LOWER CACHE CREEK, YOLO COUNTY, CA
CITY OF WOODLAND AND VICINITY

DRAFT FEASIBILITY REPORT
FOR POTENTIAL FLOOD DAMAGE
REDUCTION PROJECT

APPENDIX K

Cost Estimates

APPENDIX K

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COST ESTIMATES

Appendix K presents cost estimates developed for the plans evaluated in the feasibility study. Estimates were developed for five preliminary plans and three sub-plans and used to select two plans for further study. The two selected plans were then evaluated in terms of several design flows to allow project net benefits to be optimized for each plan.

Based upon the results of the screening of the preliminary plans and several refinements, the Lower Cache Creek Flood Barrier (LCCFB) Plan and the Modified Wide Setback Levee (MWSL) Plan were analyzed in more detailed evaluation. The costs for various design flows for each of these plans are presented in Tables K-1 through K-14.

Cost estimates of the right-of-way required for the selected plans were developed from data (cost per acre values) for the land use types found in the project area developed by the Corps Acquisition Branch. For preliminary planning purposes, market data (recent sales and current listings) of properties similar to those in the project area were examined to develop the cost per acre by land use values used in the study. The cost of lands and damages was assumed to be $3,500 per acre in the preliminary screening phase. Right-of-way costs were refined to evaluate the LCCFB and MWSL Plans and are indicated in the Real Estate Plan (Appendix F).

Non-Federal and Federal administrative costs to acquire the necessary real estate interests required for the LCCFB and MWSL Plans have been included in the draft feasibility report. These costs are based upon recent DWR experience with real estate acquisitions, costs, plus estimated Federal administrative review costs. These administrative costs were not considered in the preliminary screening phase.

Costs for Fish and Wildlife mitigation are based upon field surveys of the types and amounts of habitat affected by the respective plans multiplied by mitigation ratios and unit costs for various types of mitigation. Mitigation ratios were developed from consultations with Fish and Wildlife staff; unit costs are based upon recent Corps experience on other projects in the Sacramento area.

Cost estimates for Cultural Resource Preservation, Engineering, and Construction Management were assumed to be 1 percent, 12 percent and 8.5 percent, respectively, of the construction plus mitigation costs (Total Construction Cost) for the evaluation of both the preliminary and final plans. Cultural Resources Preservation costs do not include data recovery costs, which are expected to be small and will be determined at a later date.

While the costs for these plans reflect a 12-foot levee crown/patrol road width, the crown may vary in width up to 20 feet for ease and safety of maintenance operations. Crown widths between 12 and 20 feet have the same level of significance in potential environmental effects, as increases in width can be accommodated by corresponding reductions in the size of the temporary construction easement that parallels the base of the levee, without a change in the width of the project footprint. Related refinements in the

project cost for a levee crown up to 20 feet wide would be negligible and within the currently estimated contingency costs (less than $0.8 million, or 2 percent for the LCCFB Plan or $3.3 million, or 2 percent for the Modified Wide Setback Levee Plan). Crown widths will be refined for the selected plan, and related effects will be described in the Final Feasibility Report/EIS-EIR. Analyses of the effects of levee crown widths up to 20 feet are included in Appendixes F and the Draft EIS/EIR and are shown in Tables K-15 and K-16.

Table K-1

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN

53,000 cfs Design with Inlet Weir (Elev. 45') 2000' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
01	**LANDS AND DAMAGES[1]**	1	LS	8,577,420				**8,577,400**
02	**RELOCATIONS**							
	Utilities (3% of total construction cost)	3	%	610,746				610,700
	Mobilization & Demobilization	1	LS	250,000.00				250,000
	Building Floodproofing (Raising Homes)	25	EA	60,000.00	1,500,000	525,000	35%	2,025,000
	County Road 19B Raising							
	AC (asphalt concrete)	0	Ton	50.00	0	0	20%	0
	Aggregate Base Class II	0	Ton	20.00	0	0	20%	0
	Aggregate Subbase	0	Ton	15.00	0	0	20%	0
	Pulverize and Blend	0	SY	3.00	0	0	20%	0
	Striping	0	LF	1.50	0	0	20%	0
	Clear & Grub	0	AC	1,500.00	0	0	20%	0
	Culvert (18")	20	LF	35.00	700	140	20%	800
	Headwalls (sacked concrete slope protection)	1.2	CY	500.00	600.00	120	20%	700
	County Road 97A Raising							
	AC (asphalt concrete)	292	Ton	50.00	14,600	2,920	20%	17,500
	Aggregate Base Class II	874	Ton	20.00	17,480	3,496	20%	21,000
	Aggregate Subbase	0	Ton	15.00	0	0	20%	0
	Pulverize and Blend	208	SY	3.00	624	125	20%	700
	Striping	1,506	LF	1.50	2,259	452	20%	2,700
	Clear & Grub	0.23	AC	1,500.00	345	69	20%	400
	Culvert (36")	60	LF	85.00	5,100	1,020	20%	6,100
	Headwalls (sacked concrete slope protection)	1.3	CY	500.00	650.00	130	20%	800
	State Highway 16 Raising							
	AC (asphalt concrete)	670	Ton	50.00	33,500	6,700	20%	40,200
	Aggregate Base Class II	2,513	Ton	20.00	50,260	10,052	20%	60,300
	Aggregate Subbase	432	Ton	15.00	6,480	1,296	20%	7,800
	Pulverize and Blend	3,080	SY	3.00	9,240	1,848	20%	11,100
	Striping	2,310	LF	1.50	3,465	693	20%	4,200
	Clear & Grub	0.35	AC	1,500.00	525	105	20%	600
	Culvert (60")	80	LF	150.00	12,000	2,400	20%	14,400
	Headwalls (sacked concrete slope protection)	3.6	CY	500.00	1,800.00	360	20%	2,200
	County Road 99 Raising							

[1]Lands and damages costs are detailed in Appendix F, Real Estate Plan.

Table K-1
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN

53,000 cfs Design with Inlet Weir (Elev. 45') 2000' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	AC (asphalt concrete)	667	Ton	50.00	33,350	6,670	20%	40,000
	Aggregate Base Class II	2,001	Ton	20.00	40,020	8,004	20%	48,000
	Aggregate Subbase	7,165	Ton	15.00	107,475	21,495	20%	129,000
	Pulverize and Blend	4,089	SY	3.00	12,267	2,453	20%	14,700
	Striping	3,450	LF	1.50	5,175	1,035	20%	6,200
	Clear & Grub	0.52	AC	1,500.00	780	156	20%	900
	Culvert (2-60")	160	LF	150.00	24,000	4,800	20%	28,800
	Headwalls (sacked concrete slope protection)	6.0	CY	500.00	3,000.00	600	20%	3,600
	Frontage Road Dubach Field							
	AC (asphalt concrete)	131	Ton	50.00	6,550	1,310	20%	7,900
	Aggregate Base Class II	261	Ton	20.00	5,220	1,044	20%	6,300
	Aggregate Subbase	6,356	Ton	15.00	95,340	19,068	20%	114,400
	Pulverize and Blend	978	SY	3.00	2,934	587	20%	3,500
	Striping	1,200	LF	1.50	1,800	360	20%	2,200
	Clear & Grub	0.18	AC	1,500.00	270	54	20%	300
	Culvert (3-60")	120	LF	150.00	18,000	3,600	20%	21,600
	Headwalls (sacked concrete slope protection)	9.0	CY	500.00	4,500.00	900	20%	5,400
	Churchill Downs Raising							
	AC (asphalt concrete)	387	Ton	50.00	19,350	3,870	20%	23,200
	Aggregate Base Class II	1,450	Ton	20.00	29,000	5,800	20%	34,800
	Aggregate Subbase	1,363	Ton	15.00	20,445	4,089	20%	24,500
	Pulverize and Blend	1,778	SY	3.00	5,334	1,067	20%	6,400
	Striping	1,200	LF	1.50	1,800	360	20%	2,200
	Clear & Grub	0.18	AC	1,500.00	270	54	20%	300
	County Road 101 (Pioneer) Raising							
	AC (asphalt concrete)	1,044	Ton	50.00	52,200	10,440	20%	62,600
	Aggregate Base Class II	3,132	Ton	20.00	62,640	12,528	20%	75,200
	Aggregate Subbase	17,896	Ton	15.00	268,440	53,688	20%	322,100
	Pulverize and Blend	6,400	SY	3.00	19,200	3,840	20%	23,000
	Striping	5,400	LF	1.50	8,100	1,620	20%	9,700
	Clear & Grub	0.83	AC	1,500.00	1,245	249	20%	1,500
	Culvert (3-60")	240	LF	150.00	36,000	7,200	20%	43,200
	Headwalls (sacked concrete slope protection)	9.0	CY	500.00	4,500.00	900	20%	5,400
	County Road 102 Raising							
	AC (asphalt concrete)	2,480	Ton	50.00	124,000	24,800	20%	148,800
	Aggregate Base Class II	8,280	Ton	20.00	165,600	33,120	20%	198,700
	Aggregate Subbase	36,164	Ton	15.00	542,460	108,492	20%	651,000
	Pulverize and Blend	8,440	SY	3.00	25,320	5,064	20%	30,400

Table K-1
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN

53,000 cfs Design with Inlet Weir (Elev. 45') 2000' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Striping	5,700	LF	1.50	8,550	1,710	20%	10,300
	Clear & Grub	2	AC	1,500.00	3,000	600	20%	3,600
	Culvert (3-60")	360	LF	150.00	54,000	10,800	20%	64,800
	Headwalls (sacked concrete slope protection)	9.0	CY	500.00	4,500.00	900	20%	5,400
	Total Relocations							**5,257,100**
06	**FISH AND WILDLIFE MITIGATION[2]**	1	LS	1,353,000.00	1,353,000	244,000	18%	1,597,000
08	**ROADS**							
	Levee Patrol Roads - Levee (4" aggregate base)	8,876	TON	20.00	177,520	35,504	20%	213,000
09	**CHANNELS AND CANALS**							
	Mobilization & Demobilization	1	LS	250,000.00				0
	Clearing and Grubbing	31	AC	1,500.00	46,500.00	9,300	20%	55,800
	Excavation	133,334	CY	5.00	666,670	133,334	20%	800,000
	Seeding	27	AC	2,500.00	67,500	13,500	20%	81,000
	Reinforced Concrete Pipe (60")	1,350	LF	150.00	202,500	40,500	20%	243,000
	Bore and Jack (60" RCP, I-5))	750	LF	1,000.00	750,000	150,000	20%	900,000
	Bore and Jack (60" RCP, SH 113)	600	LF	1,000.00	600,000	120,000	20%	720,000
	Inlet and Outlet Structures (I-5 and SH-113)	4	EA	6,000.00	24,000	4,800	20%	28,800
	Box Culvert (West Levee into Settling Basin 3'x3')	150	LF	300.00	45,000	9,000	20%	54,000
	Box Culvert (LCCFB to City Drain, 3'x3')	1,800	LF	300.00	540,000	108,000	20%	648,000
	Inlet and Outlet Structures (West Levee, City Drain)	4	EA	6,000.00	24,000	4,800	20%	28,800
	Closure Structure (Slide Gates) for Box Culverts	2	EA	20,000.00	40,000	8,000	20%	48,000
	Flap Gates (for Box Culverts)	2	EA	5,500.00	11,000	2,200	20%	13,200
	Total Channels and Canals							**3,620,600**
11	**LEVEES AND FLOODWALLS**							
	Mobilization & Demobilization	1	LS	250,000.00				250,000
	Stop Log Structure - County Road 102							
	Concrete	61	CY	500.00	30,500	6,100	20%	36,600
	Reinforcing Steel	4,183	LB	0.80	3,346	669	20%	4,000
	Stop Log Structure - County Road 101 (Pioneer)							

[2]Fish and wildlife mitigation costs are detailed in Appendix I of the EIS/EIR.

Table K-1
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN

53,000 cfs Design with Inlet Weir (Elev. 45') 2000' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Concrete	0	CY	500.00	0	0	20%	0
	Reinforcing Steel	0	LB	0.80	0	0	20%	0
	Stop Log Structure - Highway 113							
	Concrete	120	CY	500.00	60,000	12,000	20%	72,000
	Reinforcing Steel	8,229	LB	0.80	6,583	1,317	20%	7,900
	Stop Log Structure - Frontage Rd. Dubach Field							
	Concrete	67	CY	500.00	33,500	6,700	20%	40,200
	Reinforcing Steel	4,595	LB	0.80	3,676	735	20%	4,400
	Stop Log Structure - Railroad Crossing (I-5)							
	Concrete	89	CY	500.00	44,500	8,900	20%	53,400
	Reinforcing Steel	6,103	LB	0.80	4,882	976	20%	5,900
	Stop Log Structure - County Road 99							
	Concrete	74	CY	500.00	37,000	7,400	20%	44,400
	Reinforcing Steel	5,075	LB	0.80	4,060	812	20%	4,900
	Levee--New Construction							
	Mobilization & Demobilization	1	LS	25,000.00	25,000	5,000	20%	30,000
	Levee Embankment	309,433	CY	5.00	1,547,165	309,433	20%	1,856,600
	Excavation for Inspection Trench	55,515	CY	5.00	277,575	55,515	20%	333,100
	Removal of Settling Basin West Levee (3000')	83,000	CY	2.50	207,500	41,500	20%	249,000
	Removal of Training Levee (Settling Basin) (5250')	166,250	CY	2.50	415,625	83,125	20%	498,800
	Clearing and Grubbing	49.0	AC	1,000.00	49,000	9,800	20%	58,800
	Stripping (6 Inches)	41,030	CY	1.50	61,545	12,309	20%	73,900
	Rip rap/Stone Slope Protection (water side of levee)	40,607	TON	28.00	1,136,996	227,399	20%	1,364,400
	Bedding (for Slope protection)	14,695	TON	22.00	323,290	64,658	20%	387,900
	Slope Protection Cover (Soil)	56,518	CY	5.00	282,590	56,518	20%	339,100
	Seeding	33.8	AC	2,500.00	84,500	16,900	20%	101,400
	Slurry Wall (from CR101 to west levee)	55200	SF	5.80	320,160	64,032	20%	384,200
	Rip rap/Stone Slope Protection (1500' of RR near I-5)	2,250	TON	28.00	63,000	12,600	20%	75,600
	Bedding (for Slope protection)	775	TON	22.00	17,050	3,410	20%	20,500
	West Levee Improvements							
	Slope Embankment (from 2:1 to 3:1)	52,270	CY	5.00	261,350	52,270	20%	313,600
	Rip rap/Stone Slope Protection	50,010	TON	28.00	1,400,280	280,056	20%	1,680,300
	Bedding (for Slope protection)	16,968	TON	22.00	373,296	74,659	20%	448,000

Table K-1
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN

53,000 cfs Design with Inlet Weir (Elev. 45') 2000' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Clearing and Grubbing	8.3	AC	1,000.00	8,300	1,660	20%	10,000
	Stripping (6 inches)	6661.0	CY	1.50	9,992	1,998	20%	12,000
	Slope Protection Cover (Soil)	33,328	CY	5.00	166,640	33,328	20%	200,000
	Seeding	7.5	AC	2,500.00	18,750	3,750	20%	22,500
	Rip rap/Stone Slope Protection - I-5 (n/s of LCCFB)	3,910	TON	28.00	109,480	21,896	20%	131,400
	Bedding (for Slope protection)	1,347	TON	22.00	29,634	5,927	20%	35,600
	Total Levee -- New Construction							**9,150,400**
15	**FLOOD CONTROL AND DIVERSION STRUCTURES**							
	Mobilization & Demobilization	1	LS	250,000.00				250,000
	Inlet Weir (2000 ft long)							
	Roller Compacted Concrete	8,743	CY	100.00	874,300	174,860	20%	1,049,200
	Conventional Concrete	1,778	CY	500.00	889,000	177,800	20%	1,066,800
	Rip rap/Stone Slope Protection	5,940	TON	28.00	166,320	33,264	20%	199,600
	Geotextile Filter Fabric	6,667	SY	3.00	20,001	4,000	20%	24,000
	Gravel Backfill	3,486	TON	22.00	76,692	15,338	20%	92,000
	Compacted Structural Backfill	1,186	CY	10.00	11,860	2,372	20%	14,200
	Excavation	5,333	CY	5.00	26,665	5,333	20%	32,000
	Total Levee -- New Construction							**2,727,800**
	TOTAL CONSTRUCTION COSTS (excludes Lands & Damages)							**22,565,900**
18	**CULTURAL RESOURCE PRESERVATION**	1	%					**225,700**
20	**PERMANENT OPERATING EQUIPMENT**							
	Flood Warning System	1	LS	$1,000,000.00	1,000,000	200,000	20%	**1,200,000**
30	**PLANNING, ENGINEERING & DESIGN**	12	%					**2,707,900**
31	**CONSTRUCTION MANAGEMENT**	8.5	%					**1,918,100**
	TOTAL FIRST COST							**37,195,000**

