0	0	0	3,975,351
16.B.99. Associated General Items	1.0	LS	55,060	0	0	0	55,060
16.B.99.04 Soil Erosion and Sediment Control	1.0	LS	55,060	0	0	0	55,060
30. Planning, Engineering and Design (P, E & D)	1.0	LS	485,000	0	0	0	485,000
P, E & D	1.0	LS	485,000	0	0	0	485,000
P, E & D	1.0	LS	485,000	0	0	0	485,000
P, E & D	1.0	LS	485,000	0	0	0	485,000
31. Construction Management (S & A)	1.0	LS	549,823	0	0	0	549,823
S & A	1.0	LS	549,823	0	0	0	549,823
S & A	1.0	LS	549,823	0	0	0	549,823
S & A	1.0	LS	549,823	0	0	0	549,823

Labor ID: Region 1 EQ ID: EP14R01 Currency in US dollars TRACES MII Version 4.2

Description	Quantity	UOM	DirectCost	SubCMU	CostToPrime	PrimeCMU	ContractCost
Project Indirect Summary			**4,664,085**	**429,491**	**5,093,521**	**1,485,194**	**6,578,769**
Selected Plan Costs - Floodway Expansion Area & Stream Stability and Sediment Transport Area (w/o wetlands)	**1.0**	**LS**	**4,664,085**	**429,491**	**5,093,521**	**1,485,194**	**6,578,769**
01. Lands and Damages	**1.0**	**LS**	**500,000**	**0**	**500,000**	**0**	**500,000**
01.02. Acquisitions	**1.0**	**LS**	**500,000**	**0**	**500,000**	**0**	**500,000**
01.02.02. By Local Sponsor	**1.0**	**LS**	**500,000**	**0**	**500,000**	**0**	**500,000**
01.02.02.01. Acquisitions	**1.0**	**LS**	**500,000**	**0**	**500,000**	**0**	**500,000**
02. Relocations	**1.0**	**LS**	**23,645**	**6,916**	**30,561**	**14,054**	**44,615**
02.A. Floodway Expansion Area	**1.0**	**LS**	**23,645**	**6,916**	**30,561**	**14,054**	**44,615**
02.A.01. Roads, Construction Activities	**1.0**	**LS**	**19,422**	**5,670**	**25,093**	**11,539**	**36,631**
02.A.01.19 Construct Roadbed to Subgrade	**1.0**	**LS**	**19,422**	**5,670**	**25,093**	**11,539**	**36,631**
02.A.03. Cemeteries, Utilities and Structures	**1.0**	**LS**	**4,223**	**1,245**	**5,468**	**2,515**	**7,983**
02.A.03.18 Utilities	**1.0**	**LS**	**4,223**	**1,245**	**5,468**	**2,515**	**7,983**
06. Fish and Wildlife Facilities	**1.0**	**LS**	**135,652**	**20,713**	**156,365**	**71,905**	**228,271**
06.A.03 Floodplain Planting (Floodway Expansion Area Mitigation)	**1.0**	**LS**	**306**	**6**	**312**	**143**	**455**
06.A.03.74 Scrub/Shrub Site Restoration	**0.5**	**ACR**	*611.44* **306**	**6**	*623.76* **312**	**143**	*910.60* **455**
Earthwork for Planting▼	**0.5**	**ACR**	*568.80* **284**	**0**	*568.80* **284**	**131**	*830.36* **415**
Planting Trees and Shrubs▼	**40.0**	**EA**	*0.53* **21**	**6**	*0.69* **27**	**13**	*1.00* **40**
06.B.03 Floodplain Planting (Stream Stability and Sediment Transport Area Mitigation)	**1.0**	**LS**	**135,346**	**20,707**	**156,054**	**71,762**	**227,816**
06.B.03.75 Riparian Stream Buffer Site Restoration	**20.0**	**ACR**	*6,767.32* **135,346**	**20,707**	*7,802.68* **156,054**	**71,762**	*11,390.78* **227,816**
Work Plans & Submittals▼	**1.0**	**EA**	*0.70-* **1-**	**0**	*0.90-* **1-**	**0**	*1.32-* **1-**

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Description	Quantity	UOM	DirectCost	SubCMU	CostToPrime	PrimeCMU	ContractCost
			3,184.53		*3,184.53*		*4,648.96*
Earthwork for Planting▼	20.0	ACR	63,691	0	63,691	29,288	92,979
			0.52		*0.67*		*0.98*
Planting Trees and Shrubs▼	30,000.0	EA	15,600	4,508	20,108	9,247	29,355
			2,802.82		*3,612.78*		*5,274.14*
Seeding▼	20.0	ACR	56,056	16,199	72,256	33,227	105,483
16. Bank Stabilization	1.0	LS	2,969,964	401,862	3,371,772	1,399,234	4,771,061
16.A. Floodway Expansion Area	1.0	LS	257,870	31,491	289,361	133,064	422,425
16.A.01. Mobilization, Demobilization and Preparatory Work	1.0	LS	59,902	4,116	64,018	29,439	93,457
16.A.01.01 Mobilization	1.0	LS	34,804	2,999	37,802	17,384	55,186
16.A.01.02 Preparatory Work	1.0	LS	25,098	1,117	26,216	12,055	38,271
16.A.31. Earthwork	1.0	LS	56,765	9,312	66,077	30,386	96,463
16.A.31.02. Site Work	1.0	LS	56,765	9,312	66,077	30,386	96,463
			43.62		*43.62*		*63.68*
16.A.81. Riprap Slope Treatment	1,493.0	TON	65,122	0	65,122	29,947	95,069
16.A.81.02 Site Work	1.0	LS	65,122	0	65,122	29,947	95,069
			803.51		*1,038.10*		*1,515.47*
16.A.86 Storm Utility Drainage Pipe System	77.0	LF	61,870	18,063	79,934	36,758	116,691
16.A.86.02 Site Work	1.0	LS	61,870	18,063	79,934	36,758	116,691
16.A.99. Associated General Items	1.0	LS	14,210	0	14,210	6,534	20,744
16.A.99.03 Care and Diversion of Water	1.0	LS	5,604	0	5,604	2,577	8,181
16.A.99.04 Soil Erosion and Sediment Control	1.0	LS	8,606	0	8,606	3,957	12,563
16.B. Stream Stability and Sediment Transport Area	1.0	LS	2,712,041	370,371	3,082,411	1,266,170	4,348,582
16.B.01. Mobilization, Demobilization and Preparatory Work	1.0	LS	207,442	10,504	217,946	100,224	318,170
16.B.01.01 Demobilization	1.0	LS	32,277	2,999	35,276	16,222	51,498
16.B.01.02 Preparatory Work	1.0	LS	175,165	7,505	182,671	84,002	266,673
16.B.31. Earthwork	1.0	LS	2,466,882	359,867	2,826,749	1,148,603	3,975,351

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Description	Quantity	UOM	DirectCost	SubCMU	CostToPrime	PrimeCMU	ContractCost
16.B.31.02 Site Work	1.0	LS	2,466,882	359,867	2,826,749	1,148,603	3,975,351
16.B.99. Associated General Items	1.0	LS	37,716	0	37,716	17,344	55,060
16.B.99.04 Soil Erosion and Sediment Control	1.0	LS	37,716	0	37,716	17,344	55,060
30. Planning, Engineering and Design (P, E & D)	1.0	LS	485,000	0	485,000	0	485,000
P, E & D	1.0	LS	485,000	0	485,000	0	485,000
P, E & D	1.0	LS	485,000	0	485,000	0	485,000
P, E & D	1.0	LS	485,000	0	485,000	0	485,000
31. Construction Management (S & A)	1.0	LS	549,823	0	549,823	0	549,823
S & A	1.0	LS	549,823	0	549,823	0	549,823
S & A	1.0	LS	549,823	0	549,823	0	549,823
S & A	1.0	LS	549,823	0	549,823	0	549,823