Table K-1
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN

INVESTMENT COST

53,000 cfs Design with Inlet Weir (Elev. 45') 2000' long, Ultimate Outlet Weir (Elev. 41')

Description	Estimated Quantity	Unit	Total Cost $
INTEREST DURING CONSTRUCTION			
Interest Rate	6.125	%	
Construction Period	2	YR	
Project First Costs			37,195,000
Interest during Construction			
At midyear (year 1.5, and .5)			2,530,000
Outlays 60% first year, 40% second year			
TOTAL INVESTMENT COST			39,725,400

ANNUAL COST

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST AND AMORTIZATION				
Interest Rate	6.125	%		
Amortization Period	50.0	YR		2,564,400
OPERATION AND MAINTENANCE				
LCCOB				48,000
Flood Warning System				25,000
County road damages				25,000
TOTAL ANNUAL COST				2,662,400

Table K-2

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN

70,000 cfs Design with Inlet Weir (Elev. 45') 2500' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
01	**LANDS AND DAMAGES**[1]	1	LS	8,577,420.00				**8,577,400**
02	**RELOCATIONS**							
	Utilities (3% of total construction cost)	3	%	670,725.00				670,700
	Mobilization & Demobilization	1	LS	250,000.00				250,000
	Building Floodproofing (Raising Homes)	25	EA	60,000.00	1,500,000	525,000	35%	2,025,000
	County Road 19B Raising							
	AC (asphalt concrete)	218	Ton	50.00	10,900	2,180	20%	13,100
	Aggregate Base Class II	0	Ton	20.00	0	0	20%	0
	Aggregate Subbase	42	Ton	15.00	630	126	20%	800
	Pulverize and Blend	667	SY	3.00	2,001	400	20%	2,400
	Striping	1,200	LF	1.50	1,800	360	20%	2,200
	Clear & Grub	0	AC	1,500.00	0	0	20%	0
	Culvert (18")	20	LF	35.00	700	140	20%	800
	Headwalls (sacked concrete Slope protection)	1.2	CY	500.00	600.00	120	20%	700
	County Road 97A Raising							
	AC (asphalt concrete)	389	Ton	50.00	19,450	3,890	20%	23,300
	Aggregate Base Class II	1,166	Ton	20.00	23,320	4,664	20%	28,000
	Aggregate Subbase	704	Ton	15.00	10,560	2,112	20%	12,700
	Pulverize and Blend	2,680	SY	3.00	8,040	1,608	20%	9,600
	Striping	2,010	LF	1.50	3,015	603	20%	3,600
	Clear & Grub	0.31	AC	1,500.00	465	93	20%	600
	Culvert (36")	60	LF	85.00	5,100	1,020	20%	6,100
	Headwalls (sacked concrete Slope protection)	1.3	CY	500.00	650.00	130	20%	800
	State Highway 16 Raising							
	AC (asphalt concrete)	836	Ton	50.00	41,800	8,360	20%	50,200
	Aggregate Base Class II	3,132	Ton	20.00	62,640	12,528	20%	75,200
	Aggregate Subbase	2,420	Ton	15.00	36,300	7,260	20%	43,600
	Pulverize and Blend	3,840	SY	3.00	11,520	2,304	20%	13,800
	Striping	2,880	LF	1.50	4,320	864	20%	5,200
	Clear & Grub	0.44	AC	1,500.00	660	132	20%	800
	Culvert (60")	80	LF	150.00	12,000	2,400	20%	14,400
	Headwalls (sacked concrete Slope protection)	3.6	CY	500.00	1,800.00	360	20%	2,200
	County Road 99 Raising							

[1]Lands and damages costs are detailed in Appendix F, Real Estate Plan.

Table K-2
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN

70,000 cfs Design with Inlet Weir (Elev. 45') 2500' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	AC (asphalt concrete)	667	Ton	50.00	33,350	6,670	20%	40,000
	Aggregate Base Class II	2,001	Ton	20.00	40,020	8,004	20%	48,000
	Aggregate Subbase	7,165	Ton	15.00	107,475	21,495	20%	129,000
	Pulverize and Blend	4,089	SY	3.00	12,267	2,453	20%	14,700
	Striping	3,450	LF	1.50	5,175	1,035	20%	6,200
	Clear & Grub	0.52	AC	1,500.00	780	156	20%	900
	Culvert (2-60")	160	LF	150.00	24,000	4,800	20%	28,800
	Headwalls (sacked concrete Slope protection)	6.0	CY	500.00	3,000.00	600	20%	3,600
	Frontage Road Dubach Field							
	AC (asphalt concrete)	131	Ton	50.00	6,550	1,310	20%	7,900
	Aggregate Base Class II	261	Ton	20.00	5,220	1,044	20%	6,300
	Aggregate Subbase	6,356	Ton	15.00	95,340	19,068	20%	114,400
	Pulverize and Blend	978	SY	3.00	2,934	587	20%	3,500
	Striping	1,200	LF	1.50	1,800	360	20%	2,200
	Clear & Grub	0.18	AC	1,500.00	270	54	20%	300
	Culvert (3-60")	120	LF	150.00	18,000	3,600	20%	21,600
	Headwalls (sacked concrete Slope protection)	9.0	CY	500.00	4,500.00	900	20%	5,400
	Churchill Downs Raising							
	AC (asphalt concrete)	387	Ton	50.00	19,350	3,870	20%	23,200
	Aggregate Base Class II	1,450	Ton	20.00	29,000	5,800	20%	34,800
	Aggregate Subbase	1,363	Ton	15.00	20,445	4,089	20%	24,500
	Pulverize and Blend	1,778	SY	3.00	5,334	1,067	20%	6,400
	Striping	1,200	LF	1.50	1,800	360	20%	2,200
	Clear & Grub	0.18	AC	1,500.00	270	54	20%	300
	County Road 101 (Pioneer) Raising							
	AC (asphalt concrete)	1,044	Ton	50.00	52,200	10,440	20%	62,600
	Aggregate Base Class II	3,132	Ton	20.00	62,640	12,528	20%	75,200
	Aggregate Subbase	17,896	Ton	15.00	268,440	53,688	20%	322,100
	Pulverize and Blend	6,400	SY	3.00	19,200	3,840	20%	23,000
	Striping	5,400	LF	1.50	8,100	1,620	20%	9,700
	Clear & Grub	0.83	AC	1,500.00	1,245	249	20%	1,500
	Culvert (3-60")	240	LF	150.00	36,000	7,200	20%	43,200
	Headwalls (sacked concrete Slope protection)	9.0	CY	500.00	4,500.00	900	20%	5,400
	County Road 102 Raising							
	AC (asphalt concrete)	2,480	Ton	50.00	124,000	24,800	20%	148,800
	Aggregate Base Class II	8,280	Ton	20.00	165,600	33,120	20%	198,700
	Aggregate Subbase	36,164	Ton	15.00	542,460	108,492	20%	651,000

Table K-2
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN

70,000 cfs Design with Inlet Weir (Elev. 45') 2500' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Pulverize and Blend	8,440	SY	3.00	25,320	5,064	20%	30,400
	Striping	5,700	LF	1.50	8,550	1,710	20%	10,300
	Clear & Grub	2	AC	1,500.00	2,610	522	20%	3,100
	Culvert (3-60")	360	LF	150.00	54,000	10,800	20%	64,800
	Headwalls (sacked concrete Slope protection)	9.0	CY	500.00	4,500.00	900	20%	5,400
	Total Relocations							**5,435,200**
06	**FISH AND WILDLIFE MITIGATION[2]**	1	LS	1,353,000.00	1,353,000	244,000	18%	**1,597,000**
08	**ROADS**							
	Levee Patrol Roads - Levee (4" aggregate base)	9,296	TON	20.00	185,920	37,184	20%	**223,100**
09	**CHANNELS AND CANALS**							
	Mobilization & Demobilization	1	LS	250,000.00				250,000
	Clearing and Grubbing	31	AC	1,500.00	46,500.00	9,300	20%	55,800
	Excavation	133,334	CY	5.00	666,670	133,334	20%	800,000
	Seeding	27	AC	2,500.00	67,500	13,500	20%	81,000
	Reinforced Concrete Pipe (60")	1,350	LF	150.00	202,500	40,500	20%	243,000
	Bore and Jack (60" RCP, I-5))	750	LF	1,000.00	750,000	150,000	20%	900,000
	Bore and Jack (60" RCP, SH 113)	600	LF	1,000.00	600,000	120,000	20%	720,000
	Inlet and Outlet Structures (I-5 and SH-113)	4	EA	6,000.00	24,000	4,800	20%	28,800
	Box Culvert (West Levee into Settling Basin 3'x3')	150	LF	300.00	45,000	9,000	20%	54,000
	Box Culvert (LCCFB to City Drain, 3'x3')	1,800	LF	300.00	540,000	108,000	20%	648,000
	Inlet and Outlet Structures (West Levee, City Drain)	4	EA	6,000.00	24,000	4,800	20%	28,800
	Closure Structure (Slide Gates) for Box Culverts	2	EA	20,000.00	40,000	8,000	20%	48,000
	Flap Gates (for Box Culverts)	2	EA	5,500.00	11,000	2,200	20%	13,200
	Total Channels and Canals							**3,870,600**
11	**LEVEES AND FLOODWALLS**							
	Mobilization & Demobilization	1	LS	250,000.00				250,000
	Stop Log Structure - County Road 102							
	Concrete	74	CY	500.00	37,000	7,400	20%	44,400
	Reinforcing Steel	5,075	LB	0.80	4,060	812	20%	4,900

[2]Fish and wildlife mitigation costs are detailed in Appendix I of the EIS/EIR.

Table K-2
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN

70,000 cfs Design with Inlet Weir (Elev. 45') 2500' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Stop Log Structure - County Road 101 (Pioneer)							
	Concrete	50	CY	500.00	25,000	5,000	20%	30,000
	Reinforcing Steel	3,429	LB	0.80	2,743	549	20%	3,300
	Stop Log Structure - Highway 113							
	Concrete	124	CY	500.00	62,000	12,400	20%	74,400
	Reinforcing Steel	8,503	LB	0.80	6,802	1,360	20%	8,200
	Stop Log Structure - Frontage Rd. Dubach Field							
	Concrete	72	CY	500.00	36,000	7,200	20%	43,200
	Reinforcing Steel	4,938	LB	0.80	3,950	790	20%	4,700
	Stop Log Structure - Railroad Crossing (I-5)							
	Concrete	94	CY	500.00	47,000	9,400	20%	56,400
	Reinforcing Steel	6,446	LB	0.80	5,157	1,031	20%	6,200
	Stop Log Structure - County Road 99							
	Concrete	79	CY	500.00	39,500	7,900	20%	47,400
	Reinforcing Steel	5,418	LB	0.80	4,334	867	20%	5,200
	Levee--New Construction							
	Mobilization & Demobilization	1	LS	25,000.00	25,000	5,000	20%	30,000
	Levee Embankment	391,967	CY	5.00	1,959,835	391,967	20%	2,351,800
	Excavation for Inspection Trench	66,081	CY	5.00	330,405	66,081	20%	396,500
	Removal of Settling Basin West Levee (3000')	83,000	CY	2.50	207,500	41,500	20%	249,000
	Removal of Training Levee (Settling Basin) (5250')	166,250	CY	2.50	415,625	83,125	20%	498,800
	Clearing and Grubbing	59.0	AC	1,000.00	59,000	11,800	20%	70,800
	Stripping (6 Inches)	47,663	CY	1.50	71,495	14,299	20%	85,800
	Slope Protection (water side of levee)	50,773	TON	28.00	1,421,644	284,329	20%	1,706,000
	Bedding (for Slope protection)	17,309	TON	22.00	380,798	76,160	20%	457,000
	Slope Protection Cover (Soil)	56,518	CY	5.00	282,590	56,518	20%	339,100
	Seeding	28.1	AC	2,500.00	70,250	14,050	20%	84,300
	Slurry Wall (from CR101 to west levee)	55200	SF	5.80	320,160	64,032	20%	384,200
	Slope protection (1500' of railroad near I-5)	2,250	TON	28.00	63,000	12,600	20%	75,600
	Bedding (for Slope protection)	775	TON	22.00	17,050	3,410	20%	20,500
	West Levee Improvements							
	Slope Embankment (from 2:1 to 3:1)	52,270	CY	5.00	261,350	52,270	20%	313,600

Table K-2
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN

70,000 cfs Design with Inlet Weir (Elev. 45') 2500' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Slope protection	50,010	TON	28.00	1,400,280	280,056	20%	1,680,300
	Bedding (for Slope protection)	16,968	TON	22.00	373,296	74,659	20%	448,000
	Clearing and Grubbing	8.3	AC	1,000.00	8,300	1,660	20%	10,000
	Stripping (6 inches)	6661.0	CY	1.50	9,992	1,998	20%	12,000
	Slope Protection Cover (Soil)	40,245	CY	5.00	201,225	40,245	20%	241,500
	Seeding	9.1	AC	2,500.00	22,750	4,550	20%	27,300
	Slope protection for I-5 (north and south of LCCFB)	3,910	TON	28.00	109,480	21,896	20%	131,400
	Bedding (for Slope protection)	1,347	TON	22.00	29,634	5,927	20%	35,600
	Total Levee -- New Construction							**10,227,400**
15	**FLOOD CONTROL AND DIVERSION STRUCTURES**							
	Mobilization & Demobilization	1	LS	250,000.00				250,000
	Inlet Weir (2500 ft long)							
	Roller Compacted Concrete	10,296	CY	100.00	1,029,600	205,920	20%	1,235,500
	Conventional Concrete	2,223	CY	500.00	1,111,500	222,300	20%	1,333,800
	Slope protection	7,425	TON	28.00	207,900	41,580	20%	249,500
	Geotextile Filter Fabric	8,334	SY	3.00	25,002	5,000	20%	30,000
	Gravel Backfill	4,367	TON	22.00	96,074	19,215	20%	115,300
	Compacted Structural Backfill	1,482	CY	10.00	14,820	2,964	20%	17,800
	Excavation	6,667	CY	5.00	33,335	6,667	20%	40,000
	Total Levee -- New Construction							**3,271,900**
	TOTAL CONSTRUCTION COSTS (excludes Lands & Damages)							**24,625,200**
18	**CULTURAL RESOURCE PRESERVATION**	1	%					**246,300**
20	**PERMANENT OPERATING EQUIPMENT**							
	Flood Warning System	1	LS	$1,000,000.00	1,000,000	200,000	20%	**1,200,000**
30	**PLANNING, ENGINEERING & DESIGN**	12	%					**2,955,000**
31	**CONSTRUCTION MANAGEMENT**	8.5	%					**2,093,100**
	TOTAL FIRST COST							**39,697,000**

Table K-2
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN

INVESTMENT COST

70,000 cfs Design with Inlet Weir (Elev. 45') 2500' long, Ultimate Outlet Weir (Elev. 41')

Description	Estimated Quantity	Unit	Total Cost $
INTEREST DURING CONSTRUCTION			
Interest Rate	6.125	%	
Construction Period	2	YR	
Project First Costs			39,697,000
Interest during Construction			
At midyear (year 1.5, and .5)			2,700,600
Outlays 60% first year, 40% second year			
TOTAL INVESTMENT COST			42,397,600

ANNUAL COST

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST AND AMORTIZATION				
Interest Rate	6.125	%		
Amortization Period	50.0	YR		2,736,000
OPERATION AND MAINTENANCE				
LCCOB				48,000
Flood Warning System				25,000
County road damages				25,000
TOTAL ANNUAL COST				2,834,900

Table K-3

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN (NED PLAN)

78,000 cfs Design with Inlet Weir (Elev. 45') 3000' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost, $
01	**LANDS AND DAMAGES[1]**	1	LS	8,577,420				**8,577,400**
02	**RELOCATIONS**							
	Utilities (3% of total construction cost)	3	%	701,322				701,300
	Mobilization & Demobilization	1	LS	250,000.00				250,000
	Building Floodproofing (Raising Homes)	25	EA	60,000.00	1,500,000	525,000	35%	2,025,000
	County Road 19B Raising							
	AC (asphalt concrete)	218	Ton	50.00	10,900	2,180	20%	13,100
	Aggregate Base Class II	0	Ton	20.00	0	0	20%	0
	Aggregate Subbase	42	Ton	15.00	630	126	20%	800
	Pulverize and Blend	667	SY	3.00	2,001	400	20%	2,400
	Striping	1,200	LF	1.50	1,800	360	20%	2,200
	Clear & Grub	0	AC	1,500.00	0	0	20%	0
	Culvert (18")	20	LF	35.00	700	140	20%	800
	Headwalls (sacked concrete Slope protection)	1.2	CY	500.00	600.00	120	20%	700
	County Road 97A Raising							
	AC (asphalt concrete)	389	Ton	50.00	19,450	3,890	20%	23,300
	Aggregate Base Class II	1,166	Ton	20.00	23,320	4,664	20%	28,000
	Aggregate Subbase	704	Ton	15.00	10,560	2,112	20%	12,700
	Pulverize and Blend	2,680	SY	3.00	8,040	1,608	20%	9,600
	Striping	2,010	LF	1.50	3,015	603	20%	3,600
	Clear & Grub	0.31	AC	1,500.00	465	93	20%	600
	Culvert (36")	60	LF	85.00	5,100	1,020	20%	6,100
	Headwalls (sacked concrete Slope protection)	1.3	CY	500.00	650.00	130	20%	800
	State Highway 16 Raising							
	AC (asphalt concrete)	836	Ton	50.00	41,800	8,360	20%	50,200
	Aggregate Base Class II	3,132	Ton	20.00	62,640	12,528	20%	75,200
	Aggregate Subbase	2,420	Ton	15.00	36,300	7,260	20%	43,600
	Pulverize and Blend	3,840	SY	3.00	11,520	2,304	20%	13,800
	Striping	2,880	LF	1.50	4,320	864	20%	5,200
	Clear & Grub	0.44	AC	1,500.00	660	132	20%	800
	Culvert (60")	80	LF	150.00	12,000	2,400	20%	14,400
	Headwalls (sacked concrete Slope protection)	3.6	CY	500.00	1,800.00	360	20%	2,200
	County Road 99 Raising							

[1]Lands and damages costs are detailed in Appendix F, Real Estate Plan.

Table K-3
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN (NED PLAN)

78,000 cfs Design with Inlet Weir (Elev. 45') 3000' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost, $
	AC (asphalt concrete)	667	Ton	50.00	33,350	6,670	20%	40,000
	Aggregate Base Class II	2,001	Ton	20.00	40,020	8,004	20%	48,000
	Aggregate Subbase	7,165	Ton	15.00	107,475	21,495	20%	129,000
	Pulverize and Blend	4,089	SY	3.00	12,267	2,453	20%	14,700
	Striping	3,450	LF	1.50	5,175	1,035	20%	6,200
	Clear & Grub	0.52	AC	1,500.00	780	156	20%	900
	Culvert (2-60")	160	LF	150.00	24,000	4,800	20%	28,800
	Headwalls (sacked concrete Slope protection)	6.0	CY	500.00	3,000.00	600	20%	3,600
	Frontage Road Dubach Field							
	AC (asphalt concrete)	131	Ton	50.00	6,550	1,310	20%	7,900
	Aggregate Base Class II	261	Ton	20.00	5,220	1,044	20%	6,300
	Aggregate Subbase	6,356	Ton	15.00	95,340	19,068	20%	114,400
	Pulverize and Blend	978	SY	3.00	2,934	587	20%	3,500
	Striping	1,200	LF	1.50	1,800	360	20%	2,200
	Clear & Grub	0.18	AC	1,500.00	270	54	20%	300
	Culvert (3-60")	120	LF	150.00	18,000	3,600	20%	21,600
	Headwalls (sacked concrete Slope protection)	9.0	CY	500.00	4,500.00	900	20%	5,400
	Churchill Downs Raising							
	AC (asphalt concrete)	387	Ton	50.00	19,350	3,870	20%	23,200
	Aggregate Base Class II	1,450	Ton	20.00	29,000	5,800	20%	34,800
	Aggregate Subbase	1,363	Ton	15.00	20,445	4,089	20%	24,500
	Pulverize and Blend	1,778	SY	3.00	5,334	1,067	20%	6,400
	Striping	1,200	LF	1.50	1,800	360	20%	2,200
	Clear & Grub	0.18	AC	1,500.00	270	54	20%	300
	County Road 101 (Pioneer) Raising							
	AC (asphalt concrete)	1,044	Ton	50.00	52,200	10,440	20%	62,600
	Aggregate Base Class II	3,132	Ton	20.00	62,640	12,528	20%	75,200
	Aggregate Subbase	17,896	Ton	15.00	268,440	53,688	20%	322,100
	Pulverize and Blend	6,400	SY	3.00	19,200	3,840	20%	23,000
	Striping	5,400	LF	1.50	8,100	1,620	20%	9,700
	Clear & Grub	0.83	AC	1,500.00	1,245	249	20%	1,500
	Culvert (3-60")	240	LF	150.00	36,000	7,200	20%	43,200
	Headwalls (sacked concrete Slope protection)	9.0	CY	500.00	4,500.00	900	20%	5,400
	County Road 102 Raising							
	AC (asphalt concrete)	2,480	Ton	50.00	124,000	24,800	20%	148,800
	Aggregate Base Class II	8,280	Ton	20.00	165,600	33,120	20%	198,700
	Aggregate Subbase	36,164	Ton	15.00	542,460	108,492	20%	651,000

Table K-3
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN (NED PLAN)

78,000 cfs Design with Inlet Weir (Elev. 45') 3000' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost, $
	Pulverize and Blend	8,440	SY	3.00	25,320	5,064	20%	30,400
	Striping	5,700	LF	1.50	8,550	1,710	20%	10,300
	Clear & Grub	2	AC	1,500.00	2,610	522	20%	3,100
	Culvert (3-60")	360	LF	150.00	54,000	10,800	20%	64,800
	Headwalls (sacked concrete Slope protection)	9.0	CY	500.00	4,500.00	900	20%	5,400
	Total Relocations							**5,465,800**
06	**FISH AND WILDLIFE MITIGATION[2]**	1	LS	1,353,000.00	1,353,000	244,000	18%	**1,597,000**
08	**ROADS**							
	Levee Patrol Roads - Levee (4" aggregate base)	9,296	TON	20.00	185,920	37,184	20%	**223,100**
09	**CHANNELS AND CANALS**							
	Mobilization & Demobilization	1	LS	250,000.00				250,000
	Clearing and Grubbing	31	AC	1,500.00	46,500.00	9,300	20%	55,800
	Excavation	133,334	CY	5.00	666,670	133,334	20%	800,000
	Seeding	27	AC	2,500.00	67,500	13,500	20%	81,000
	Reinforced Concrete Pipe (60")	1,350	LF	150.00	202,500	40,500	20%	243,000
	Bore and Jack (60" RCP, I-5))	750	LF	1,000.00	750,000	150,000	20%	900,000
	Bore and Jack (60" RCP, SH 113)	600	LF	1,000.00	600,000	120,000	20%	720,000
	Inlet and Outlet Structures (I-5 and SH-113)	4	EA	6,000.00	24,000	4,800	20%	28,800
	Box Culvert (West Levee into Settling Basin 3'x3')	150	LF	300.00	45,000	9,000	20%	54,000
	Box Culvert (LCCFB to City Drain, 3'x3')	1,800	LF	300.00	540,000	108,000	20%	648,000
	Inlet and Outlet Structures (West Levee, City Drain)	4	EA	6,000.00	24,000	4,800	20%	28,800
	Closure Structure (Slide Gates) for Box Culverts	2	EA	20,000.00	40,000	8,000	20%	48,000
	Flap Gates (for Box Culverts)	2	EA	5,500.00	11,000	2,200	20%	13,200
	Total Channels and Canals							**3,870,600**
11	**LEVEES AND FLOODWALLS**							
	Mobilization & Demobilization	1	LS	250,000.00				250,000
	Stop Log Structure - County Road 102							
	Concrete	74	CY	500.00	37,000	7,400	20%	44,400
	Reinforcing Steel	5,075	LB	0.80	4,060	812	20%	4,900

[2]Fish and wildlife mitigation costs are detailed in Appendix I of the EIS/EIR.

Table K-3
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN (NED PLAN)

78,000 cfs Design with Inlet Weir (Elev. 45') 3000' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost, $
	Stop Log Structure - County Road 101 (Pioneer)							
	Concrete	50	CY	500.00	25,000	5,000	20%	30,000
	Reinforcing Steel	3,429	LB	0.80	2,743	549	20%	3,300
	Stop Log Structure - Highway 113							
	Concrete	124	CY	500.00	62,000	12,400	20%	74,400
	Reinforcing Steel	8,503	LB	0.80	6,802	1,360	20%	8,200
	Stop Log Structure - Frontage Rd. Dubach Field							
	Concrete	72	CY	500.00	36,000	7,200	20%	43,200
	Reinforcing Steel	4,938	LB	0.80	3,950	790	20%	4,700
	Stop Log Structure - Railroad Crossing (I-5)							
	Concrete	94	CY	500.00	47,000	9,400	20%	56,400
	Reinforcing Steel	6,446	LB	0.80	5,157	1,031	20%	6,200
	Stop Log Structure - County Road 99							
	Concrete	79	CY	500.00	39,500	7,900	20%	47,400
	Reinforcing Steel	5,418	LB	0.80	4,334	867	20%	5,200
	Levee--New Construction							
	Mobilization & Demobilization	1	LS	25,000.00	25,000	5,000	20%	30,000
	Levee Embankment	440,995	CY	5.00	2,204,975	440,995	20%	2,646,000
	Excavation for Inspection Trench	72,922	CY	5.00	364,610	72,922	20%	437,500
	Removal of Settling Basin West Levee (3000')	83,000	CY	2.50	207,500	41,500	20%	249,000
	Removal of Training Levee (Settling Basin) (5250')	166,250	CY	2.50	415,625	83,125	20%	498,800
	Clearing and Grubbing	62.0	AC	1,000.00	62,000	12,400	20%	74,400
	Stripping (6 Inches)	49,428	CY	1.50	74,142	14,828	20%	89,000
	Slope Protection (water side of levee)	53,405	TON	28.00	1,495,340	299,068	20%	1,794,400
	Bedding (for Slope protection)	18,206	TON	22.00	400,532	80,106	20%	480,600
	Slope Protection Cover (Soil)	56,518	CY	5.00	282,590	56,518	20%	339,100
	Seeding	34	AC	2,500.00	85,000	17,000	20%	102,000
	Slurry Wall (from CR101 to west levee)	55200	SF	5.80	320,160	64,032	20%	384,200
	Slope protection (1500' of railroad near I-5)	2,250	TON	28.00	63,000	12,600	20%	75,600
	Bedding (for Slope protection)	775	TON	22.00	17,050	3,410	20%	20,500

Table K-3
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN (NED PLAN)

78,000 cfs Design with Inlet Weir (Elev. 45') 3000' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost, $
	West Levee Improvements							
	Slope Embankment (from 2:1 to 3:1)	52,270	CY	5.00	261,350	52,270	20%	313,600
	Slope protection	50,010	TON	28.00	1,400,280	280,056	20%	1,680,300
	Bedding (for Slope protection)	16,968	TON	22.00	373,296	74,659	20%	448,000
	Clearing and Grubbing	8.3	AC	1,000.00	8,300	1,660	20%	10,000
	Stripping (6 inches)	6661.0	CY	1.50	9,992	1,998	20%	12,000
	Slope Protection Cover (Soil)	43,099	CY	5.00	215,495	43,099	20%	258,600
	Seeding	9.7	AC	2,500.00	24,250	4,850	20%	29,100
	Slope protection for I-5 (north and south of LCCFB)	3,910	TON	28.00	109,480	21,896	20%	131,400
	Bedding (for Slope protection)	1,347	TON	22.00	29,634	5,927	20%	35,600
	Total Levee -- New Construction							**10,718,000**
15	**FLOOD CONTROL AND DIVERSION STRUCTURES**							
	Mobilization & Demobilization	1	LS	250,000.00	250,000	50,000	20%	300,000
	Inlet Weir (3000 ft long)							
	Roller Compacted Concrete	11,850	CY	100.00	1,185,000	237,000	20%	1,422,000
	Conventional Concrete	2,667	CY	500.00	1,333,500	266,700	20%	1,600,200
	Slope protection	8,910	TON	22.00	196,020	39,204	20%	235,200
	Geotextile Filter Fabric	10,000	SY	3.00	30,000	6,000	20%	36,000
	Gravel Backfill	5,248	TON	22.00	115,456	23,091	20%	138,500
	Compacted Structural Backfill	1,778	CY	10.00	17,780	3,556	20%	21,300
	Excavation	8,000	CY	5.00	40,000	8,000	20%	48,000
	Total Levee -- New Construction							**3,801,200**
	TOTAL CONSTRUCTION COSTS (excludes Lands & Damages)							**25,675,700**
18	**CULTURAL RESOURCE PRESERVATION**	1	%					**256,800**
20	**PERMANENT OPERATING EQUIPMENT**							
	Flood Warning System	1	LS	$1,000,000.00	1,000,000	200,000	20%	**1,200,000**

Table K-3
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN (NED PLAN)

78,000 cfs Design with Inlet Weir (Elev. 45') 3000' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost, $
30	**PLANNING, ENGINEERING & DESIGN**	12	%					**3,081,100**
31	**CONSTRUCTION MANAGEMENT**	8.5	%					**2,182,400**
	TOTAL FIRST COST							**40,973,400**

Table K-3
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN (NED PLAN)

INVESTMENT COST

78,000 cfs Design with Inlet Weir (Elev. 45') 3000' long, Ultimate Outlet Weir (Elev. 41')

Description	Estimated Quantity	Unit	Total Cost $
INTEREST DURING CONSTRUCTION			
Interest Rate	6.125	%	
Construction Period	2	YR	
Project First Costs			40,973,400
Interest during Construction			
At midyear (year 1.5, and .5)			2,787,400
Outlays 60% first year, 40% second year			
TOTAL INVESTMENT COST			43,760,800

ANNUAL COST

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST AND AMORTIZATION				
Interest Rate	6.125	%		
Amortization Period	50.0	YR		2,824,900
OPERATION AND MAINTENANCE				
LCCOB				48,000
Flood Warning System				25,000
County road damages				25,000
TOTAL ANNUAL COST				2,922,900

Table K-4

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN

91,000 cfs Design with Inlet Weir (Elev. 45') 3000' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost, $
01	**LANDS AND DAMAGES**[1]	1	LS	8,577,420.00				**8,577,400**
02	**RELOCATIONS**							
	Utilities (3% of total construction cost)	3	%	759,033.00				759,000
	Mobilization & Demobilization	1	LS	250,000.00	250,000	50,000	20%	300,000
	Building Floodproofing (Raising Homes)	25	EA	60,000.00	1,500,000	525,000	35%	2,025,000
	County Road 19B Raising							
	AC (asphalt concrete)	221	Ton	50.00	11,050	2,210	20%	13,300
	Aggregate Base Class II	623	Ton	20.00	12,460	2,492	20%	15,000
	Aggregate Subbase	1,703	Ton	15.00	25,545	5,109	20%	30,700
	Pulverize and Blend	1,267	SY	2.65	3,358	672	20%	4,000
	Striping	2,280	LF	1.00	2,280	456	20%	2,700
	Clear & Grub	0	AC	1,500.00	0	0	20%	0
	Culvert (18")	20	LF	35.00	700	140	20%	800
	Headwalls (sacked concrete slope protection)	1.2	CY	500.00	600	120	20%	700
	County Road 97A Raising							
	AC (asphalt concrete)	482	Ton	50.00	24,100	4,820	20%	28,900
	Aggregate Base Class II	1,444	Ton	20.00	28,880	5,776	20%	34,700
	Aggregate Subbase	2,092	Ton	15.00	31,380	6,276	20%	37,700
	Pulverize and Blend	3,320	SY	2.65	8,798	1,760	20%	10,600
	Striping	2,490	LF	1.00	2,490	498	20%	3,000
	Clear & Grub	0.38	AC	1,500.00	570	114	20%	700
	Culvert (36")	60	LF	85.00	5,100	1,020	20%	6,100
	Headwalls (sacked concrete slope protection)	1.3	CY	500.00	650	130	20%	800
	State Highway 16 Raising							
	AC (asphalt concrete)	1,001	Ton	50.00	50,050	10,010	20%	60,100
	Aggregate Base Class II	3,752	Ton	20.00	75,040	15,008	20%	90,000
	Aggregate Subbase	5,151	Ton	15.00	77,265	15,453	20%	92,700
	Pulverize and Blend	4,089	SY	2.65	10,836	2,167	20%	13,000
	Striping	3,450	LF	1.00	3,450	690	20%	4,100
	Clear & Grub	0.52	AC	1,500.00	780	156	20%	900
	Culvert (60")	80	LF	150.00	12,000	2,400	20%	14,400
	Headwalls (sacked concrete slope protection)	3.6	CY	500.00	1,800	360	20%	2,200
	County Road 99 Raising							

[1]Lands and damages costs are detailed in Appendix F, Real Estate Plan.