Currency in US dollars

Description	DirectLabor	DirectEQ	DirectMatl	DirectCost	JOOH	HOOH	Profit	Bond	CostToPrime	ContractorOwnCost
Contractor Indirect Summary										
EXCAVATION Prime Contractor	912,628	200,875	152,678	1,314,974	261,791	157,677	138,408	46,821	1,314,974	3,834,396
SITE WORK Site Work Sub	382,573	139,048	775,981	1,297,600	129,760	114,189	131,032	0	1,672,581	1,672,581
SURVEY Survey Sub	96,103	2,463	0	98,566	9,857	8,674	9,953	0	127,050	127,050
ELECTRICAL Electrical Sub	3,160	70	4,544	7,774	777	684	831	0	10,067	10,067
CONCRETE Concrete Sub	42,236	5,294	33,704	81,293	8,129	7,154	8,450	0	105,026	105,026
EXCAVATION Prime Contractor - No markups	0	0	0	1,863,823	0	0	0	0	1,863,823	1,863,823

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Description	ManHours	LaborCost	EQHours	CrewHours	CrewCost
Crews Backup					
	1.50	*93.47*	*1.00*		*107.47*
GOV COFCB10A 1 eqoprmed + 1 roller, walk-behind, vib, dbl	2,844.4	177,242	1,896.2	1,896.2	203,789
MIL B-LABORER Laborers, (Semi-Skilled)	*0.5*	*28*			
MIL B-EQOPRMED Equip. Operators, Medium	*1.0*	*65*			
GEN C10Z1425 COMPACTOR, ROLLER, VIBRATORY, 26.5" (674 MM) WIDE, 0.8 TON (0.7 MT), DOUBLE DRUM, WALK-BEHIND			*1.0*		
	3.00	*174.09*	*2.00*		*203.88*
RSM A2 A2	78.0	4,526	52.0	26.0	5,301
MIL B-TRKDVRLT Truck Drivers, Light	*1.0*	*61*			
MIL B-LABORER Laborers, (Semi-Skilled)	*2.0*	*113*			
GEN T50Z7400 TRUCK, HIGHWAY, 25,000 LB (11,340 KG) GVW, 4X2, 2 AXLE (ADD ACCESSORIES)			*1.0*		
GEN T40Z7010 TRUCK OPTION, FLATBED, 8' (2.4 M) x 16' (4.9 M) (ADD 25,000 LB (11,340 KG) GVW TRUCK)			*1.0*		
	7.00	*413.70*	*1.00*		*465.09*
RSM B13 B13	224.0	13,238	32.0	32.0	14,883
MIL B-LABORER Laborers, (Semi-Skilled)	*4.0*	*226*			
MIL B-LABORER Laborers, (Semi-Skilled)	*1.0*	*57*			
MIL B-EQOPRCRN Equip. Operators, Heavy	*1.0*	*69*			
MIL B-EQOPROIL Equip. Operators, Oilers / Grade Checker	*1.0*	*62*			
GEN C80Z2260 CRANE, HYDRAULIC, TRUCK MOUNTED, 25 TON (22.7 MT), 80' (24.4 M) BOOM, 6X4			*1.0*		
	3.00	*170.20*	*1.00*		*174.46*
RSM B18 B18	48.0	2,723	16.0	16.0	2,791
MIL B-LABORER Laborers, (Semi-Skilled)	*2.0*	*113*			
MIL B-LABORER Laborers, (Semi-Skilled)	*1.0*	*57*			
GEN C10Z1400 COMPACTOR, VIBROPLATE, 21" (534 MM) WIDE x 24" (610 MM) PLATE			*1.0*		
	3.00	*179.82*	*0.00*		*179.82*
RSM B24 B24	21.1	1,264	0.0	7.0	1,264
MIL B-CEMTFINR Cement Finishers	*1.0*	*66*			
MIL B-CARPNTER Carpenters	*1.0*	*57*			
MIL B-LABORER Laborers, (Semi-Skilled)	*1.0*	*56*			
	6.00	*357.14*	*2.00*		*491.74*
RSM B25C B25C	12.0	714	4.0	2.0	983
MIL B-EQOPRMED Equip. Operators, Medium	*2.0*	*131*			
MIL B-LABORER Laborers, (Semi-Skilled)	*3.0*	*169*			
MIL B-LABORER Laborers, (Semi-Skilled)	*1.0*	*57*			
GEN R45Z5670 ROLLER, VIBRATORY, SELF-PROPELLED, DOUBLE DRUM, SMOOTH, 2.7 TON (2.5 MT), 47"(3.8 M) WIDE, ASPHALT COMPACTOR			*1.0*		
GEN A30Z0640 ASPHALT PAVER, 10.0' (3.1 M) WIDE, SELF PROPELLED, W/19' (5.8 M) SCREED EXTENSION, WHEEL			*1.0*		