Table K-4
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN

91,000 cfs Design with Inlet Weir (Elev. 45') 3000' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost, $
	AC (asphalt concrete)	667	Ton	50.00	33,350	6,670	20%	40,000
	Aggregate Base Class II	2,001	Ton	20.00	40,020	8,004	20%	48,000
	Aggregate Subbase	7,165	Ton	15.00	107,475	21,495	20%	129,000
	Pulverize and Blend	4,089	SY	2.65	10,836	2,167	20%	13,000
	Striping	3,450	LF	1.00	3,450	690	20%	4,100
	Clear & Grub	0.52	AC	1,500.00	780	156	20%	900
	Culvert (2-60")	160	LF	150.00	24,000	4,800	20%	28,800
	Headwalls (sacked concrete slope protection)	6.0	CY	500.00	3,000	600	20%	3,600
	Frontage Road Dubach Field							
	AC (asphalt concrete)	131	Ton	50.00	6,550	1,310	20%	7,900
	Aggregate Base Class II	261	Ton	20.00	5,220	1,044	20%	6,300
	Aggregate Subbase	6,356	Ton	15.00	95,340	19,068	20%	114,400
	Pulverize and Blend	978	SY	2.65	2,592	518	20%	3,100
	Striping	1,200	LF	1.00	1,200	240	20%	1,400
	Clear & Grub	0.18	AC	1,500.00	270	54	20%	300
	Culvert (3-60")	120	LF	150.00	18,000	3,600	20%	21,600
	Headwalls (sacked concrete slope protection)	9.0	CY	500.00	4,500	900	20%	5,400
	Churchill Downs Raising							
	AC (asphalt concrete)	387	Ton	50.00	19,350	3,870	20%	23,200
	Aggregate Base Class II	1,450	Ton	20.00	29,000	5,800	20%	34,800
	Aggregate Subbase	1,363	Ton	15.00	20,445	4,089	20%	24,500
	Pulverize and Blend	1,778	SY	2.65	4,712	942	20%	5,700
	Striping	1,200	LF	1.00	1,200	240	20%	1,400
	Clear & Grub	0.18	AC	1,500.00	270	54	20%	300
	County Road 101 (Pioneer) Raising							
	AC (asphalt concrete)	1,044	Ton	50.00	52,200	10,440	20%	62,600
	Aggregate Base Class II	3,132	Ton	20.00	62,640	12,528	20%	75,200
	Aggregate Subbase	17,896	Ton	15.00	268,440	53,688	20%	322,100
	Pulverize and Blend	6,400	SY	2.65	16,960	3,392	20%	20,400
	Striping	5,400	LF	1.00	5,400	1,080	20%	6,500
	Clear & Grub	0.83	AC	1,500.00	1,245	249	20%	1,500
	Culvert (3-60")	240	LF	150.00	36,000	7,200	20%	43,200
	Headwalls (sacked concrete slope protection)	9.0	CY	500.00	4,500	900	20%	5,400
	County Road 102 Raising							
	AC (asphalt concrete)	2,480	Ton	50.00	124,000	24,800	20%	148,800
	Aggregate Base Class II	8,280	Ton	20.00	165,600	33,120	20%	198,700
	Aggregate Subbase	36,164	Ton	15.00	542,460	108,492	20%	651,000

Table K-4
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN

91,000 cfs Design with Inlet Weir (Elev. 45') 3000' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost, $
	Pulverize and Blend	8,440	SY	2.65	22,366	4,473	20%	26,800
	Striping	5,700	LF	1.00	5,700	1,140	20%	6,800
	Clear & Grub	2	AC	1,500.00	2,610	522	20%	3,100
	Culvert (3-60")	360	LF	150.00	54,000	10,800	20%	64,800
	Headwalls (sacked concrete slope protection)	9.0	CY	500.00	4,500	900	20%	5,400
	Total Relocations							**5,711,100**
06	**FISH AND WILDLIFE MITIGATION[2]**	1	LS	1,353,000.00	1.353.000	244,000	18%	**1,597,000**
08	**ROADS**							
	Levee Patrol Roads - Levee (4" aggregate base)	9,296	TON	20.00	185,920	37,184	20%	**223,100**
09	**CHANNELS AND CANALS**							
	Mobilization & Demobilization	1	LS	250,000.00	250,000	50,000	20%	300,000
	Clearing and Grubbing	31	AC	1,500.00	46,500	9,300	20%	55,800
	Excavation	133,334	CY	5.00	666,670	133,334	20%	800,000
	Seeding	27	AC	2,500.00	67,500	13,500	20%	81,000
	Reinforced Concrete Pipe (60")	1,350	LF	150.00	202,500	40,500	20%	243,000
	Bore and Jack (60" RCP, I-5))	750	LF	1,000.00	750,000	150,000	20%	900,000
	Bore and Jack (60" RCP, SH 113)	600	LF	1,000.00	600,000	120,000	20%	720,000
	Inlet and Outlet Structures (I-5 and SH-113)	4	EA	6,000.00	24,000	4,800	20%	28,800
	Box Culvert (West Levee into Settling Basin 3'x3')	150	LF	300.00	45,000	9,000	20%	54,000
	Box Culvert (LCCFB to City Drain, 3'x3')	1,800	LF	300.00	540,000	108,000	20%	648,000
	Inlet and Outlet Structures (West Levee, City Drain)	4	EA	6,000.00	24,000	4,800	20%	28,800
	Closure Structure (Slide Gates) for Box Culverts	2	EA	20,000.00	40,000	8,000	20%	48,000
	Flap Gates (for Box Culverts)	2	EA	5,500.00	11,000	2,200	20%	13,200
	Total Channels and Canals							**3,920,600**
11	**LEVEES AND FLOODWALLS**							
	Mobilization & Demobilization	1	LS	250,000.00	250,000	50,000	20%	300,000
	Stop Log Structure - County Road 102							
	Concrete	82	CY	500.00	41,000	8,200	20%	49,200
	Reinforcing Steel	5,620.00	LB	0.80	4,496	899	20%	5,400

[2]Fish and wildlife mitigation costs are detailed in Appendix I of the EIS/EIR.

Table K-4
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN

91,000 cfs Design with Inlet Weir (Elev. 45') 3000' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost, $
	Stop Log Structure - County Road 101 (Pioneer)							
	Concrete	61	CY	500.00	30,500	6,100	20%	36,600
	Reinforcing Steel	4,180	LB	0.80	3,344	669	20%	4,000
	Stop Log Structure - Highway 113							
	Concrete	128	CY	500.00	64,000	12,800	20%	76,800
	Reinforcing Steel	8,780	LB	0.80	7,024	1,405	20%	8,400
	Stop Log Structure - Frontage Rd. Dubach Field							
	Concrete	75	CY	500.00	37,500	7,500	20%	45,000
	Reinforcing Steel	5,150	LB	0.80	4,120	824	20%	4,900
	Stop Log Structure - Railroad Crossing (I-5)							
	Concrete	104	CY	500.00	52,000	10,400	20%	62,400
	Reinforcing Steel	7,130	LB	0.80	5,704	1,141	20%	6,800
	Stop Log Structure - County Road 99							
	Concrete	83	CY	500.00	41,500	8,300	20%	49,800
	Reinforcing Steel	5,690	LB	0.80	4,552	910	20%	5,500
	Levee--New Construction							
	Levee Embankment	466,296	CY	5.00	2,331,480	466,296	20%	2,797,800
	Excavation for Inspection Trench	77,472	CY	5.00	387,360	77,472	20%	464,800
	Removal of Settling Basin West Levee (3000')	83,000	CY	2.50	207,500	41,500	20%	249,000
	Removal of Training Levee (Settling Basin) (5250')	166,250	CY	2.50	415,625	83,125	20%	498,800
	Clearing and Grubbing	60.0	AC	1,000.00	60,000	12,000	20%	72,000
	Stripping (6 Inches)	48,335	CY	1.50	72,503	14,501	20%	87,000
	Slope Protection (water side of levee)	140,040	TON	22.00	3,080,880	616,176	20%	3,697,100
	Bedding (for riprap)	17,904	TON	22.00	393,888	78,778	20%	472,700
	Slope Protection Cover (Soil)	56,518	CY	5.00	282,590	56,518	20%	339,100
	Seeding	41.8	AC	2,500.00	104,500	20,900	20%	125,400
	Slurry Wall (from CR101 to west levee)	55200	SF	5.80	320,160	64,032	20%	384,200
	Slope Protection (1500' of railroad near I-5)	2,350	TON	22.00	51,700	10,340	20%	62,000
	Bedding (for riprap)	810	TON	22.00	17,820	3,564	20%	21,400
	West Levee Improvements							
	Slope Embankment (from 2:1 to 3:1)	52,270	CY	5.00	261,350	52,270	20%	313,600

Table K-4
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN

91,000 cfs Design with Inlet Weir (Elev. 45') 3000' long, Ultimate Outlet Weir (Elev. 41')

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost, $
	Slope Protection	50,010	TON	22.00	1,100,220	220,044	20%	1,320,300
	Bedding (for slope protection)	16,968	TON	22.00	373,296	74,659	20%	448,000
	Clearing and Grubbing	8.3	AC	1,000.00	8,300	1,660	20%	10,000
	Stripping (6 inches)	6661	CY	1.50	9,992	1,998	20%	12,000
	Slope Protection Cover (Soil)	44,080	CY	5.00	220,400	44,080	20%	264,500
	Seeding	9.9	AC	2,500.00	24,750	4,950	20%	29,700
	Slope Protection for I-5 (north and south of LCCFB)	2,250	TON	22.00	49,500	9,900	20%	59,400
	Bedding (for slope protection)	775	TON	22.00	17,050	3,410	20%	20,500
	Total Levee -- New Construction							**12,404,100**
15	**FLOOD CONTROL AND DIVERSION STRUCTURES**							
	Mobilization & Demobilization	1	LS	250,000.00	250,000	50,000	20%	300,000
	Inlet Weir (3000 ft long)							
	Roller Compacted Concrete	11,850	CY	100.00	1,185,000	237,000	20%	1,422,000
	Conventional Concrete	2,667	CY	500.00	1,333,500	266,700	20%	1,600,200
	Slope Protection	8,910	TON	22.00	196,020	39,204	20%	235,200
	Geotextile Filter Fabric	10,000	SY	3.00	30,000	6,000	20%	36,000
	Gravel Backfill	5,248	TON	22.00	115,456	23,091	20%	138,500
	Compacted Structural Backfill	1,778	CY	10.00	17,780	3,556	20%	21,300
	Excavation	8,000	CY	5.00	40,000	8,000	20%	48,000
	Total Levee -- New Construction							**3,801,200**
	TOTAL CONSTRUCTION COSTS (excludes Lands & Damages)							**27,657,100**
18	**CULTURAL RESOURCE PRESERVATION**	1	%					**276,600**
20	**PERMANENT OPERATING EQUIPMENT**							
	Flood Warning System	1	LS	$1,000,000.00	1,000,000	200,000	20%	**1,200,000**
30	**PLANNING, ENGINEERING & DESIGN**	12	%					**3,318,900**
31	**CONSTRUCTION MANAGEMENT**	8.5	%					**235,900**
	TOTAL FIRST COST							**43,380,900**

Table K-4
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN

INVESTMENT COST

91,000 cfs Design with Inlet Weir (Elev. 45') 3000' long, Ultimate Outlet Weir (Elev. 41')

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST DURING CONSTRUCTION				
Interest Rate	6.125	%		
Construction Period	2	YR		
Project First Costs				43,380,900
Interest during Construction				
At midyear (year 1.5, and .5)				2,951,000
Outlays 60% first year, 40% second year				
TOTAL INVESTMENT COST				46,332,000

ANNUAL COST

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST AND AMORTIZATION				
Interest Rate	6.125	%		
Amortization Period	50.0	YR		2,990,900
OPERATION AND MAINTENANCE				
LCCOB				48,000
Flood Warning System				25,000
County road damages				25,000
TOTAL ANNUAL COST				3,088,900

Table K-5

PRELIMINARY CURRENT WORKING ESTIMATE
NARROW SETBACK LEVEE PLAN

50,000k cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
01	LANDS AND DAMAGES[1]	1	LS	25,485,050				25,485,100
02	RELOCATIONS							
	Utilities (3% of Total First Cost)	3	%	2,160,000				2,160,000
	Road Realignments							
	County Roads 17B, 97A, and 97B							
	Mobilization & Demobilization	1	LS	66,500				66,500
	Asphaltic Concrete	1,310	TON	50	65,500	13,100	20%	78,600
	Aggregate Base, Class II	3,920	TON	20	78,400	15,680	20%	94,100
	Aggregate Subbase	50,090	TON	15	751,350	150,270	20%	901,600
	Demolish Existing Road	4,660	SY	4	18,640	3,728	20%	22,400
	Pulverize and Blend	41,940	SY	3	125,820	25,164	20%	151,000
	Striping	9,000	LF	1.50	13,500	2,700	20%	16,200
	Clear and Grubb	5.4	AC	1,500	8,100	1,620	20%	9,700
	Guard Rail	2,400	LF	35	84,000	16,800	20%	100,800
	Total Road Realignments							1,440,900
	Total Relocations							3,600,900
06	FISH AND WILDLIFE MITIGATION[2]	1	LS	34,800,000				34,800,000
08	ROADS							
	Mobilization & Demobilization	1	LS	34,300				34,300
	Patrol Roads (4" aggregate base)	28,600	TON	20	572,000	114,400	20%	686,400
	Total Project Roads							720,700
09	CHANNELS AND CANALS							
	Mobilization & Demobilization	1	LS	990,000				990,000
	Creek							
	Clearing and Grubbing (in-channel for rip rap)	45.7	AC	5,000	228,500	45,700	20%	274,200
	Clearing and Grubbing (in overbank for rip rap)	22.5	AC	1,500	33,750	6,750	20%	40,500
	Excavation (Layback channel slope and for rip rap)	156,900	CY	5	784,500	156,900	20%	941,400
	Rip Rap	354,300	TON	28	9,920,400	1,984,080	20%	11,904,500

[1]Lands and damages costs are detailed in Appendix F, Real Estate Plan.
[2]Fish and wildlife mitigation costs are detailed in Appendix I of the EIS/EIR.

Table K-5
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
NARROW SETBACK LEVEE PLAN

50,000k cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Bedding (for riprap)	102,400	TON	21	2,150,400	430,080	20%	2,580,500
	Stripping (for rip rap, 6")	54,200	CY	10	542,000	108,400	20%	650,400
	Gabions	15,870	CY	125	1,983,750	396,750	20%	2,380,500
	Concrete Lining	4,140	CY	275	1,138,500	227,700	20%	1,366,200
	Total Creek Channels							20,138,200
	Toe Drain							
	Excavation	51,000	CY	2	102,000	20,400	20%	122,400
	Reinforced Concrete Inlet and Outlet Transitions	227	CY	500	113,500	22,700	20%	136,200
	24"-Diameter RCP	2,000	LF	40	80,000	16,000	20%	96,000
	Seeding	3	AC	2,500	7,500	1,500	20%	9,000
	Total Toe Drain							363,600
	Total Channels and Canals							21,491,800
11	LEVEES AND FLOODWALLS							
	Mobilization & Demobilization	1	LS	560,000				560,000
	Degradation of Existing Levees							
	Stripping (6 Inches)	77,680	CY	1.50	116,520	23,304	20%	139,800
	Excavation (Includes training levee)	611,000	CY	2	1,222,000	244,400	20%	1,466,400
	Total Degradation of Levees							1,606,200
	Levee--New Construction							
	Levee Embankment	645,700	CY	5	3,228,500	645,700	20%	3,874,200
	Excavation for Inspection Trench	180,700	CY	5	903,500	180,700	20%	1,084,200
	Slurry Wall	494,000	SF	5.80	2,865,200	573,040	20%	3,438,200
	Clearing and Grubbing	65.5	AC	1,000	65,500	13,100	20%	78,600
	Stripping (6 Inches)	52,820	CY	1.50	79,230	15,846	20%	95,100
	Seeding	45.7	AC	2,500	114,250	22,850	20%	137,100
	Total Construction of New Levees							8,707,400
	Levee--Improvements							
	Mobilization & Demobilization	1	LS	15,000	15,000	3,000	20%	18,000
	Sheet Pile	10,400	SF	15	156,000	31,200	20%	187,200

Table K-5
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
NARROW SETBACK LEVEE PLAN

50,000k cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Total Levee Improvements							205,200
	Total Levees							11,078,800
	TOTAL CONSTRUCTION COSTS (excludes Lands & Damages)							71,692,200
18	CULTURAL RESOURCE PRESERVATION	1	%					716,900
30	PLANNING, ENGINEERING & DESIGN	12	%					8,603,100
31	CONSTRUCTION MANAGEMENT	8.5	%					6,093,800
	TOTAL FIRST COST							**112,591,100**

Table K-5
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
NARROW SETBACK LEVEE PLAN

INVESTMENT COST

50,000k cfs

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST DURING CONSTRUCTION				
Interest Rate	6.125	%		
Construction Period	2	YR		
Project First Costs				112,591,100
Interest during Construction				
At midyear (year 1.5, and .5)				7,659,400
Outlays 60% first year, 40% second year				
TOTAL INVESTMENT COST				120,250,500

ANNUAL COST

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST AND AMORTIZATION				
Interest Rate	6.125	%		
Amortization Period	50.0	YR		7,762,700
OPERATION AND MAINTENANCE				
Allowance (from DWR)				485,000
TOTAL ANNUAL COST				8,247,700

Table K-6

PRELIMINARY CURRENT WORKING ESTIMATE
NARROW SETBACK LEVEE PLAN

70,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
01	LANDS AND DAMAGES[1]	1	LS	25,485,050				25,485,100
02	RELOCATIONS							
	Utilities (3% of Total First Cost)	3	%	2,382,000				2,382,000
	Road Realignments							
	County Roads 17B, 97A, and 97B							
	Mobilization & Demobilization	1	LS	68,500				68,500
	Asphaltic Concrete	1,310	TON	50	65,500	13,100	20%	78,600
	Aggregate Base, Class II	3,920	TON	20	78,400	15,680	20%	94,100
	Aggregate Subbase	50,090	TON	15	751,350	150,270	20%	901,600
	Demolish Existing Road	4,660	SY	4	18,640	3,728	20%	22,400
	Pulverize and Blend	41,940	SY	3	125,820	25,164	20%	151,000
	Striping	9,000	LF	1.50	13,500	2,700	20%	16,200
	Clear and Grubb	5.4	AC	1,500	8,100	1,620	20%	9,700
	Guard Rail	2,400	LF	35	84,000	16,800	20%	100,800
	Total Road Realignments							1,442,900
	Total Relocations							3,824,900
06	FISH AND WILDLIFE MITIGATION[2]	1	LS	34,800,000				34,800,000
08	ROADS							
	Mobilization & Demobilization	1	LS	34,500				34,500
	Patrol Roads (4" aggregate base)	28,600	TON	20	572,000	114,400	20%	686,400
	Total Roads							720,900
09	CHANNELS AND CANALS							
	Mobilization & Demobilization	1	LS	1,000,000				1,000,000
	Creek							
	Clearing and Grubbing (in-channel for rip rap)	46.2	AC	5,000	231,000	46,200	20%	277,200
	Clearing and Grubbing (in overbank for rip rap)	22.6	AC	1,500	33,900	6,780	20%	40,700

[1]Lands and damages costs are detailed in Appendix F, Real Estate Plan.
[2]Fish and wildlife mitigation costs are detailed in Appendix I of the EIS/EIR.

Table K-6
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
NARROW SETBACK LEVEE PLAN

70,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Excavation (Layback channel slope and for rip rap)	158,300	CY	5	791,500	158,300	20%	949,800
	Rip Rap	360,200	TON	28	10,085,600	2,017,120	20%	12,102,700
	Bedding (for riprap)	104,000	TON	21	2,184,000	436,800	20%	2,620,800
	Stripping (for rip rap, 6")	54,600	CY	10	546,000	109,200	20%	655,200
	Gabions	15,870	CY	125	1,983,750	396,750	20%	2,380,500
	Concrete Lining	4,140	CY	275	1,138,500	227,700	20%	1,366,200
	Total Creek Channels							20,393,100
	Toe Drain							
	Excavation	51,000	CY	2	102,000	20,400	20%	122,400
	Reinforced Concrete Inlet and Outlet Transitions	227	CY	500	113,500	22,700	20%	136,200
	24"-Diameter RCP	2,000	LF	40	80,000	16,000	20%	96,000
	Seeding	3	AC	2,500	7,500	1,500	20%	9,000
	Total Toe Drain							363,600
	Total Channels and Canals							21,756,700
11	LEVEES AND FLOODWALLS							
	Mobilization and Demobilization	1	LS	890,000				890,000
	Degradation of Existing Levees							
	Stripping (6 Inches)	101,000	CY	1.50	151,500	30,300	20%	181,800
	Excavation (Includes training levee)	911,000	CY	2	1,822,000	364,400	20%	2,186,400
	Total Degradation of Levees							2,368,200
	Levee--New Construction							
	Levee Embankment	1,060,450	CY	5	5,302,250	1,060,450	20%	6,362,700
	Excavation for Inspection Trench	222,240	CY	5	1,111,200	222,240	20%	1,333,400
	Slurry Wall	494,000	SF	5.80	2,865,200	573,040	20%	3,438,200
	Clearing and Grubbing	89.6	AC	1,000	89,600	17,920	20%	107,500
	Stripping (6 Inches)	77,840	CY	1.50	116,760	23,352	20%	140,100
	Seeding	70.7	AC	2,500	176,750	35,350	20%	212,100
	Total Construction of New Levees							11,594,000

Table K-6
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
NARROW SETBACK LEVEE PLAN

70,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Levee--Improvements							
	Levee Embankment	23,800	CY	5	119,000	23,800	20%	142,800
	Sheet Pile	42,400	SF	15	636,000	127,200	20%	763,200
	Excavation for Inspection Trench	34,790	CY	5	173,950	34,790	20%	208,700
	Clearing and Grubbing	6.9	AC	1,000	6,900	1,380	20%	8,300
	Stripping (6 Inches)	15,410	CY	1.50	23,115	4,623	20%	27,700
	Seeding	3.1	AC	2,500	7,750	1,550	20%	9,300
	Total Levee--Improvements							1,160,000
	Total Levees							16,012,200
	TOTAL CONSTRUCTION COSTS (excludes Lands & Damages)							77,114,700
18	CULTURAL RESOURCE PRESERVATION	1	%					771,100
30	PLANNING, ENGINEERING & DESIGN	12	%					9,253,800
31	CONSTRUCTION MANAGEMENT	8.5	%					6,554,700
	TOTAL FIRST COST							**119,179,400**

Table K-6
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
NARROW SETBACK LEVEE PLAN

INVESTMENT COST

70,000 cfs

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST DURING CONSTRUCTION				
Interest Rate	6.125	%		
Construction Period	2	YR		
Project First Costs				119,179,400
Interest during Construction				
At midyear (year 1.5, and .5)				8,107,700
Outlays 60% first year, 40% second year				
TOTAL INVESTMENT COST				127,287,100

ANNUAL COST

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST AND AMORTIZATION				
Interest Rate	6.125	%		
Amortization Period	50.0	YR		8,216,900
OPERATION AND MAINTENANCE				
Allowance (from DWR)				485,000
TOTAL ANNUAL COST				8,701,900

Table K-7

PRELIMINARY CURRENT WORKING ESTIMATE
NARROW SETBACK LEVEE PLAN

90,000k cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
01	LANDS AND DAMAGES[1]	1	LS	25,485,050				25,485,100
02	RELOCATIONS							
	Utilities (3% of Total First Cost)	3	%	3,285,000				3,285,000
	Bridges							
	Mobilization & Demobilization	1	LS	830,000				830,000
	County Road 102 Bridge Replacement	15,000	SF	125	1,875,000	375,000	20%	2,250,000
	State Highway 113 Bridge Replacement	20,000	SF	125	2,500,000	500,000	20%	3,000,000
	County Road 99W Bridge Enlargement	11,020	SF	125	1,377,500	275,500	20%	1,653,000
	Interstate 5 Southbound Bridge Enlargement	14,400	SF	150	2,160,000	432,000	20%	2,592,000
	Interstate 5 Northbound Bridge Enlargement	12,000	SF	150	1,800,000	360,000	20%	2,160,000
	Excavation of Bridge Abutment/Causeway	41,667	CY	5	208,335	41,667	20%	250,000
	Pulverize and Blend	31,800	SY	3	95,400	19,080	20%	114,500
	Clear and Grub	7	AC	1,000	7,400	1,480	20%	8,900
	Remove Concrete Pavement	3,490	CY	80	279,200	55,840	20%	335,000
	Raise Bridge Ramps--Concrete	4,980	CY	100	498,000	99,600	20%	597,600
	Raise Bridge Ramps--Asphaltic Concrete	7,830	TON	50	391,500	78,300	20%	469,800
	Raise Bridge Ramps--Aggregate Base, Class II	24,440	TON	20	488,800	97,760	20%	586,600
	Raise Bridge Ramps--Embankment	105,480	TON	15	1,582,200	316,440	20%	1,898,600
	Striping	23,850	LF	1.50	35,775	7,155	20%	42,900
	Total Bridges							16,788,900
	Road Realignments							
	County Roads 17B, 97A, and 97B							
	Mobilization & Demobilization	1	LS	105,000				105,000
	Asphaltic Concrete	2,068	TON	50	103,400	20,680	20%	124,100
	Aggregate Base, Class II	6,200	TON	20	124,000	24,800	20%	148,800
	Aggregate Subbase	82,068	TON	15	1,231,020	246,204	20%	1,477,200
	Demolish Existing Road	5,860	SY	4	23,440	4,688	20%	28,100
	Pulverize and Blend	68,400	SY	3	205,200	41,040	20%	246,200
	Stripping	14,250	LF	1.50	21,375	4,275	20%	25,700
	Clear and Grubb	8.0	AC	1,500	12,000	2,400	20%	14,400

[1]Lands and damages costs are detailed in Appendix F, Real Estate Plan.

Table K-7
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
NARROW SETBACK LEVEE PLAN

90,000k cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Guard Rail	4,400	LF	35	154,000	30,800	20%	184,800
	Total Road Realignments							2,354,300
	Total Relocations							22,428,200
06	FISH AND WILDLIFE MITIGATION[2]	1	LS	34,800,000				34,800,000
08	ROADS							
	Mobilization & Demobilization	1	LS	205,000				205,000
	Patrol Roads (4" aggregate base)	28,600	TON	20	572,000	114,400	20%	686,400
	Bridges							
	Railroad Bridge Replacement	500	LF	5,500	2,750,000	550,000	20%	3,300,000
	Railroad Ballast	180	CY	60	10,800	2,160	20%	13,000
	Railroad Ties	1,070	LF	8	8,560	1,712	20%	10,300
	Railroad Track	800	LF	135	108,000	21,600	20%	129,600
	Total Bridges							3,452,900
	Total Roads							4,344,300
09	CHANNELS AND CANALS							
	Mobilization & Demobilization	1	LS	1,170,000				1,170,000
	Creek							
	Clearing and Grubbing (in-channel for rip rap)	49.7	AC	5,000	248,500	49,700	20%	298,200
	Clearing and Grubbing (in overbank for rip rap)	26.0	AC	1,500	39,000	7,800	20%	46,800
	Excavation (Layback channel slope and for rip rap)	169,700	CY	5	848,500	169,700	20%	1,018,200
	Rip Rap	398,700	TON	28	11,163,600	2,232,720	20%	13,396,300
	Bedding (for riprap)	115,200	TON	21	2,419,200	483,840	20%	2,903,000
	Stripping (for rip rap, 6")	60,200	CY	10	602,000	120,400	20%	722,400
	Gabions	15,870	CY	125	1,983,750	396,750	20%	2,380,500
	Concrete Lining	9,210	CY	275	2,532,750	506,550	20%	3,039,300
	Total Creek Channels							23,804,700

[2]Fish and wildlife mitigation costs are detailed in Appendix I of the EIS/EIR.

Table K-7
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
NARROW SETBACK LEVEE PLAN

90,000k cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Toe Drain							
	Excavation	51,000	CY	2	102,000	20,400	20%	122,400
	Reinforced Concrete Inlet and Outlet Transitions	227	CY	500	113,500	22,700	20%	136,200
	24"-Diameter RCP	2,000	LF	40	80,000	16,000	20%	96,000
	Seeding	3	AC	2,500	7,500	1,500	20%	9,000
	Total Toe Drain							363,600
	Total Channels and Canals							25,338,300
11	LEVEES AND FLOODWALLS							
	Mobilization & Demobilization	1	LS	1,190,000				1,190,000
	Degradation of Existing Levees							
	Stripping (6 Inches)	101,000	CY	1.50	151,500	30,300	20%	181,800
	Excavation (Includes training levee)	911,000	CY	2	1,822,000	364,400	20%	2,186,400
	Total Degradation of Levees							2,368,200
	Levee--New Construction							
	Levee Embankment	1,315,700	CY	5	6,578,500	1,315,700	20%	7,894,200
	Excavation for Inspection Trench	260,235	CY	5	1,301,175	260,235	20%	1,561,400
	Slurry Wall	494,000	SF	5.80	2,865,200	573,040	20%	3,438,200
	Clearing and Grubbing	103.3	AC	1,000	103,300	20,660	20%	124,000
	Stripping (6 Inches)	83,299	CY	1.50	124,949	24,990	20%	149,900
	Seeding	80.6	AC	2,500	201,500	40,300	20%	241,800
	Total Construction of New Levees							13,409,500
	Levee--Improvements							
	Levee Embankment	70,900	CY	5	354,500	70,900	20%	425,400
	Sheet Pile	59,680	SF	15	895,200	179,040	20%	1,074,200
	Excavation for Inspection Trench	50,200	CY	5	251,000	50,200	20%	301,200
	Clearing and Grubbing	9.6	AC	1,000	9,600	1,920	20%	11,500
	Stripping (6 Inches)	21,600	CY	1.50	32,400	6,480	20%	38,900
	Seeding	5.1	AC	2,500	12,750	2,550	20%	15,300
	Total Levee--Improvements							1,866,500

Table K-7
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
NARROW SETBACK LEVEE PLAN

90,000k cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Levee--Improvements to Settling Basin							
	Levee Embankment	141,800	CY	5	709,000	141,800	20%	850,800
	Rip Rap (Stock Pile and Reset)	87,000	TON	15	1,305,000	261,000	20%	1,566,000
	Bedding (for riprap)	2,450	TON	22	53,900	10,780	20%	64,700
								2,481,500
	Total Levees							21,315,700
	TOTAL CONSTRUCTION COSTS (excludes Lands & Damages)							108,226,500
18	CULTURAL RESOURCE PRESERVATION	1	%					1,082,300
30	PLANNING, ENGINEERING & DESIGN	12	%					12,987,200
31	CONSTRUCTION MANAGEMENT	8.5	%					9,199,300
	TOTAL FIRST COST							**156,980,400**

Table K-7
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
NARROW SETBACK LEVEE PLAN

INVESTMENT COST

90,000k cfs

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST DURING CONSTRUCTION				
Interest Rate	6.125	%		
Construction Period	2	YR		
Project First Costs				156,980,400
Interest during Construction				
At midyear (year 1.5, and .5)				10,679,100
Outlays 60% first year, 40% second year				
TOTAL INVESTMENT COST				167,659,500

ANNUAL COST

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST AND AMORTIZATION				
Interest Rate	6.125	%		
Amortization Period	50.0	YR		10,823,100
OPERATION AND MAINTENANCE				
Allowance (from DWR)				485,000
TOTAL ANNUAL COST				11,308,100

Table K-8

PRELIMINARY CURRENT WORKING ESTIMATE
WIDE SETBACK LEVEE PLAN

50,000k cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
01	LANDS AND DAMAGES[1]	1	LS	57,612,850				57,612,900
02	RELOCATIONS							
	Utilities (3% of Total First Cost)	3	%	1,434,000				1,434,000
	Road Realignments							
	County Roads 17, 18, 18A and 97A							
	Mobilization & Demobilization	1	LS	47,000				47,000
	Asphaltic Concrete	3,660	TON	50	183,000	36,600	20%	219,600
	Aggregate Base, Class II	10,970	TON	20	219,400	43,880	20%	263,300
	Aggregate Subbase	18,830	TON	15	282,450	56,490	20%	338,900
	Demolish Existing Road	0	SY	4	0	0	20%	0
	Pulverize and Blend	0	SY	3	0	0	20%	0
	Stripping	25,200	LF	1.50	37,800	7,560	20%	45,400
	Clear and Grubb	11.6	AC	1,500	17,400	3,480	20%	20,900
	Guard Rail	0	LF	35	0	0	20%	0
	Right of Way	11.6	AC	3,500	40,600	8,120	20%	48,700
	Total Road Realignments							983,800
	Total Relocations							2,417,800
06	FISH AND WILDLIFE MITIGATION[2]	1	LS	20,500,000				20,500,000
08	ROADS							
	Mobilization & Demobilization	1	LS	34,500				34,500
	Patrol Roads (4" aggregate base)	28,800	TON	20	576,000	115,200	20%	691,200
	Total Roads							725,700
09	CHANNELS AND CANALS							
	Mobilization & Demobilization	1	LS	505,000				505,000
	Creek							
	Clearing and Grubbing (in-channel for rip rap)	15.9	AC	5,000	79,500	15,900	20%	95,400
	Clearing and Grubbing (in overbank for rip rap)	19.4	AC	1,500	29,100	5,820	20%	34,900
	Excavation (Layback channel slope and for rip rap)	31,600	CY	5	158,000	31,600	20%	189,600

[1]Lands and damages costs are detailed in Appendix F, Real Estate Plan.
[2]Fish and wildlife mitigation costs are detailed in Appendix I of the EIS/EIR.