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Description	ManHours	LaborCost	EQHours	CrewHours	CrewCost
	7.00	*413.70*	*1.00*		*455.53*
RSM B29 B29	3.6	213	0.5	0.5	234
MIL B-LABORER Laborers, (Semi-Skilled)	*1.0*	*57*			
MIL B-LABORER Laborers, (Semi-Skilled)	*4.0*	*226*			
MIL B-EQOPRCRN Equip. Operators, Heavy	*1.0*	*69*			
MIL B-EQOPROIL Equip. Operators, Oilers/Grade Checker	*1.0*	*62*			
GEN H30Z3720 HYDRAULIC EXCAVATOR, WHEEL, 34,100 LBS (15,467.5 KG), 0.625 CY (0.5 M3), TELESCOPIC BOOM, 4X2			*1.0*		
	3.00	*191.97*	*3.00*		*352.51*
RSM B30 B30	58.8	3,763	58.8	19.6	6,909
MIL B-TRKDVRHV Truck Drivers, Heavy	*2.0*	*127*			
MIL B-EQOPRMED Equip. Operators, Medium	*1.0*	*65*			
GEN T50Z7710 DUMP TRUCK, HIGHWAY, 16 - 20 CY (12.2 - 15.3 M3) DUMP BODY, 75,000 LBS (34,000 KG) GVW, 2 AXLE, 6X4			*2.0*		
GEN H25Z3185 HYDRAULIC EXCAVATOR, CRAWLER, 55,000 LB (24,948 KG), 1.50 CY (1.2 M3) BUCKET, 23.3' (7.1 M) MAX DIGGING DEPTH			*1.0*		
	8.00	*494.63*	*6.00*		*802.56*
RSM B36B B36B	4.4	272	3.3	0.6	442
MIL B-TRKDVRHV Truck Drivers, Heavy	*1.0*	*63*			
MIL B-LABORER Laborers, (Semi-Skilled)	*1.0*	*57*			
MIL B-LABORER Laborers, (Semi-Skilled)	*2.0*	*113*			
MIL B-EQOPRMED Equip. Operators, Medium	*4.0*	*261*			
GEN R45Z5680 ROLLER, VIBRATORY, SELF-PROPELLED, DOUBLE DRUM, SMOOTH, 6 TON (5.4 MT), 66" (1.7 M) WIDE, ASPHALT COMPACTOR			*1.0*		
GEN G15Z3080 GRADER, MOTOR, ARTICULATED, 135 HP (101 KW), 12' (3.6 M) BLADE WIDTH			*1.0*		
GEN T45Z7280 TRUCK TRAILER, WATER TANKER, 5,000 GAL (18,927 L) (ADD 50,000 LB (22,680 KG) GVW TRUCK)			*1.0*		
GEN T50Z7600 TRUCK, HIGHWAY, 50,000 LB (22,680 KG) GVW, 6X4, 3 AXLE (ADD ACCESSORIES)			*1.0*		
GEN L35Z4220 LOADER, FRONT END, CRAWLER, 1.30 CY (1.0 M3) BUCKET			*1.0*		
GEN T15Z6560 TRACTOR, CRAWLER (DOZER), 251-300 HP (187-224 KW), POWERSHIFT, W/UNIVERSAL BLADE			*1.0*		
	5.00	*299.11*	*4.00*		*391.26*
RSM B38 B38	40.0	2,393	32.0	8.0	3,130
MIL B-LABORER Laborers, (Semi-Skilled)	*2.0*	*113*			
MIL B-LABORER Laborers, (Semi-Skilled)	*1.0*	*57*			
MIL B-EQOPRLT Equip. Operators, Light	*1.0*	*64*			
MIL B-EQOPRMED Equip. Operators, Medium	*1.0*	*65*			
GEN L50Z4640 LOADER/BACKHOE, WHEEL, 1.10 CY (0.84 M3) FRONT END BUCKET, 14.6' (3.7 M) DEPTH OF HOE, 24" (0.61 M) DIPPER, 4X4			*1.0*		
GEN H25Z3680 HYDRAULIC EXCAVATOR, ATTACHMENT, MATERIAL HANDLING, BUCKET, 36" (914 MM) PAVEMENT REMOVAL (ADD TO 75,000 LB (34,019 KG) HYDRAULIC EXCAVATOR)			*1.0*		
GEN L40Z4400 LOADER, FRONT END, WHEEL, ARTICULATED, 3.50 CY (2.7 M3) BUCKET, 4X4			*1.0*		
GEN H25Z3685 HYDRAULIC EXCAVATOR, ATTACHMENT, CONCRETE PULVERIZER, 3,000 LB (1360 KG) W/POINT (ADD TO 26,000-36,000 LB (11,793-16,329 KG) HYDRAULIC EXCAVATOR)			*1.0*		

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Description	ManHours	LaborCost	EQHours	CrewHours	CrewCost
	2.00	*128.62*	*2.00*		*189.39*
RSM B45 B45	1.0	64	1.0	0.5	95
MIL B-EQOPRMED Equip. Operators, Medium	*1.0*	*65*			
MIL B-TRKDVRHV Truck Drivers, Heavy	*1.0*	*63*			
GEN A25Z0580 ASPHALT DISTRIBUTOR, 3,000 GAL (11,355 L) (ADD 45,000 LB (20,412 KG) GVW TRUCK)			*1.0*		
GEN T50Z7580 TRUCK, HIGHWAY, 45,000 LB (20,412 KG) GVW, 6X4, 3 AXLE (ADD ACCESSORIES)			*1.0*		
	3.00	*176.44*	*1.00*		*199.57*
RSM B6 B6	11.8	693	3.9	3.9	784
MIL B-LABORER Laborers, (Semi-Skilled)	*2.0*	*113*			
MIL B-EQOPRLT Equip. Operators, Light	*1.0*	*64*			
GEN L50Z4640 LOADER/BACKHOE, WHEEL, 1.10 CY (0.84 M3) FRONT END BUCKET, 14.6' (3.7 M) DEPTH OF HOE, 24" (0.61 M) DIPPER, 4X4			*1.0*		
	1.00	*63.64*	*1.00*		*86.77*
RSM B66 B66	268.1	17,063	268.1	268.1	23,264
MIL B-EQOPRLT Equip. Operators, Light	*1.0*	*64*			
GEN L50Z4640 LOADER/BACKHOE, WHEEL, 1.10 CY (0.84 M3) FRONT END BUCKET, 14.6' (3.7 M) DEPTH OF HOE, 24" (0.61 M) DIPPER, 4X4			*1.0*		
	6.00	*348.27*	*4.00*		*447.26*
RSM B7 B7	222.9	12,936	148.6	37.1	16,613
MIL B-LABORER Laborers, (Semi-Skilled)	*1.0*	*57*			
MIL B-LABORER Laborers, (Semi-Skilled)	*4.0*	*226*			
MIL B-EQOPRMED Equip. Operators, Medium	*1.0*	*65*			
PTC C05Z1210 CHAINSAW, 24" - 42" (610-1,067 MM) BAR			*2.0*		
GEN L35Z4260 LOADER, FRONT END, CRAWLER, 2.60 CY (2.0 M3) BUCKET			*1.0*		
GEN B20Z0890 BRUSH CHIPPER, 12" (305 MM) DIA LOG DISC TYPE CUTTER, TRAILER MOUNTED			*1.0*		
	4.00	*238.73*	*3.00*		*270.83*
RSM B80 B80	9.7	580	7.3	2.4	658
MIL B-LABORER Laborers, (Semi-Skilled)	*1.0*	*57*			
MIL B-EQOPRLT Equip. Operators, Light	*1.0*	*64*			
MIL B-LABORER Laborers, (Semi-Skilled)	*1.0*	*56*			
MIL B-TRKDVRLT Truck Drivers, Light	*1.0*	*61*			
GEN T50Z7400 TRUCK, HIGHWAY, 25,000 LB (11,340 KG) GVW, 4X2, 2 AXLE (ADD ACCESSORIES)			*1.0*		
GEN T40Z7010 TRUCK OPTION, FLATBED, 8' (2.4 M) x 16' (4.9 M) (ADD 25,000 LB (11,340 KG) GVW TRUCK)			*1.0*		
GEN XMEZ9120 POST DRIVER, 8" (203 MM) MAX DIA POST, 30,000 LB (13,608 KG) IMPACT (ADD 20,000-35,000 LB (9,072-15,876 KG) GVW TRUCK)			*1.0*		
	2.00	*124.93*	*4.00*		*171.20*
RSM B89 B89	7.9	495	15.8	4.0	678
MIL B-EQOPRLT Equip. Operators, Light	*1.0*	*64*			
MIL B-TRKDVRLT Truck Drivers, Light	*1.0*	*61*			
GEN T50Z7400 TRUCK, HIGHWAY, 25,000 LB (11,340 KG) GVW, 4X2, 2 AXLE (ADD ACCESSORIES)			*1.0*		