Table K-8
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
WIDE SETBACK LEVEE PLAN

50,000k cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Rip Rap	183,200	TON	28	5,129,600	1,025,920	20%	6,155,500
	Bedding (for riprap)	55,400	TON	21	1,163,400	232,680	20%	1,396,100
	Stripping (for rip rap, 6")	28,500	CY	10	285,000	57,000	20%	342,000
	Gabions	0	CY	125	0	0	20%	0
	Concrete Lining	4,140	CY	275	1,138,500	227,700	20%	1,366,200
	Total Creek Channels							9,579,700
	Toe Drain							
	Excavation	184,500	CY	2	369,000	73,800	20%	442,800
	Reinforced Concrete Inlet and Outlet Transitions	337	CY	500	168,500	33,700	20%	202,200
	24"-Diameter RCP	4,000	LF	40	160,000	32,000	20%	192,000
	Seeding	9.9	AC	2,500	24,750	4,950	20%	29,700
	Total Toe Drain							866,700
	Total Channels and Canals							10,951,400
11	LEVEES AND FLOODWALLS							
	Mobilization & Demobilization	1	LS	705,000				705,000
	Degradation of Existing Levees							
	Stripping (6 Inches)	99,700	CY	1.50	149,550	29,910	20%	179,500
	Excavation (Includes training levee)	930,200	CY	2	1,860,400	372,080	20%	2,232,500
	Total Degradation of Levees							2,412,000
	Levee--New Construction							
	Levee Embankment	941,700	CY	5	4,708,500	941,700	20%	5,650,200
	Excavation for Inspection Trench	250,100	CY	5	1,250,500	250,100	20%	1,500,600
	Slurry Wall	595500	SF	5.80	3,453,900	690,780	20%	4,144,700
	Clearing and Grubbing	89.2	AC	1,000	89,200	17,840	20%	107,000
	Stripping (6 Inches)	71,970	CY	1.50	107,955	21,591	20%	129,500
	Seeding	67.0	AC	2,500	167,500	33,500	20%	201,000
	Total Construction of New Levees							11,733,000
	Levee--Improvements							
	Mobilization & Demobilization		LS	25,000	0	0	20%	0

Table K-8
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
WIDE SETBACK LEVEE PLAN

50,000k cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Levee Embankment	1,020	CY	5	5,100	1,020	20%	6,100
	Sheet Pile	0	SF	15	0	0	20%	0
	Excavation for Inspection Trench	700	CY	5	3,500	700	20%	4,200
	Clearing and Grubbing	0.1	AC	1,000	100	20	20%	100
	Stripping (6 Inches)	230	CY	1.50	345	69	20%	400
	Seeding	0.1	AC	2,500	250	50	20%	300
	Total Levee--Improvements							11,100
	Total Levees							14,861,100
	TOTAL CONSTRUCTION COSTS (excludes Lands & Damages)							49,456,000
18	CULTURAL RESOURCE PRESERVATION	1	%					494,600
30	PLANNING, ENGINEERING & DESIGN	12	%					5,934,700
31	CONSTRUCTION MANAGEMENT	8.5	%					4,203,800
	TOTAL FIRST COST							**117,702,000**

Table K-8
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
WIDE SETBACK LEVEE PLAN

INVESTMENT COST

50,000k cfs

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST DURING CONSTRUCTION				
Interest Rate	6.125	%		
Construction Period	2	YR		
Project First Costs				117,702,000
Interest during Construction				
At midyear (year 1.5, and .5)				8,007,100
Outlays 60% first year, 40% second year				
TOTAL INVESTMENT COST				125,709,100

ANNUAL COST

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST AND AMORTIZATION				
Interest Rate	6.125	%		
Amortization Period	50.0	YR		8,115,000
OPERATION AND MAINTENANCE				
Allowance (from DWR)				415,000
TOTAL ANNUAL COST				8,530,000

Table K-9

PRELIMINARY CURRENT WORKING ESTIMATE
WIDE SETBACK LEVEE PLAN

70,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
01	LANDS AND DAMAGES[1]	1	LS	57,612,850				57,612,900
02	RELOCATIONS							
	Utilities (3% of Total First Cost)	3	%	1,566,000				1,566,000
	Road Realignments							
	County Roads 17, 18, 18A and 97A							
	Mobilization & Demobilization	1	LS	47,000				47,000
	Asphaltic Concrete	3,660	TON	50	183,000	36,600	20%	219,600
	Aggregate Base, Class II	10,970	TON	20	219,400	43,880	20%	263,300
	Aggregate Subbase	18,830	TON	15	282,450	56,490	20%	338,900
	Demolish Existing Road	0	SY	4	0	0	20%	0
	Pulverize and Blend	0	SY	3	0	0	20%	0
	Striping	25,200	LF	1.50	37,800	7,560	20%	45,400
	Clear and Grubb	11.6	AC	1,500	17,400	3,480	20%	20,900
	Guard Rail	0	LF	35	0	0	20%	0
	Right of Way	11.6	AC	3,500	40,600	8,120	20%	48,700
	Total Road Realignments							983,800
	Total Relocations							2,549,800
06	FISH AND WILDLIFE MITIGATION[2]	1	LS	20,500,000				20,500,000
08	ROADS							
	Mobilization & Demobilization	1	LS	34,500				34,500
	Patrol Roads (4" aggregate base)	28,800	TON	20	576,000	115,200	20%	691,200
	Total Roads							725,700
09	CHANNELS AND CANALS							
	Mobilization & Demobilization	1	LS	50,500				50,500
	Creek							
	Clearing and Grubbing (in-channel for rip rap)	15.9	AC	5,000	79,500	15,900	20%	95,400
	Clearing and Grubbing (in overbank for rip rap)	19.4	AC	1,500	29,100	5,820	20%	34,900
	Excavation (Layback channel slope and for rip rap)	31,600	CY	5	158,000	31,600	20%	189,600

[1]Lands and damages costs are detailed in Appendix F, Real Estate Plan.
[2]Fish and wildlife mitigation costs are detailed in Appendix I of the EIS/EIR.

Table K-9
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
WIDE SETBACK LEVEE PLAN

70,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Rip Rap	183,200	TON	28	5,129,600	1,025,920	20%	6,155,500
	Bedding (for riprap)	55,400	TON	21	1,163,400	232,680	20%	1,396,100
	Stripping (for rip rap, 6")	28,500	CY	10	285,000	57,000	20%	342,000
	Gabions	0	CY	125	0	0	20%	0
	Concrete Lining	4,140	CY	275	1,138,500	227,700	20%	1,366,200
	Total Creek Channels							9,579,700
	Toe Drain							
	Excavation	184,500	CY	2	369,000	73,800	20%	442,800
	Reinforced Concrete Inlet and Outlet Transitions	337	CY	500	168,500	33,700	20%	202,200
	24"-Diameter RCP	4,000	LF	40	160,000	32,000	20%	192,000
	Seeding	9.9	AC	2,500	24,750	4,950	20%	29,700
	Total Toe Drain							866,700
	Total Channels and Canals							10,496,900
11	LEVEES AND FLOODWALLS							
	Mobilization & Demobilization	1	LS	920,000				920,000
	Degradation of Existing Levees							
	Stripping (6 Inches)	123,000	CY	1.50	184,500	36,900	20%	221,400
	Excavation (Includes training levee)	1,230,900	CY	2	2,461,800	492,360	20%	2,954,200
	Total Degradation of Levees							3,175,600
	Levee--New Construction							
	Levee Embankment	1,438,700	CY	5	7,193,500	1,438,700	20%	8,632,200
	Excavation for Inspection Trench	277,300	CY	5	1,386,500	277,300	20%	1,663,800
	Slurry Wall	595500	SF	5.80	3,453,900	690,780	20%	4,144,700
	Clearing and Grubbing	113.1	AC	1,000	113,100	22,620	20%	135,700
	Stripping (6 Inches)	91,230	CY	1.50	136,845	27,369	20%	164,200
	Seeding	89.3	AC	2,500	223,250	44,650	20%	267,900
	Total Construction of New Levees							15,008,500
	Levee--Improvements							
	Mobilization & Demobilization		LS	25,000	0	0	20%	0

Table K-9
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
WIDE SETBACK LEVEE PLAN

70,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Levee Embankment	14,500	CY	5	72,500	14,500	20%	87,000
	Sheet Pile	0	SF	15	0	0	20%	0
	Excavation for Inspection Trench	13,200	CY	5	66,000	13,200	20%	79,200
	Clearing and Grubbing	2.9	AC	1,000	2,900	580	20%	3,500
	Stripping (6 Inches)	4,050	CY	1.50	6,075	1,215	20%	7,300
	Seeding	1.4	AC	2,500	3,500	700	20%	4,200
	Total Levee--Improvements							181,200
	Total Levees							19,285,300
	TOTAL CONSTRUCTION COSTS (excludes Lands & Damages)							53,557,700
18	CULTURAL RESOURCE PRESERVATION	1	%					535,600
30	PLANNING, ENGINEERING & DESIGN	12	%					6,426,900
31	CONSTRUCTION MANAGEMENT	8.5	%					4,552,400
	TOTAL FIRST COST							**122,685,500**

Table K-9
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
WIDE SETBACK LEVEE PLAN

INVESTMENT COST

70,000 cfs

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST DURING CONSTRUCTION				
Interest Rate	6.125	%		
Construction Period	2	YR		
Project First Costs				122,685,500
Interest during Construction				
At midyear (year 1.5, and .5)				8,346,200
Outlays 60% first year, 40% second year				
TOTAL INVESTMENT COST				131,031,700

ANNUAL COST

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST AND AMORTIZATION				
Interest Rate	6.125	%		
Amortization Period	50.0	YR		8,458,600
OPERATION AND MAINTENANCE				
Allowance (from DWR)				415,000
TOTAL ANNUAL COST				8,873,600

Table K-10

PRELIMINARY CURRENT WORKING ESTIMATE
WIDE SETBACK LEVEE PLAN

90,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
01	LANDS AND DAMAGES[1]	1	LS	57,612,850				57,612,900
02	RELOCATIONS							
	Utilities (3% of Total First Cost)	3	%	2,052,000				2,052,000
	Bridges							
	Mobilization & Demobilization	1	LS	515,000				515,000
	County Road 102 Bridge Replacement	15,000	SF	125	1,875,000	375,000	20%	2,250,000
	State Highway 113 Bridge Replacement	20,000	SF	125	2,500,000	500,000	20%	3,000,000
	County Road 99W Bridge Enlargement	0	SF	125	0	0	20%	0
	Interstate 5 Southbound Bridge Replacement	13,200	SF	150	1,980,000	396,000	20%	2,376,000
	Interstate 5 Northbound Bridge Enlargement	0	SF	150	0	0	20%	0
	Excavation of Bridge Abutment/Causeway	0	CY	5	0	0	20%	0
	Pulverize and Blend	20,600	SY	3	61,800	12,360	20%	74,200
	Clear and Grub	5	AC	1,000	4,800	960	20%	5,800
	Remove Concrete Pavement	0	CY	80	0	0	20%	0
	Raise Bridge Ramps--Concrete Pavement	0	CY	100	0	0	20%	0
	Raise Bridge Ramps--Asphaltic Concrete	5,940	TON	50	297,000	59,400	20%	356,400
	Raise Bridge Ramps--Aggregate Base, Class II	19,870	TON	20	397,400	79,480	20%	476,900
	Raise Bridge Ramps--Embankment	66,770	TON	15	1,001,550	200,310	20%	1,201,900
	Striping	15,450	LF	1.50	23,175	4,635	20%	27,800
	Total Bridges							10,284,000
	Road Realignments							
	County Roads 17, 18, 18A and 97A							
	Mobilization & Demobilization	1	LS	47,000				47,000
	Asphaltic Concrete	3,660	TON	50	183,000	36,600	20%	219,600
	Aggregate Base, Class II	10,970	TON	20	219,400	43,880	20%	263,300
	Aggregate Subbase	18,830	TON	15	282,450	56,490	20%	338,900
	Demolish Existing Road	0	SY	4	0	0	20%	0
	Pulverize and Blend	0	SY	3	0	0	20%	0
	Striping	25,200	LF	1.50	37,800	7,560	20%	45,400
	Clear and Grubb	11.6	AC	1,500	17,400	3,480	20%	20,900

[1]Lands and damages costs are detailed in Appendix F, Real Estate Plan.

Table K-10
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
WIDE SETBACK LEVEE PLAN

90,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Guard Rail	0	LF	35	0	0	20%	0
	Right of Way	11.6	AC	3,500	40,600	8,120	20%	48,700
	Total Road Realignments							983,800
	Total Relocations							13,319,800
06	FISH AND WILDLIFE MITIGATION[2]	1	LS	20,500,000				20,500,000
08	ROADS							
	Mobilization & Demobilization	1	LS	34,500				34,500
	Patrol Roads (4" aggregate base)	28,800	TON	20	576,000	115,200	20%	691,200
	Bridges							
	Railroad Bridge Replacement	0	LF	5,500	0	0	20%	0
	Total Bridges							0
	Total Roads							725,700
09	CHANNELS AND CANALS							
	Mobilization & Demobilization	1	LS	520,000				520,000
	Creek							
	Clearing and Grubbing (in-channel for rip rap)	15.9	AC	5,000	79,500	15,900	20%	95,400
	Clearing and Grubbing (in overbank for rip rap)	19.4	AC	1,500	29,100	5,820	20%	34,900
	Excavation (Layback channel slope and for rip rap)	31,600	CY	5	158,000	31,600	20%	189,600
	Rip Rap	183,200	TON	28	5,129,600	1,025,920	20%	6,155,500
	Bedding (for riprap)	55,400	TON	21	1,163,400	232,680	20%	1,396,100
	Stripping (for rip rap, 6")	28,500	CY	10	285,000	57,000	20%	342,000
	Gabions	0	CY	125	0	0	20%	0
	Concrete Lining	4,910	CY	275	1,350,250	270,050	20%	1,620,300
	Total Creek Channels							9,833,800
	Toe Drain							

[2]Fish and wildlife mitigation costs are detailed in Appendix I of the EIS/EIR.

Table K-10
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
WIDE SETBACK LEVEE PLAN

90,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Excavation	184,500	CY	2	369,000	73,800	20%	442,800
	Reinforced Concrete Inlet and Outlet Transitions	337	CY	500	168,500	33,700	20%	202,200
	24"-Diameter RCP	4,000	LF	40	160,000	32,000	20%	192,000
	Seeding	9.9	AC	2,500	24,750	4,950	20%	29,700
	Total Toe Drain							866,700
	Total Channels and Canals							11,220,500
11	LEVEES AND FLOODWALLS							
	Mobilization & Demobilization	1	LS	1,175,000				1,175,000
	Degradation of Existing Levees							
	Stripping (6 Inches)	123,000	CY	1.50	184,500	36,900	20%	221,400
	Excavation (Includes training levee)	1,230,900	CY	2	2,461,800	492,360	20%	2,954,200
	Total Degradation of Levees							3,175,600
	Levee--New Construction							
	Levee Embankment	1,823,500	CY	5	9,117,500	1,823,500	20%	10,941,000
	Excavation for Inspection Trench	297,000	CY	5	1,485,000	297,000	20%	1,782,000
	Slurry Wall	595500	SF	5.80	3,453,900	690,780	20%	4,144,700
	Clearing and Grubbing	131.1	AC	1,000	131,100	26,220	20%	157,300
	Stripping (6 Inches)	105,800	CY	1.50	158,700	31,740	20%	190,400
	Seeding	105.6	AC	2,500	264,000	52,800	20%	316,800
	Total Construction of New Levees							17,532,200
	Levee--Improvements							
	Levee Embankment	24,500	CY	5	122,500	24,500	20%	147,000
	Sheet Pile	0	SF	15	0	0	20%	0
	Excavation for Inspection Trench	13,500	CY	5	67,500	13,500	20%	81,000
	Clearing and Grubbing	2.9	AC	1,000	2,900	580	20%	3,500
	Stripping (6 Inches)	6,450	CY	1.50	9,675	1,935	20%	11,600
	Seeding	1.6	AC	2,500	4,000	800	20%	4,800
	Total Levee--Improvements							247,900

Table K-10
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
WIDE SETBACK LEVEE PLAN

90,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Levee--Improvements to Settling Basin							
	Levee Embankment	141,800	CY	5	709,000	141,800	20%	850,800
	Rip Rap (Stock Pile and Reset)	87,000	TON	15	1,305,000	261,000	20%	1,566,000
	Bedding (for riprap)	2,450	TON	22	53,900	10,780	20%	64,700
								2,481,500
	Total Levees							24,612,200
	TOTAL CONSTRUCTION COSTS (excludes Lands & Damages)							70,378,200
18	CULTURAL RESOURCE PRESERVATION	1	%					703,800
30	PLANNING, ENGINEERING & DESIGN	12	%					8,445,400
31	CONSTRUCTION MANAGEMENT	8.5	%					5,982,100
	TOTAL FIRST COST							**143,122,400**