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Description	ManHours	LaborCost	EQHours	CrewHours	CrewCost
GEN T40Z7010 TRUCK OPTION, FLATBED, 8' (2.4 M) x 16' (4.9 M) (ADD 25,000 LB (11,340 KG) GVW TRUCK)			*1.0*		
GEN XMEZ9560 WATER TANK, 500 GAL (1,893 L) PORTABLE			*1.0*		
GEN C60Z1980 CONCRETE SAW, 13" (330 MM) DEPTH, SELF PROPELLED (ADD WATER AND COST FOR SAWBLADE WEAR)			*1.0*		
	2.00	*124.93*	*5.00*		*194.58*
RSM B89B B89B	8.2	513	20.5	4.1	799
MIL B-TRKDVRLT Truck Drivers, Light	*1.0*	*61*			
MIL B-EQOPRLT Equip. Operators, Light	*1.0*	*64*			
GEN T50Z7400 TRUCK, HIGHWAY, 25,000 LB (11,340 KG) GVW, 4X2, 2 AXLE (ADD ACCESSORIES)			*1.0*		
GEN T40Z7010 TRUCK OPTION, FLATBED, 8' (2.4 M) x 16' (4.9 M) (ADD 25,000 LB (11,340 KG) GVW TRUCK)			*1.0*		
GEN XMEZ9560 WATER TANK, 500 GAL (1,893 L) PORTABLE			*1.0*		
GEN C60Z1990 CONCRETE SAW, RAIL SAW, 15.5" (394 MM) DEPTH, WALL (ADD 250 CFM (7 CMM) COMPRESSOR & COST FOR SAWBLADE WEAR)			*1.0*		
GEN G10Z3070 GENERATOR SET, SKID MOUNTED, 125 KW, VARIABLE POWER SETTINGS, RECONNECTIBLE			*1.0*		
	11.00	*713.52*	*1.00*		*717.20*
RSM C14E C14E	99.2	6,432	9.0	9.0	6,465
MIL B-CARPNTER Carpenters	*1.0*	*59*			
MIL B-RODMAN Rodmen, (Reinforcing)	*4.0*	*305*			
MIL B-CARPNTER Carpenters	*2.0*	*115*			
MIL B-CEMTFINR Cement Finishers	*1.0*	*66*			
MIL B-LABORER Laborers, (Semi-Skilled)	*3.0*	*169*			
GEN XMEZ9520 CONCRETE VIBRATOR, 2.5" (63.5 MM) DIA, W/7.5 HP (5.6 KW) GENERATOR			*1.0*		
	1.00	*56.40*	*1.00*		*61.42*
RSM C29 C29	24.0	1,354	24.0	24.0	1,474
MIL B-LABORER Laborers, (Semi-Skilled)	*1.0*	*56*			
GEN W25Z8605 WATER BLASTER, LOW PRESSURE, COLD WATER, 5.5 GPM (20.8 LPM) 1 NOZZLE, @ 3,500 PSI (24,132 KPA)			*1.0*		
	6.00	*358.04*	*1.00*		*361.96*
RSM C8C C8C	6.0	358	1.0	1.0	362
MIL B-LABORER Laborers, (Semi-Skilled)	*3.0*	*169*			
MIL B-LABORER Laborers, (Semi-Skilled)	*1.0*	*57*			
MIL B-EQOPRMED Equip. Operators, Medium	*1.0*	*65*			
MIL B-CEMTFINR Cement Finishers	*1.0*	*66*			
GEN C35Z1580 CONCRETE GUNITER/SHOTCRETER, HOPPER/PUMP/SPRAYER, 12 CY/HR (9.2 M3/HR), 1 GUN (ADD 600 CFM (17 CMM) COMPRESSOR)			*1.0*		
	1.00	*57.25*	*0.00*		*57.25*
RSM CARP CARP	1.3	76	0.0	1.3	76
MIL B-CARPNTER Carpenters	*1.0*	*57*			
	1.00	*66.17*	*0.00*		*66.17*

Labor ID: Region 1 EQ ID: EP14R01 Currency in US dollars TRACES MII Version 4.2

Description	ManHours	LaborCost	EQHours	CrewHours	CrewCost
RSM CEFI CEFI	24.0	1,589	0.0	24.0	1,589
MIL B-CEMTFINR Cement Finishers	*1.0*	*66*			
	1.00	*52.05*	*0.00*		*52.05*
RSM CLAB CLAB	58.0	3,019	0.0	58.0	3,019
MIL B-LABORERG Laborers, General (Lowest paid)	*1.0*	*52*			
	1.00	*63.98*	*0.00*		*63.98*
RSM ELEC ELEC	4.0	256	0.0	4.0	256
MIL B-ELECTRN Electricians	*1.0*	*64*			
	2.50	*166.15*	*0.50*		*181.40*
RSM R3 R3	11.5	767	2.3	4.6	837
MIL B-EQOPRCRN Equip. Operators, Heavy	*0.5*	*34*			
MIL B-ELECTRN Electricians	*1.0*	*68*			
MIL B-ELECTRN Electricians	*1.0*	*64*			
GEN C75Z2080 CRANE, HYDRAULIC, SELF-PROPELLED, YARD, 9 TON (8 MT), 44' (13.4 M) BOOM, 4X4			*0.5*		
	1.50	*84.60*	*1.50*		*86.97*
USR 1.5 Clab 1.5 Clab Excavation Crew By Hand	288.0	16,243	288.0	192.0	16,698
MIL X-LABORER Outside Laborers, (Semi-Skilled)	*1.5*	*85*			
NON XMIXX020 SMALL TOOLS			*1.5*		
	1.50	*93.47*	*5.00*		*99.56*
USR B10I B10I	144.0	8,973	480.0	96.0	9,558
MIL B-EQOPRMED Equip. Operators, Medium	*1.0*	*65*			
MIL B-LABORER Laborers, (Semi-Skilled)	*0.5*	*28*			
NON XMIXX020 SMALL TOOLS			*1.0*		
GEN P65Z5490 PUMP, WATER, DIAPHRAGM, WHEEL, ENGINE DRIVE, 4" (102 MM) DIA, 4,440 GPH (16,807 LPH) @ 25' (7.6 M) HEAD (ADD HOSES)			*1.0*		
MAP P50GR003 PUMP, WATER, CENTRIFUGAL, TRASH, HOSE, SUCTION, 4" DIA X 20' WITH COUPLING (PER SECTION)			*1.0*		
MAP P50GR007 PUMP, WATER, CENTRIFUGAL, TRASH, HOSE, DISCH, 4" DIA X 50' WITH COUPLING (PER SECTION)			*2.0*		
	1.50	*93.47*	*2.50*		*139.04*
USR B-10L B-10L Grading w/ dozer crew	379.7	23,659	632.8	253.1	35,192
MIL B-EQOPRMED Equip. Operators, Medium	*1.0*	*65*			
MIL B-LABORER Laborers, (Semi-Skilled)	*0.5*	*28*			
NON XMIXX020 SMALL TOOLS			*0.5*		
EP T15CA024 TRACTOR, CRAWLER (DOZER), 110 HP, POWERSHIFT, W/3.37 CY SEMI-U BLADE (ADD ATTACHMENTS)			*1.0*		
GEN T10Z6240 TRACTOR ATTACHMENT, BLADE, POWER ANGLE, HYDRAULIC, 2.53 CY (1.93 M3) CAPACITY (ADD TO 101-135 HP (75-101 KW) DOZER, D-5)			*1.0*		