Table K-10
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
WIDE SETBACK LEVEE PLAN

INVESTMENT COST

90,000 cfs

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST DURING CONSTRUCTION				
Interest Rate	6.125	%		
Construction Period	2	YR		
Project First Costs				143,122,400
Interest during Construction				
At midyear (year 1.5, and .5)				9,736,400
Outlays 60% first year, 40% second year				
TOTAL INVESTMENT COST				152,858,800

ANNUAL COST

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST AND AMORTIZATION				
Interest Rate	6.125	%		
Amortization Period	50.0	YR		9,867,600
OPERATION AND MAINTENANCE				
Allowance (from DWR)				415,000
TOTAL ANNUAL COST				10,282,600

Table K-11

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN

50,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
01	LANDS AND DAMAGES[1]	1	LS	48,647,300				48,647,300
02	RELOCATIONS							
	Utilities (3% of Total First Cost)	3	%	2,385,000				2,385,000
	Bridges							
	Mobilization & Demobilization	1	LS	1,975,000				1,975,000
	County Road 102 Bridge Replacement	30,000	SF	125	3,750,000	750,000	20%	4,500,000
	State Highway 113 Bridge Replacement	50,000	SF	125	6,250,000	1,250,000	20%	7,500,000
	County Road 99W Bridge Enlargement	38,000	SF	125	4,750,000	950,000	20%	5,700,000
	Interstate 5 Southbound Bridge Enlargement	48,000	SF	150	7,200,000	1,440,000	20%	8,640,000
	Interstate 5 Northbound Bridge Enlargement	40,000	SF	150	6,000,000	1,200,000	20%	7,200,000
	Excavation of Bridge Abutment/Causeway	41,667	CY	5	208,335	41,667	20%	250,000
	Pulverize and Blend	31,800	SY	3	95,400	19,080	20%	114,500
	Clear and Grub	7	AC	1,000	7,400	1,480	20%	8,900
	Remove Concrete Pavement	3,490	CY	80	279,200	55,840	20%	335,000
	Raise Bridge Ramps--Concrete Pavement	4,980	CY	100	498,000	99,600	20%	597,600
	Raise Bridge Ramps--Asphaltic Concrete	7,830	TON	50	391,500	78,300	20%	469,800
	Raise Bridge Ramps--Aggregate Base, Class II	24,440	TON	20	488,800	97,760	20%	586,600
	Raise Bridge Ramps--Embankment	105,480	TON	15	1,582,200	316,440	20%	1,898,600
	Striping	23,850	LF	1.50	35,775	7,155	20%	42,900
	Total Bridges							39,818,900
	Road Realignments							
	County Roads 17, 18, 18A and 97A							
	Mobilization & Demobilization	1	LS	47,000				47,000
	Asphaltic Concrete	3,660	TON	50	183,000	36,600	20%	219,600
	Aggregate Base, Class II	10,970	TON	20	219,400	43,880	20%	263,300
	Aggregate Subbase	18,830	TON	15	282,450	56,490	20%	338,900
	Demolish Existing Road	0	SY	4	0	0	20%	0
	Pulverize and Blend	0	SY	3	0	0	20%	0
	Stripping	25,200	LF	1.50	37,800	7,560	20%	45,400

[1]Lands and damages costs are detailed in Appendix F, Real Estate Plan.

Table K-11
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN

50,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Clear and Grubb	11.6	AC	1,500	17,400	3,480	20%	20,900
	Guard Rail	0	LF	35	0	0	20%	0
	Right of Way	11.6	AC	3,500	40,600	8,120	20%	48,700
	Total Road Realignments							983,800
	Total Relocations							43,187,700
06	FISH AND WILDLIFE MITIGATION[2]	1	LS	9,901,000				9,901,000
08	ROADS							
	Mobilization & Demobilization	1	LS	395,000				395,000
	Patrol Roads (4" aggregate base)	28,800	TON	20	576,000	115,200	20%	691,200
	Bridges							
	Railroad Bridge Replacement	1,000	LF	5,500	5,500,000	1,100,000	20%	6,600,000
	Railroad Ballast	180	CY	60	10,800	2,160	20%	13,000
	Railroad Ties	1,070	LF	8	8,560	1,712	20%	10,300
	Railroad Track	800	LF	135	108,000	21,600	20%	129,600
	Total Bridges							6,752,900
	Total Roads							7,839,100
09	CHANNELS AND CANALS							
	Mobilization & Demobilization	1	LS	235,000				235,000
	Creek							
	Clearing and Grubbing (in-channel for rip rap)	4.7	AC	5,000	23,500	4,700	20%	28,200
	Clearing and Grubbing (in overbank for rip rap)	0.2	AC	1,500	300	60	20%	400
	Excavation (Layback channel slope and for rip rap)	12,000	CY	5	60,000	12,000	20%	72,000
	Rip Rap	26,100	TON	28	730,800	146,160	20%	877,000
	Bedding (for riprap)	7,000	TON	21	147,000	29,400	20%	176,400
	Stripping (for rip rap, 6")	4,000	CY	10	40,000	8,000	20%	48,000
	Gabions	1,500	CY	125	187,500	37,500	20%	225,000
	Concrete Lining	4,140	CY	275	1,138,500	227,700	20%	1,366,200

[2]Fish and wildlife mitigation costs are detailed in Appendix I of the EIS/EIR.

Table K-11
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN

50,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Clearing and Grubbing (for Hardpoints)	1.7	AC	3,750	6,375	1,275	20%	7,700
	Excavation (for Hardpoints)	40,000	CY	5	200,000	40,000	20%	240,000
	Stone (for Hardpoints)	31,700	TON	22	697,400	139,480	20%	836,900
	Total Creek Channels							3,877,800
	Toe Drain							
	Excavation	184,500	CY	2	369,000	73,800	20%	442,800
	Reinforced Concrete Inlet and Outlet Transitions	337	CY	500	168,500	33,700	20%	202,200
	24"-Diameter RCP	4,000	LF	40	160,000	32,000	20%	192,000
	Seeding	9.9	AC	2,500	24,750	4,950	20%	29,700
	Total Toe Drain							866,700
	Total Channels and Canals							4,979,500
11	LEVEES AND FLOODWALLS							
	Mobilization & Demobilization	1	LS	700,000				700,000
	Degradation of Existing Levees							
	Stripping (6 Inches)	86,100	CY	1.50	129,150	25,830	20%	155,000
	Excavation (Includes training levee)	861,600	CY	2	1,723,200	344,640	20%	2,067,800
	Total Degradation of Levees							2,222,800
	Levee--New Construction							
	Levee Embankment	941,700	CY	5	4,708,500	941,700	20%	5,650,200
	Excavation for Inspection Trench	250,100	CY	5	1,250,500	250,100	20%	1,500,600
	Slurry Wall	595500	SF	5.80	3,453,900	690,780	20%	4,144,700
	Clearing and Grubbing	89.2	AC	1,000	89,200	17,840	20%	107,000
	Stripping (6 Inches)	71,970	CY	1.50	107,955	21,591	20%	129,500
	Seeding	67.0	AC	2,500	167,500	33,500	20%	201,000
	Total Construction of New Levees							11,733,000
	Levee--Improvements							
	Levee Embankment	1,020	CY	5	5,100	1,020	20%	6,100
	Sheet Pile	0	SF	15	0	0	20%	0

Table K-11
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN

50,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Excavation for Inspection Trench	700	CY	5	3,500	700	20%	4,200
	Clearing and Grubbing	0.1	AC	1,000	100	20	20%	100
	Stripping (6 Inches)	230	CY	1.50	345	69	20%	400
	Seeding	0.1	AC	2,500	250	50	20%	300
	Total Levee--Improvements							11,100
	Total Levees							14,666,900
	TOTAL CONSTRUCTION COSTS (excludes Lands & Damages)							80,574,200
18	CULTURAL RESOURCE PRESERVATION	1	%					805,700
30	PLANNING, ENGINEERING & DESIGN	12	%					9,668,900
31	CONSTRUCTION MANAGEMENT	8.5	%					6,848,800
	TOTAL FIRST COST							**146,544,900**

Table K-11
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN

INVESTMENT COST

50,000 cfs

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST DURING CONSTRUCTION				
Interest Rate	6.125	%		
Construction Period	2	YR		
Project First Costs				146,544,900
Interest during Construction				
At midyear (year 1.5, and .5)				9,969,300
Outlays 60% first year, 40% second year				
TOTAL INVESTMENT COST				156,514,200

ANNUAL COST

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST AND AMORTIZATION				
Interest Rate	6.125	%		
Amortization Period	50.0	YR		10,103,600
OPERATION AND MAINTENANCE				
Allowance (from DWR)				415,000
TOTAL ANNUAL COST				10,518,600

Table K-12

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN

70,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
01	LANDS AND DAMAGES[1]	1	LS	48,647,300				48,647,300
02	RELOCATIONS							
	Utilities (3% of Total First Cost)	3	%	2,505,000				2,505,000
	Bridges							
	Mobilization & Demobilization	1	LS	1,975,000				1,975,000
	County Road 102 Bridge Replacement	30,000	SF	125	3,750,000	750,000	20%	4,500,000
	State Highway 113 Bridge Replacement	50,000	SF	125	6,250,000	1,250,000	20%	7,500,000
	County Road 99W Bridge Enlargement	38,000	SF	125	4,750,000	950,000	20%	5,700,000
	Interstate 5 Southbound Bridge Enlargement	48,000	SF	150	7,200,000	1,440,000	20%	8,640,000
	Interstate 5 Northbound Bridge Enlargement	40,000	SF	150	6,000,000	1,200,000	20%	7,200,000
	Excavation of Bridge Abutment/Causeway	41,667	CY	5	208,335	41,667	20%	250,000
	Pulverize and Blend	31,800	SY	3	95,400	19,080	20%	114,500
	Clear and Grub	7	AC	1,000	7,400	1,480	20%	8,900
	Remove Concrete Pavement	3,490	CY	80	279,200	55,840	20%	335,000
	Raise Bridge Ramps--Concrete Pavement	4,980	CY	100	498,000	99,600	20%	597,600
	Raise Bridge Ramps--Asphaltic Concrete	7,830	TON	50	391,500	78,300	20%	469,800
	Raise Bridge Ramps--Aggregate Base, Class II	24,440	TON	20	488,800	97,760	20%	586,600
	Raise Bridge Ramps--Embankment	105,480	TON	15	1,582,200	316,440	20%	1,898,600
	Striping	23,850	LF	1.50	35,775	7,155	20%	42,900
	Total Bridges							39,818,900
	Road Realignments							
	County Roads 17, 18, 18A and 97A							
	Mobilization & Demobilization	1	LS	47,000				47,000
	Asphaltic Concrete	3,660	TON	50	183,000	36,600	20%	219,600
	Aggregate Base, Class II	10,970	TON	20	219,400	43,880	20%	263,300
	Aggregate Subbase	18,830	TON	15	282,450	56,490	20%	338,900
	Demolish Existing Road	0	SY	4	0	0	20%	0
	Pulverize and Blend	0	SY	3	0	0	20%	0
	Striping	25,200	LF	1.50	37,800	7,560	20%	45,400
	Clear and Grubb	11.6	AC	1,500	17,400	3,480	20%	20,900

[1]Lands and damages costs are detailed in Appendix F, Real Estate Plan.

Table K-12
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN

70,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Guard Rail	0	LF	35	0	0	20%	0
	Right of Way	11.6	AC	3,500	40,600	8,120	20%	48,700
	Total Road Realignments							983,800
	Total Relocations							43,307,700
06	FISH AND WILDLIFE MITIGATION[2]	1	LS	9,901,000				9,901,000
08	ROADS							
	Mobilization & Demobilization	1	LS	395,000				395,000
	Patrol Roads (4" aggregate base)	28,600	TON	20	572,000	114,400	20%	686,400
	Bridges							
	Railroad Bridge Replacement	1,000	LF	5,500	5,500,000	1,100,000	20%	6,600,000
	Railroad Ballast	180	CY	60	10,800	2,160	20%	13,000
	Railroad Ties	1,070	LF	8	8,560	1,712	20%	10,300
	Railroad Track	800	LF	135	108,000	21,600	20%	129,600
	Total Bridges							6,752,900
	Total Roads							7,834,300
09	CHANNELS AND CANALS							
	Mobilization & Demobilization	1	LS	235,000				235,000
	Creek							
	Clearing and Grubbing (in-channel for rip rap)	4.7	AC	5,000	23,500	4,700	20%	28,200
	Clearing and Grubbing (in overbank for rip rap)	0.2	AC	1,500	300	60	20%	400
	Excavation (Layback channel slope and for rip rap)	12,000	CY	5	60,000	12,000	20%	72,000
	Rip Rap	26,100	TON	28	730,800	146,160	20%	877,000
	Bedding (for riprap)	7,000	TON	21	147,000	29,400	20%	176,400
	Stripping (for rip rap, 6")	4,000	CY	10	40,000	8,000	20%	48,000
	Gabions	1,500	CY	125	187,500	37,500	20%	225,000
	Concrete Lining	4,140	CY	275	1,138,500	227,700	20%	1,366,200

[2]Fish and wildlife mitigation costs are detailed in Appendix I of the EIS/EIR.

Table K-12
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN

70,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Clearing and Grubbing (for Hardpoints)	1.7	AC	3,750	6,375	1,275	20%	7,700
	Excavation (for Hardpoints)	40,000	CY	5	200,000	40,000	20%	240,000
	Stone (for Hardpoints)	31,700	TON	22	697,400	139,480	20%	836,900
	Total Creek Channels							3,877,800
	Toe Drain							
	Excavation	184,500	CY	2	369,000	73,800	20%	442,800
	Reinforced Concrete Inlet and Outlet Transitions	337	CY	500	168,500	33,700	20%	202,200
	24"-Diameter RCP	4,000	LF	40	160,000	32,000	20%	192,000
	Seeding	9.9	AC	2,500	24,750	4,950	20%	29,700
	Total Toe Drain							866,700
	Total Channels and Canals							4,979,500
11	LEVEES AND FLOODWALLS							
	Mobilization & Demobilization	1	LS	870,000				870,000
	Degradation of Existing Levees							
	Stripping (6 Inches)	86,100	CY	1.50	129,150	25,830	20%	155,000
	Excavation (Includes training levee)	861,600	CY	2	1,723,200	344,640	20%	2,067,800
	Total Degradation of Levees							2,222,800
	Levee--New Construction							
	Levee Embankment	1,438,700	CY	5	7,193,500	1,438,700	20%	8,632,200
	Excavation for Inspection Trench	277,300	CY	5	1,386,500	277,300	20%	1,663,800
	Slurry Wall	595500	SF	5.80	3,453,900	690,780	20%	4,144,700
	Clearing and Grubbing	113.1	AC	1,000	113,100	22,620	20%	135,700
	Stripping (6 Inches)	91,230	CY	1.50	136,845	27,369	20%	164,200
	Seeding	89.3	AC	2,500	223,250	44,650	20%	267,900
	Total Construction of New Levees							15,008,500
	Levee--Improvements							
	Levee Embankment	14,500	CY	5	72,500	14,500	20%	87,000
	Sheet Pile	0	SF	15	0	0	20%	0
	Excavation for Inspection Trench	13,200	CY	5	66,000	13,200	20%	79,200

Table K-12
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN

70,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Clearing and Grubbing	2.9	AC	1,000	2,900	580	20%	3,500
	Stripping (6 Inches)	4,050	CY	1.50	6,075	1,215	20%	7,300
	Seeding	1.4	AC	2,500	3,500	700	20%	4,200
	Total Levee--Improvements							181,200
	Total Levees							18,282,500
	TOTAL CONSTRUCTION COSTS (excludes Lands & Damages)							84,305,000
18	CULTURAL RESOURCE PRESERVATION	1	%					843,100
30	PLANNING, ENGINEERING & DESIGN	12	%					10,116,600
31	CONSTRUCTION MANAGEMENT	8.5	%					7,165,900
	TOTAL FIRST COST							**151,077,900**

Table K-12
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN

INVESTMENT COST

70,000 cfs

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST DURING CONSTRUCTION				
Interest Rate	6.125	%		
Construction Period	2	YR		
Project First Costs				151,077,900
Interest during Construction				
At midyear (year 1.5, and .5)				10,277,600
Outlays 60% first year, 40% second year				
TOTAL INVESTMENT COST				161,355,500

ANNUAL COST

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST AND AMORTIZATION				
Interest Rate	6.125	%		
Amortization Period	50.0	YR		10,416,100
OPERATION AND MAINTENANCE				
Allowance (from DWR)				415,000
TOTAL ANNUAL COST				10,831,100

Table K-13

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN

78,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
01	LANDS AND DAMAGES[1]	1	LS	48,647,300				48,647,300
02	RELOCATIONS							
	Utilities (3% of Total First Cost)	3	%	2,505,000				2,505,000
	Bridges							
	Mobilization & Demobilization	1	LS	1,975,000				1,975,000
	County Road 102 Bridge Replacement	30,000	SF	125.00	3,750,000.00	750,000	20%	4,500,000
	State Highway 113 Bridge Replacement	50,000	SF	125.00	6,250,000.00	1,250,000	20%	7,500,000
	County Road 99W Bridge Enlargement	38,000	SF	125.00	4,750,000	950,000	20%	5,700,000
	Interstate 5 Southbound Bridge Enlargement	48,000	SF	150.00	7,200,000	1,440,000	20%	8,640,000
	Interstate 5 Northbound Bridge Enlargement	40,000	SF	150.00	6,000,000	1,200,000	20%	7,200,000
	Excavation of Bridge Abutment/Causeway	41,667	CY	5.00	208,335	41,667	20%	250,000
	Pulverize and Blend	31,800	SY	3.00	95,400	19,080	20%	114,500
	Clear and Grub	7	AC	1,000.00	7,400	1,480	20%	8,900
	Remove Concrete Pavement	3,490	CY	80.00	279,200	55,840	20%	335,000
	Raise Bridge Ramps--Concrete Pavement	4,980	CY	100.00	498,000	99,600	20%	597,600
	Raise Bridge Ramps--Asphaltic Concrete	7,830	TON	50.00	391,500	78,300	20%	469,800
	Raise Bridge Ramps--Aggregate Base, Class II	24,440	TON	20.00	488,800	97,760	20%	586,600
	Raise Bridge Ramps--Embankment	105,480	TON	15.00	1,582,200	316,440	20%	1,898,600
	Striping	23,850	LF	1.50	35,775	7,155	20%	42,900
	Total Bridges							39,818,900
	Road Realignments							
	County Roads 17, 18, 18A and 97A							
	Mobilization & Demobilization	1	LS	47,000				47,000
	Asphaltic Concrete	3,660	TON	50.00	183,000.00	36,600	20%	219,600
	Aggregate Base, Class II	10,970	TON	20.00	219,400.00	43,880	20%	263,300
	Aggregate Subbase	18,830	TON	15.00	282,450.00	56,490	20%	338,900
	Demolish Existing Road	0	SY	4.00	0.00	0	20%	0
	Pulverize and Blend	0	SY	3.00	0.00	0	20%	0
	Striping	25,200	LF	1.50	37,800.00	7,560	20%	45,400

[1]Lands and damages costs are detailed in Appendix F, Real Estate Plan.