Labor ID: Region 1 EQ ID: EP14R01 Currency in US dollars TRACES MII Version 4.2

Description	ManHours	LaborCost	EQHours	CrewHours	CrewCost
	2.00	*125.17*	*2.00*		*185.62*
USR B-12B B-12B Excavator Crew	2,428.0	151,956	2,428.0	1,214.0	225,338
MIL B-EQOPRCRN Equip. Operators, Heavy	*1.0*	*69*			
MIL X-LABORER Outside Laborers, (Semi-Skilled)	*1.0*	*56*			
NON XMIXX020 SMALL TOOLS			*1.0*		
GEN H25Z3185 HYDRAULIC EXCAVATOR, CRAWLER, 55,000 LB (24,948 KG), 1.50 CY (1.2 M3) BUCKET, 23.3' (7.1 M) MAX DIGGING DEPTH			*1.0*		
	1.00	*56.40*	*1.00*		*57.98*
USR CLAB CLAB	1,382.1	77,948	1,382.1	1,382.1	80,132
MIL X-LABORER Outside Laborers, (Semi-Skilled)	*1.0*	*56*			
NON XMIXX020 SMALL TOOLS			*1.0*		
	2.30	*131.89*	*2.30*		*141.99*
USR CLAB2 CLAB2	170.9	9,797	170.9	74.3	10,547
MIL X-LABORER Outside Laborers, (Semi-Skilled)	*2.0*	*113*			
MIL B-EQOPRLT Equip. Operators, Light	*0.3*	*19*			
GEN L50Z4640 LOADER/BACKHOE, WHEEL, 1.10 CY (0.84 M3) FRONT END BUCKET, 14.6' (3.7 M) DEPTH OF HOE, 24" (0.61 M) DIPPER, 4X4			*0.3*		
NON XMIXX020 SMALL TOOLS			*2.0*		
	1.00	*26.37*	*1.00*		*27.95*
USR HREMW2 1 envi sampler + small tools	2.0	53	2.0	2.0	56
USR Environmental Sampler	*1.0*	*26*			
NON XMIXX020 SMALL TOOLS			*1.0*		
	0.00	*0.00*	*0.00*		*0.00*
USR N/A No Crew	0.0	0	0.0	30,910.0	0
	3.00	*175.75*	*2.00*		*199.71*
USR USURA1 3 FC-suryr + 4x4 suburban + small tools	168.0	9,842	112.0	56.0	11,184
MIL X-LABORER Outside Laborers, (Semi-Skilled)	*2.0*	*113*			
MIL X-INSTRUMN Instrument Man	*1.0*	*63*			
NON XMIXX020 SMALL TOOLS			*1.0*		
EP T50GM005 TRUCK, HIGHWAY, 8,600 GVW, 4X4 (SUBURBAN)			*1.0*		
	3.00	*177.15*	*3.00*		*233.67*
USR UTDHA1 1 trkdvrhv + 2 laborers + 1 truck, hwy, 55,000 GVW w/ lowboy	336.0	19,841	336.0	112.0	26,172
MIL B-LABORER Laborers, (Semi-Skilled)	*1.0*	*56*			
MIL B-TRKDVRHV Truck Drivers, Heavy	*1.0*	*63*			
MIL B-LABORER Laborers, (Semi-Skilled)	*1.0*	*57*			
NON XMIXX020 SMALL TOOLS			*1.0*		
GEN T50Z7520 TRUCK, HIGHWAY, 55,000 LB (24,948 KG) GVW, 6X4, 3 AXLE (ADD ACCESSORIES)			*1.0*		
GEN T45Z7240 TRUCK TRAILER, LOWBOY, 75 TON (68.0 MT), 3 AXLE (ADD TOWING TRUCK)			*1.0*		

Labor ID: Region 1 EQ ID: EP14R01 Currency in US dollars TRACES MII Version 4.2

Description	ManHours	LaborCost	EQHours	CrewHours	CrewCost
	4.00	*231.49*	*2.00*		*242.06*
USR XTRLB3L 1 trkdvrlt + 3 lab + 3/4 Ton Pickup Trk	416.0	24,075	208.0	104.0	25,175
MIL X-LABORER Outside Laborers, (Semi-Skilled)	*1.0*	*57*			
MIL X-TRKDVRLT Outside Truck Drivers, Light	*1.0*	*61*			
MIL X-LABORER Outside Laborers, (Semi-Skilled)	*2.0*	*113*			
NON XMIXX020 SMALL TOOLS			*1.0*		
EP T50XX019 TRUCK, HIGHWAY, CREW, 3/4 TON PICKUP, 4X2			*1.0*		

Labor ID: Region 1 EQ ID: EP14R01 Currency in US dollars TRACES MII Version 4.2

Description	SUIExperience	SUIRate	FICA	FUIRate	PayrollTax	State	ContractorCla	WCIBaseRate	WCIExperience	WCIRate
Contractors Labor Payroll Markup Report										
1 EXCAVATION Prime Contractor	245.67	9.83	7.65	0.80	18.28	NY	Excavation -- rock/earth NOC	8.91	227.96	20.31
1.1 SITE WORK Site Work Sub	245.67	9.83	7.65	0.80	18.28	NY	Excavation -- rock/earth NOC	8.91	227.90	20.31
1.2 SURVEY Survey Sub	245.67	9.83	7.65	0.80	18.28	NY	Excavation -- rock/earth NOC	8.91	227.90	20.31
1.3 ELECTRICAL Electrical Sub	245.67	9.83	7.65	0.80	18.28	NY	Electrical Wiring -- inside	6.22	326.52	20.31
1.5 CONCRETE Concrete Sub	245.67	9.83	7.65	0.80	18.28	NY	Concrete Work -- NOC	20.80	97.64	20.31
2 EXCAVATION Prime Contractor - No markups	245.67	9.83	7.65	0.80	18.28	NY	Excavation -- rock/earth NOC	8.91	227.91	20.31

Labor ID: Region 1 EQ ID: EP14R01 Currency in US dollars TRACES MII Version 4.2

Description	BaseWage	Overtime	Payroll	WCI	TaxableFringe	NonTaxFringe	Travel	Total	ManHours
Labor Backup									
FOP FA-AGENS General Superintendents (P.M.)	*43.34* 83,906	0	15,335	17,042	*0.00* 0	*8.53* 16,514	*0.00* 0	*68.59* 132,798	1,936.0
FOP FA-PROJM Project Managers	*43.34* 12,573	0	2,298	2,554	*0.00* 0	*8.53* 2,475	*0.00* 0	*68.59* 19,899	290.1
FOP FB-ACONT Contract Administrators	*28.89* 11,180	0	2,043	2,271	*0.00* 0	*7.11* 2,752	*0.00* 0	*47.15* 18,246	387.0
FOP FB-CLTYP Clerks, Typists, Bookkeepers & Receptionist	*21.57* 2,783	0	509	565	*0.00* 0	*6.39* 824	*0.00* 0	*36.28* 4,681	129.0
FOP FC-ENGCI Engineers, Civil	*39.40* 77,224	0	14,114	15,685	*0.00* 0	*8.53* 16,719	*0.00* 0	*63.13* 123,742	1,960.0
FOP FC-FLDRT Field Draftsmen	*24.55* 2,553	0	467	519	*0.00* 0	*6.68* 695	*0.00* 0	*40.70* 4,233	104.0
FOP FC-SURYC Surveyors, Chief	*39.55* 44,296	0	8,096	8,996	*0.00* 0	*22.40* 25,088	*0.00* 0	*77.21* 86,476	1,120.0
FOP FD-SAENG Safety Engineers	*39.40* 76,909	0	14,056	15,621	*0.00* 0	*8.53* 16,651	*0.00* 0	*63.13* 123,237	1,952.0
MIL B-CARPNTER Carpenters	*29.46* 777	0	142	158	*0.00* 0	*27.79* 733	*0.00* 0	*68.62* 1,811	26.4
MIL B-CARPNTER Carpenters	*31.06* 280	0	51	57	*0.00* 0	*27.79* 251	*0.00* 0	*70.83* 639	9.0
MIL B-CEMTFINR Cement Finishers	*38.37* 1,575	0	288	320	*0.00* 0	*27.80* 1,141	*0.00* 0	*80.98* 3,324	41.0
MIL B-ELECTRN Electricians	*38.00* 1,239	0	227	252	*0.00* 0	*25.98* 847	*0.00* 0	*78.64* 2,565	32.6
MIL B-ELECTRN Electricians	*41.80* 193	0	35	39	*0.00* 0	*25.98* 120	*0.00* 0	*83.91* 387	4.6
MIL B-EQOPRCRN Equip. Operators, Heavy	*41.02* 51,227	0	9,363	10,405	*0.00* 0	*27.75* 34,655	*0.00* 0	*84.60* 105,649	1,248.8
MIL B-EQOPRLT Equip. Operators, Light	*35.89* 18,908	0	3,456	3,840	*0.00* 0	*27.75* 14,619	*0.00* 0	*77.49* 40,823	526.8

Currency in US dollars

Description	BaseWage	Overtime	Payroll	WCI	TaxableFringe	NonTaxFringe	Travel	Total	ManHours
	37.52				*0.00*	*27.75*	*0.00*	*79.75*	
MIL B-EQOPRMED Equip. Operators, Medium	87,264	0	15,949	17,724	0	64,541	0	185,478	2,325.8
	34.18				*0.00*	*27.75*	*0.00*	*75.12*	
MIL B-EQOPROIL Equip. Operators, Oilers / Grade Checker	1,111	0	203	226	0	902	0	2,442	32.5
	34.00				*0.00*	*22.40*	*0.00*	*69.52*	
MIL B-LABORER Laborers, (Semi-Skilled)	80,606	0	14,732	16,371	0	53,105	0	164,815	2,370.8
	35.00				*0.00*	*22.40*	*0.00*	*70.90*	
MIL B-LABORER Laborers, (Semi-Skilled)	10,697	0	1,955	2,173	0	6,846	0	21,671	305.6
	29.65				*0.00*	*22.40*	*0.00*	*63.49*	
MIL B-LABORERG Laborers, General (Lowest paid)	1,720	0	314	349	0	1,299	0	3,682	58.0
	38.12				*0.00*	*38.08*	*0.00*	*90.91*	
MIL B-RODMAN Rodmen, (Reinforcing)	44,069	0	8,054	8,950	0	44,023	0	105,096	1,156.1
	31.29				*0.00*	*32.06*	*0.00*	*75.42*	
MIL B-TRKDVRHV Truck Drivers, Heavy	140,778	0	25,730	28,589	0	144,242	0	339,340	4,499.1
	29.14				*0.00*	*32.15*	*0.00*	*72.53*	
MIL B-TRKDVRLT Truck Drivers, Light	1,064	0	194	216	0	1,173	0	2,647	36.5
	38.55				*0.00*	*22.40*	*0.00*	*75.82*	
MIL X-INSTRUMN Instrument Man	43,176	0	7,891	8,769	0	25,088	0	84,924	1,120.0
	40.55				*0.00*	*22.40*	*0.00*	*78.60*	
MIL X-INSTRUMN Instrument Man	2,271	0	415	461	0	1,254	0	4,401	56.0
	34.00				*0.00*	*22.40*	*0.00*	*69.52*	
MIL X-LABORER Outside Laborers, (Semi-Skilled)	122,965	0	22,474	24,973	0	81,012	0	251,425	3,616.6
	35.00				*0.00*	*22.40*	*0.00*	*70.90*	
MIL X-LABORER Outside Laborers, (Semi-Skilled)	3,640	0	665	739	0	2,330	0	7,374	104.0
	29.14				*0.00*	*32.15*	*0.00*	*72.53*	
MIL X-TRKDVRLT Outside Truck Drivers, Light	3,031	0	554	615	0	3,344	0	7,544	104.0
	20.12				*0.00*	*6.25*	*0.00*	*34.13*	
USR Environmental Sampler	40	0	7	8	0	13	0	68	2.0

Currency in US dollars

Description	Depr/Rntl	FCCM	Fuel	FOG	TireWear	TireRepair	EQRepair	Total	EQHours
Equipment Backup									
	5.41	*0.64*	*5.45*	*2.76*	*0.73*	*0.13*	*7.38*	*22.51*	
EP L50CA001 LOADER / BACKHOE, WHEEL, 1.00 CY FRONT END BUCKET, 24" DIP, 6.2 CF, 14.5' DIGGING DEPTH, 4X2	43	5	44	22	6	1	59	180	8.0
	9.20	*1.15*	*9.76*	*1.72*	*0.00*	*0.00*	*18.29*	*40.11*	
EP T15CA024 TRACTOR, CRAWLER (DOZER), 110 HP, POWERSHIFT, W/3.37 CY SEMI-U BLADE (ADD ATTACHMENTS)	2,328	290	2,471	435	0	0	4,628	10,152	253.1
	4.25	*0.36*	*11.17*	*1.53*	*0.29*	*0.05*	*4.74*	*22.38*	
EP T50GM005 TRUCK, HIGHWAY, 8,600 GVW, 4X4 (SUBURBAN)	238	20	626	85	16	3	265	1,254	56.0
	2.53	*0.22*	*2.79*	*0.33*	*0.25*	*0.04*	*2.83*	*8.99*	
EP T50XX019 TRUCK, HIGHWAY, CREW, 3/4 TON PICKUP, 4X2	263	23	291	34	26	5	294	935	104.0
	10.94	*0.59*	*0.00*	*1.80*	*0.00*	*0.00*	*11.89*	*25.22*	
GEN A25Z0580 ASPHALT DISTRIBUTOR, 3,000 GAL (11,355 L) (ADD 45,000 LB (20,412 KG) GVW TRUCK)	5	0	0	1	0	0	6	13	0.5
	37.04	*3.02*	*19.88*	*4.22*	*4.32*	*0.74*	*50.64*	*119.85*	
GEN A30Z0640 ASPHALT PAVER, 10.0' (3.1 M) WIDE, SELF PROPELLED, W/19' (5.8 M) SCREED EXTENSION, WHEEL	74	6	40	8	9	1	101	240	2.0
	3.32	*0.23*	*11.33*	*1.55*	*0.07*	*0.01*	*3.70*	*20.21*	
GEN B20Z0890 BRUSH CHIPPER, 12" (305 MM) DIA LOG DISC TYPE CUTTER, TRAILER MOUNTED	123	9	421	57	2	0	138	751	37.1
	1.15	*0.04*	*1.25*	*0.15*	*0.00*	*0.00*	*1.67*	*4.26*	
GEN C10Z1400 COMPACTOR, VIBROPLATE, 21" (534 MM) WIDE x 24" (610 MM) PLATE	18	1	20	2	0	0	27	68	16.0
	4.64	*0.20*	*0.90*	*0.10*	*0.00*	*0.00*	*8.16*	*14.00*	
GEN C10Z1425 COMPACTOR, ROLLER, VIBRATORY, 26.5" (674 MM) WIDE, 0.8 TON (0.7 MT), DOUBLE DRUM, WALK-BEHIND	8,805	373	1,703	199	0	0	15,468	26,547	1,896.2
	1.37	*0.12*	*0.00*	*0.40*	*0.10*	*0.02*	*1.92*	*3.92*	
GEN C35Z1580 CONCRETE GUNITER/SHOTCRETER, HOPPER/PUMP/SPRAYER, 12 CY/HR (9.2 M3/HR), 1 GUN (ADD 600 CFM (17 CMM) COMPRESSOR)	1	0	0	0	0	0	2	4	1.0
	2.04	*0.11*	*7.94*	*1.24*	*0.00*	*0.00*	*2.61*	*13.93*	
GEN C60Z1980 CONCRETE SAW, 13" (330 MM) DEPTH, SELF PROPELLED (ADD WATER AND COST FOR SAWBLADE WEAR)	8	0	31	5	0	0	10	55	4.0
	4.10	*0.22*	*2.27*	*0.35*	*0.00*	*0.00*	*5.23*	*12.18*	

Currency in US dollars

Description	Depr/Rntl	FCCM	Fuel	FOG	TireWear	TireRepair	EQRepair	Total	EQHours
GEN C60Z1990 CONCRETE SAW, RAIL SAW, 15.5" (394 MM) DEPTH, WALL (ADD 250 CFM (7 CMM) COMPRESSOR & COST FOR SAWBLADE WEAR)	17	1	9	1	0	0	21	50	4.1
	7.34	*0.95*	*11.80*	*1.84*	*0.52*	*0.09*	*7.96*	*30.51*	
GEN C75Z2080 CRANE, HYDRAULIC, SELF-PROPELLED, YARD, 9 TON (8 MT), 44' (13.4 M) BOOM, 4X4	17	2	27	4	1	0	18	70	2.3
	16.84	*2.22*	*10.52*	*1.85*	*5.30*	*0.91*	*13.75*	*51.39*	
GEN C80Z2260 CRANE, HYDRAULIC, TRUCK MOUNTED, 25 TON (22.7 MT), 80' (24.4 M) BOOM, 6X4	539	71	337	59	169	29	440	1,645	32.0
	7.25	*0.83*	*5.75*	*0.79*	*0.17*	*0.03*	*11.81*	*26.63*	
GEN D30Z2840 DRILL, EARTH/AUGER, HYDRAULIC AUGER, 14" (356 MM) DIA, 30' (9.1 M) DEPTH, 3,500 FT-LBS (483.9 KGF-M), W/TRAILER (ADD COST FOR DRILL STEEL AND CUTTING EDGE WEAR)	116	13	92	13	3	0	189	426	16.0
	3.57	*0.30*	*16.18*	*1.89*	*0.00*	*0.00*	*3.19*	*25.13*	
GEN G10Z3070 GENERATOR SET, SKID MOUNTED, 125 KW, VARIABLE POWER SETTINGS, RECONNECTIBLE	15	1	66	8	0	0	13	103	4.1
	12.45	*2.01*	*10.22*	*1.69*	*0.99*	*0.17*	*14.36*	*41.89*	
GEN G15Z3080 GRADER, MOTOR, ARTICULATED, 135 HP (101 KW), 12' (3.6 M) BLADE WIDTH	7	1	6	1	1	0	8	23	0.6
	17.87	*2.39*	*14.24*	*2.44*	*0.00*	*0.00*	*21.93*	*58.87*	
GEN H25Z3185 HYDRAULIC EXCAVATOR, CRAWLER, 55,000 LB (24,948 KG), 1.50 CY (1.2 M3) BUCKET, 23.3' (7.1 M) MAX DIGGING DEPTH	22,049	2,944	17,567	3,010	0	0	27,047	72,617	1,233.6
	1.02	*0.07*	*0.00*	*0.00*	*0.00*	*0.00*	*1.18*	*2.27*	
GEN H25Z3680 HYDRAULIC EXCAVATOR, ATTACHMENT, MATERIAL HANDLING, BUCKET, 36" (914 MM) PAVEMENT REMOVAL (ADD TO 75,000 LB (34,019 KG) HYDRAULIC EXCAVATOR)	8	1	0	0	0	0	9	18	8.0
	5.86	*0.35*	*0.00*	*0.50*	*0.00*	*0.00*	*7.93*	*14.64*	
GEN H25Z3685 HYDRAULIC EXCAVATOR, ATTACHMENT, CONCRETE PULVERIZER, 3,000 LB (1360 KG) W/POINT (ADD TO 26,000-36,000 LB (11,793-16,329 KG) HYDRAULIC EXCAVATOR)	47	3	0	4	0	0	63	117	8.0
	15.00	*1.46*	*9.16*	*1.49*	*2.61*	*0.45*	*11.67*	*41.83*	
GEN H30Z3720 HYDRAULIC EXCAVATOR, WHEEL, 34,100 LBS (15,467.5 KG), 0.625 CY (0.5 M3), TELESCOPIC BOOM, 4X2	8	1	5	1	1	0	6	22	0.5

Currency in US dollars

Description	Depr/Rntl	FCCM	Fuel	FOG	TireWear	TireRepair	EQRepair	Total	EQHours
	10.21	*1.04*	*7.99*	*0.93*	*0.00*	*0.00*	*16.15*	*36.32*	
GEN L35Z4220 LOADER, FRONT END, CRAWLER, 1.30 CY (1.0 M3) BUCKET	6	1	4	1	0	0	9	20	0.6
	21.80	*2.23*	*14.20*	*1.65*	*0.00*	*0.00*	*33.32*	*73.20*	
GEN L35Z4260 LOADER, FRONT END, CRAWLER, 2.60 CY (2.0 M3) BUCKET	810	83	527	61	0	0	1,238	2,719	37.1
	13.16	*1.49*	*14.56*	*1.86*	*5.66*	*0.98*	*14.41*	*52.12*	
GEN L40Z4400 LOADER, FRONT END, WHEEL, ARTICULATED, 3.50 CY (2.7 M3) BUCKET, 4X4	105	12	117	15	45	8	115	417	8.0
	5.94	*0.72*	*4.64*	*2.35*	*1.14*	*0.20*	*8.15*	*23.13*	
GEN L50Z4640 LOADER/BACKHOE, WHEEL, 1.10 CY (0.84 M3) FRONT END BUCKET, 14.6' (3.7 M) DEPTH OF HOE, 24" (0.61 M) DIPPER, 4X4	3,066	369	2,393	1,214	590	102	4,208	11,942	516.3
	1.22	*0.11*	*0.68*	*0.11*	*0.20*	*0.03*	*1.54*	*3.89*	
GEN P65Z5490 PUMP, WATER, DIAPHRAGM, WHEEL, ENGINE DRIVE, 4" (102 MM) DIA, 4,440 GPH (16,807 LPH) @ 25' (7.6 M) HEAD (ADD HOSES)	117	11	65	10	19	3	148	373	96.0
	3.93	*0.33*	*3.70*	*0.58*	*0.00*	*0.00*	*6.21*	*14.74*	
GEN R45Z5670 ROLLER, VIBRATORY, SELF-PROPELLED, DOUBLE DRUM, SMOOTH, 2.7 TON (2.5 MT), 47"(3.8 M) WIDE, ASPHALT COMPACTOR	8	1	7	1	0	0	12	29	2.0
	11.62	*0.97*	*12.12*	*1.89*	*0.00*	*0.00*	*18.38*	*44.98*	
GEN R45Z5680 ROLLER, VIBRATORY, SELF-PROPELLED, DOUBLE DRUM, SMOOTH, 6 TON (5.4 MT), 66" (1.7 M) WIDE, ASPHALT COMPACTOR	6	1	7	1	0	0	10	25	0.6
	1.94	*0.20*	*0.00*	*0.08*	*0.00*	*0.00*	*2.45*	*4.67*	
GEN T10Z6240 TRACTOR ATTACHMENT, BLADE, POWER ANGLE, HYDRAULIC, 2.53 CY (1.93 M3) CAPACITY (ADD TO 101-135 HP (75-101 KW) DOZER, D-5)	490	50	0	20	0	0	621	1,181	253.1
	31.39	*4.35*	*27.51*	*3.76*	*0.00*	*0.00*	*57.76*	*124.78*	
GEN T15Z6560 TRACTOR, CRAWLER (DOZER), 251-300 HP (187-224 KW), POWERSHIFT, W/UNIVERSAL BLADE	17	2	15	2	0	0	32	69	0.6
	0.64	*0.05*	*0.00*	*0.00*	*0.00*	*0.00*	*0.55*	*1.25*	
GEN T40Z7010 TRUCK OPTION, FLATBED, 8' (2.4 M) x 16' (4.9 M) (ADD 25,000 LB (11,340 KG) GVW TRUCK)	23	2	0	0	0	0	20	46	36.5

Currency in US dollars

Description	Depr/Rntl	FCCM	Fuel	FOG	TireWear	TireRepair	EQRepair	Total	EQHours
	1.27	*0.09*	*0.00*	*0.00*	*0.00*	*0.00*	*1.23*	*2.60*	
GEN T40Z7090 TRUCK OPTION, DUMP BODY, REAR, 12 CY (9.2 M3) (ADD 45,000 LB (20,412 KG) GVW TRUCK)	5,517	384	0	0	0	0	5,340	11,242	4,330.9
	5.23	*0.51*	*0.00*	*0.50*	*1.93*	*0.33*	*3.67*	*12.17*	
GEN T45Z7240 TRUCK TRAILER, LOWBOY, 75 TON (68.0 MT), 3 AXLE (ADD TOWING TRUCK)	586	57	0	56	216	37	411	1,363	112.0
	5.93	*0.70*	*5.10*	*0.60*	*0.91*	*0.16*	*5.53*	*18.91*	
GEN T45Z7280 TRUCK TRAILER, WATER TANKER, 5,000 GAL (18,927 L) (ADD 50,000 LB (22,680 KG) GVW TRUCK)	3	0	3	0	0	0	3	10	0.6
	2.95	*0.32*	*18.82*	*2.75*	*0.52*	*0.09*	*3.09*	*28.54*	
GEN T50Z7400 TRUCK, HIGHWAY, 25,000 LB (11,340 KG) GVW, 4X2, 2 AXLE (ADD ACCESSORIES)	155	17	988	144	27	5	162	1,498	52.5
	7.13	*0.91*	*22.84*	*3.12*	*1.14*	*0.20*	*7.43*	*42.77*	
GEN T50Z7520 TRUCK, HIGHWAY, 55,000 LB (24,948 KG) GVW, 6X4, 3 AXLE (ADD ACCESSORIES)	798	102	2,558	349	128	22	832	4,791	112.0
	7.22	*0.92*	*16.95*	*2.32*	*1.14*	*0.20*	*6.81*	*35.55*	
GEN T50Z7580 TRUCK, HIGHWAY, 45,000 LB (20,412 KG) GVW, 6X4, 3 AXLE (ADD ACCESSORIES)	4	0	8	1	1	0	3	18	0.5
	6.64	*0.84*	*22.84*	*3.12*	*1.14*	*0.20*	*6.26*	*41.05*	
GEN T50Z7600 TRUCK, HIGHWAY, 50,000 LB (22,680 KG) GVW, 6X4, 3 AXLE (ADD ACCESSORIES)	4	0	13	2	1	0	3	23	0.6
	8.15	*1.02*	*29.47*	*4.03*	*0.75*	*0.13*	*7.28*	*50.83*	
GEN T50Z7710 DUMP TRUCK, HIGHWAY, 16 - 20 CY (12.2 - 15.3 M3) DUMP BODY, 75,000 LBS (34,000 KG) GVW, 2 AXLE, 6X4	320	40	1,155	158	30	5	285	1,993	39.2
	0.79	*0.04*	*2.65*	*0.31*	*0.00*	*0.00*	*1.24*	*5.02*	
GEN W25Z8605 WATER BLASTER, LOW PRESSURE, COLD WATER, 5.5 GPM (20.8 LPM) 1 NOZZLE, @ 3,500 PSI (24,132 KPA)	19	1	64	7	0	0	30	121	24.0
	1.04	*0.05*	*0.00*	*0.00*	*0.00*	*0.00*	*0.59*	*1.68*	
GEN XMEZ8815 LASER LEVEL FOR PIPES	1,165	56	0	0	0	0	661	1,882	1,120.0
	0.57	*0.04*	*0.00*	*1.00*	*0.00*	*0.00*	*0.70*	*2.31*	
GEN XMEZ9120 POST DRIVER, 8" (203 MM) MAX DIA POST, 30,000 LB (13,608 KG) IMPACT (ADD 20,000-35,000 LB (9,072-15,876 KG) GVW TRUCK)	1	0	0	2	0	0	2	6	2.4
	0.96	*0.04*	*0.14*	*0.07*	*0.00*	*0.00*	*2.47*	*3.68*	

Labor ID: Region 1 EQ ID: EP14R01 Currency in US dollars TRACES MII Version 4.2

Description	Depr/Rntl	FCCM	Fuel	FOG	TireWear	TireRepair	EQRepair	Total	EQHours
GEN XMEZ9520 CONCRETE VIBRATOR, 2.5" (63.5 MM) DIA, W/7.5 HP (5.6 KW) GENERATOR	9	0	1	1	0	0	22	33	9.0
	0.73	*0.08*	*0.00*	*1.00*	*0.13*	*0.01*	*0.60*	*2.55*	
GEN XMEZ9560 WATER TANK, 500 GAL (1,893 L) PORTABLE	6	1	0	8	1	0	5	21	8.1
	0.07	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.15*	*0.23*	
MAP P50GR003 PUMP, WATER, CENTRIFUGAL, TRASH, HOSE, SUCTION, 4" DIA X 20' WITH COUPLING (PER SECTION)	7	0	0	0	0	0	15	22	96.0
	0.06	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.13*	*0.20*	
MAP P50GR007 PUMP, WATER, CENTRIFUGAL, TRASH, HOSE, DISCH, 4" DIA X 50' WITH COUPLING (PER SECTION)	12	0	0	0	0	0	25	38	192.0
	6.28	*0.79*	*22.84*	*3.12*	*0.84*	*0.14*	*5.63*	*39.64*	
MAP T50XX029 TRUCK, HIGHWAY, 50,000 LBS GVW, 3 AXLE, 6X4 (CHASSIS ONLY-ADD OPTIONS)	27,217	3,433	98,921	13,515	3,618	624	24,366	171,693	4,330.9
	0.50	*0.22*	*0.16*	*0.07*	*0.00*	*0.00*	*0.63*	*1.58*	
NON XMDXX020 SMALL TOOLS	2,505	1,102	801	351	0	0	3,156	7,915	5,009.2
	0.31	*0.01*	*1.29*	*0.20*	*0.00*	*0.00*	*0.97*	*2.79*	
PTC C05Z1210 CHAINSAW, 24" - 42" (610-1,067 MM) BAR	23	1	96	15	0	0	72	207	74.3

Labor ID: Region 1 EQ ID: EP14R01 Currency in US dollars TRACES MII Version 4.2