Table K-13
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN

78,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Clear and Grubb	11.6	AC	1,500.00	17,400.00	3,480	20%	20,900
	Guard Rail	0	LF	35.00	0.00	0	20%	0
	Right of Way	11.6	AC	3,500.00	40,600.00	8,120	20%	48,700
	Total Road Realignments							983,800
	Total Relocations							43,307,700
06	FISH AND WILDLIFE MITIGATION[2]	1	LS	9,901,000				9,901,000
08	ROADS							
	Mobilization & Demobilization	1	LS	395,000				395,000
	Patrol Roads (4" aggregate base)	28,600	TON	20.00	572,000	114,400	20%	686,400
	Bridges							
	Railroad Bridge Replacement	1,000	LF	5,500.00	5,500,000	1,100,000	20%	6,600,000
	Railroad Ballast	180	CY	60.00	10,800	2,160	20%	13,000
	Railroad Ties	1,070	LF	8.00	8,560	1,712	20%	10,300
	Railroad Track	800	LF	135.00	108,000	21,600	20%	129,600
	Total Bridges							6,752,900
	Total Roads							7,834,300
09	CHANNELS AND CANALS							
	Mobilization & Demobilization	1	LS	235,000				235,000
	Creek							
	Clearing and Grubbing (in-channel for rip rap)	4.7	AC	5,000.00	23,500.00	4,700	20%	28,200
	Clearing and Grubbing (in overbank for rip rap)	0.2	AC	1,500.00	300.00	60	20%	400
	Excavation (Layback channel slope and for rip rap)	12,000	CY	5.00	60,000	12,000	20%	72,000
	Rip Rap	26,100	TON	28.00	730,800	146,160	20%	877,000
	Bedding (for riprap)	7,000	TON	21.00	147,000	29,400	20%	176,400
	Stripping (for rip rap, 6")	4,000	CY	10.00	40,000	8,000	20%	48,000
	Gabions	1,500	CY	125.00	187,500	37,500	20%	225,000
	Concrete Lining	4,140	CY	275.00	1,138,500	227,700	20%	1,366,200

[2]Fish and wildlife mitigation costs are detailed in Appendix I of the EIS/EIR.

Table K-13
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN

78,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Clearing and Grubbing (for Hardpoints)	1.7	AC	3,750.00	6,375	1,275	20%	7,700
	Excavation (for Hardpoints)	40,000	CY	5.00	200,000	40,000	20%	240,000
	Stone (for Hardpoints)	31,700	TON	22.00	697,400	139,480	20%	836,900
	Total Creek Channels							3,877,800
	Toe Drain							
	Excavation	184,500	CY	2.00	369,000	73,800	20%	442,800
	Reinforced Concrete Inlet and Outlet Transitions	337	CY	500.00	168,500	33,700	20%	202,200
	24"-Diameter RCP	4,000	LF	40.00	160,000	32,000	20%	192,000
	Seeding	9.9	AC	2,500.00	24,750	4,950	20%	29,700
	Total Toe Drain							866,700
	Total Channels and Canals							4,979,500
11	LEVEES AND FLOODWALLS							
	Mobilization & Demobilization	1	LS	930,000				930,000
	Degradation of Existing Levees							
	Stripping (6 Inches)	86,100	CY	1.50	129,150	25,830	20%	155,000
	Excavation (Includes training levee)	861,600	CY	2.00	1,723,200	344,640	20%	2,067,800
	Total Degradation of Levees							2,222,800
	Levee--New Construction							
	Levee Embankment	1,631,100	CY	5.00	8,155,500	1,631,100	20%	9,786,600
	Excavation for Inspection Trench	277,300	CY	5.00	1,386,500	277,300	20%	1,663,800
	Slurry Wall	595500	SF	5.80	3,453,900	690,780	20%	4,144,700
	Clearing and Grubbing	113.1	AC	1,000.00	113,100	22,620	20%	135,700
	Stripping (6 Inches)	91,230	CY	1.50	136,845	27,369	20%	164,200
	Seeding	89.3	AC	2,500.00	223,250	44,650	20%	267,900
	Total Construction of New Levees							16,162,900
	Levee--Improvements							
	Levee Embankment	19,500	CY	5.00	97,500	19,500	20%	117,000
	Sheet Pile	0	SF	15.00	0	0	20%	0
	Excavation for Inspection Trench	13,350	CY	5.00	66,750	13,350	20%	80,100

Table K-13
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN

78,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Clearing and Grubbing	2.9	AC	1,000.00	2,900	580	20%	3,500
	Stripping (6 Inches)	5,250	CY	1.50	7,875	1,575	20%	9,500
	Seeding	1.5	AC	2,500.00	3,750	750	20%	4,500
	Total Levee--Improvements							214,600
	Total Levees							19,530,300
	TOTAL CONSTRUCTION COSTS (excludes Lands & Damages)							85,552,800
18	CULTURAL RESOURCE PRESERVATION	1	%					855,500
30	PLANNING, ENGINEERING & DESIGN	12	%					10,266,300
31	CONSTRUCTION MANAGEMENT	8.5	%					7,272,000
	TOTAL FIRST COST							**152,593,000**

Table K-13
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN

INVESTMENT COST

78,000 cfs

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST DURING CONSTRUCTION				
Interest Rate	6.125	%		
Construction Period	2	YR		
Project First Costs				152,593,900
Interest during Construction				
At midyear (year 1.5, and .5)				10,380,800
Outlays 60% first year, 40% second year				
TOTAL INVESTMENT COST				162,974,700

ANNUAL COST

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST AND AMORTIZATION				
Interest Rate	6.125	%		
Amortization Period	50.0	YR		10,520,700
OPERATION AND MAINTENANCE				
Allowance (from DWR)				415,000
TOTAL ANNUAL COST				10,935,700

Table K-14

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN

90,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
01	LANDS AND DAMAGES[1]	1	LS	48,647,300				48,647,300
02	RELOCATIONS							
	Utilities (3% of Total First Cost)	3	%	2,685,000				2,685,000
	Bridges							
	Mobilization & Demobilization	1	LS	1,975,000				1,975,000
	County Road 102 Bridge Replacement	30,000	SF	125	3,750,000	750,000	20%	4,500,000
	State Highway 113 Bridge Replacement	50,000	SF	125	6,250,000	1,250,000	20%	7,500,000
	County Road 99W Bridge Enlargement	38,000	SF	125	4,750,000	950,000	20%	5,700,000
	Interstate 5 Southbound Bridge Enlargement	48,000	SF	150	7,200,000	1,440,000	20%	8,640,000
	Interstate 5 Northbound Bridge Enlargement	40,000	SF	150	6,000,000	1,200,000	20%	7,200,000
	Excavation of Bridge Abutment/Causeway	41,667	CY	5	208,335	41,667	20%	250,000
	Pulverize and Blend	31,800	SY	3	95,400	19,080	20%	114,500
	Clear and Grub	7	AC	1,000	7,400	1,480	20%	8,900
	Remove Concrete Pavement	3,490	CY	80	279,200	55,840	20%	335,000
	Raise Bridge Ramps--Concrete Pavement	4,980	CY	100	498,000	99,600	20%	597,600
	Raise Bridge Ramps--Asphaltic Concrete	7,830	TON	50	391,500	78,300	20%	469,800
	Raise Bridge Ramps--Aggregate Base, Class II	24,440	TON	20	488,800	97,760	20%	586,600
	Raise Bridge Ramps--Embankment	105,480	TON	15	1,582,200	316,440	20%	1,898,600
	Striping	23,850	LF	1.50	35,775	7,155	20%	42,900
	Total Bridges							39,818,900
	Road Realignments							
	County Roads 17, 18, 18A and 97A							
	Mobilization & Demobilization	1	LS	47,000				47,000
	Asphaltic Concrete	3,660	TON	50	183,000	36,600	20%	219,600
	Aggregate Base, Class II	10,970	TON	20	219,400	43,880	20%	263,300
	Aggregate Subbase	18,830	TON	15	282,450	56,490	20%	338,900
	Demolish Existing Road	0	SY	4	0	0	20%	0
	Pulverize and Blend	0	SY	3	0	0	20%	0
	Striping	25,200	LF	1.50	37,800	7,560	20%	45,400
	Clear and Grubb	11.6	AC	1,500	17,400	3,480	20%	20,900

[1]Lands and damages costs are detailed in Appendix F, Real Estate Plan.

Table K-14
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN

90,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Guard Rail	0	LF	35	0	0	20%	0
	Right of Way	11.6	AC	3,500	40,600	8,120	20%	48,700
	Total Road Realignments							983,800
	Total Relocations							43,487,700
06	FISH AND WILDLIFE MITIGATION[2]	1	LS	9,901,000				9,901,000
08	ROADS							
	Mobilization & Demobilization	1	LS	395,000				395,000
	Patrol Roads (4" aggregate base)	28,800	TON	20	576,000	115,200	20%	691,200
	Bridges							
	Railroad Bridge Replacement	1,000	LF	5,500	5,500,000	1,100,000	20%	6,600,000
	Railroad Ballast	180	CY	60	10,800	2,160	20%	13,000
	Railroad Ties	1,070	LF	8	8,560	1,712	20%	10,300
	Railroad Track	800	LF	135	108,000	21,600	20%	129,600
	Total Bridges							6,752,900
	Total Roads							7,839,100
09	CHANNELS AND CANALS							
	Mobilization & Demobilization	1	LS	235,000				235,000
	Creek							
	Clearing and Grubbing (in-channel for rip rap)	4.7	AC	5,000	23,500	4,700	20%	28,200
	Clearing and Grubbing (in overbank for rip rap)	0.2	AC	1,500	300	60	20%	400
	Excavation (Layback channel slope and for rip rap)	12,000	CY	5	60,000	12,000	20%	72,000
	Rip Rap	26,100	TON	28	730,800	146,160	20%	877,000
	Bedding (for riprap)	7,000	TON	21	147,000	29,400	20%	176,400
	Stripping (for rip rap, 6")	4,000	CY	10	40,000	8,000	20%	48,000
	Gabions	1,500	CY	125	187,500	37,500	20%	225,000
	Concrete Lining	4,140	CY	275	1,138,500	227,700	20%	1,366,200

[2]Fish and wildlife mitigation costs are detailed in Appendix I of the EIS/EIR.

Table K-14
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN

90,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Clearing and Grubbing (for Hardpoints)	1.7	AC	3,750	6,375	1,275	20%	7,700
	Excavation (for Hardpoints)	40,000	CY	5	200,000	40,000	20%	240,000
	Stone (for Hardpoints)	31,700	TON	22	697,400	139,480	20%	836,900
	Total Creek Channels							3,877,800
	Toe Drain							
	Excavation	184,500	CY	2	369,000	73,800	20%	442,800
	Reinforced Concrete Inlet and Outlet Transitions	337	CY	500	168,500	33,700	20%	202,200
	24"-Diameter RCP	4,000	LF	40	160,000	32,000	20%	192,000
	Seeding	9.9	AC	2,500	24,750	4,950	20%	29,700
	Total Toe Drain							866,700
	Total Channels and Canals							4,979,500
11	LEVEES AND FLOODWALLS							
	Mobilization & Demobilization	1	LS	1,125,000				1,125,000
	Degradation of Existing Levees							
	Stripping (6 Inches)	86,100	CY	1.50	129,150	25,830	20%	155,000
	Excavation (Includes training levee)	861,600	CY	2	1,723,200	344,640	20%	2,067,800
	Total Degradation of Levees							2,222,800
	Levee--New Construction							
	Levee Embankment	1,823,500	CY	5	9,117,500	1,823,500	20%	10,941,000
	Excavation for Inspection Trench	297,000	CY	5	1,485,000	297,000	20%	1,782,000
	Slurry Wall	595500	SF	5.80	3,453,900	690,780	20%	4,144,700
	Clearing and Grubbing	131.1	AC	1,000	131,100	26,220	20%	157,300
	Stripping (6 Inches)	105,800	CY	1.50	158,700	31,740	20%	190,400
	Seeding	105.6	AC	2,500	264,000	52,800	20%	316,800
	Total Construction of New Levees							17,532,200
	Levee--Improvements							
	Levee Embankment	24,500	CY	5	122,500	24,500	20%	147,000
	Sheet Pile	0	SF	15	0	0	20%	0

Table K-14
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN

90,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Excavation for Inspection Trench	13,500	CY	5	67,500	13,500	20%	81,000
	Clearing and Grubbing	2.9	AC	1,000	2,900	580	20%	3,500
	Stripping (6 Inches)	6,450	CY	1.50	9,675	1,935	20%	11,600
	Seeding	1.6	AC	2,500	4,000	800	20%	4,800
	Total Levee--Improvements							247,900
	Levee--Improvements to Settling Basin							
	Levee Embankment	141,800	CY	5	709,000	141,800	20%	850,800
	Rip Rap (Stock Pile and Reset)	87,000	TON	15	1,305,000	261,000	20%	1,566,000
	Bedding (for riprap)	2,450	TON	22	53,900	10,780	20%	64,700
								2,481,500
	Total Levees							23,609,400
	TOTAL CONSTRUCTION COSTS (excludes Lands & Damages)							89,816,700
18	CULTURAL RESOURCE PRESERVATION	1	%					898,200
30	PLANNING, ENGINEERING & DESIGN	12	%					10,778,000
31	CONSTRUCTION MANAGEMENT	8.5	%					7,634,400
	TOTAL FIRST COST							**157,774,600**

Table K-14
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN

INVESTMENT COST

90,000 cfs

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST DURING CONSTRUCTION				
Interest Rate	6.125	%		
Construction Period	2	YR		
Project First Costs				157,774,600
Interest during Construction				
At midyear (year 1.5, and .5)				10,733,200
Outlays 60% first year, 40% second year				
TOTAL INVESTMENT COST				168,507,800

ANNUAL COST

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST AND AMORTIZATION				
Interest Rate	6.125	%		
Amortization Period	50.0	YR		10,877,900
OPERATION AND MAINTENANCE				
Allowance (from DWR)				415,000
TOTAL ANNUAL COST				11,292,900

Table K-15

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN
WITH 20-FOOT LEVEE CROWN

78,000 cfs Inlet Weir (Elev. 45') 3000' long, Ultimate Outlet Weir (Elev. 41') with 20-Foot Levee Crown

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
01	**LANDS AND DAMAGES**[1]	1	LS	8,745,420				8,745,400
02	**RELOCATIONS**							
	Utilities (3% of total construction cost)	3	%	715,008				715,000
	Mobilization & Demobilization	1	LS	250,000.00				250,000
	Building Floodproofing (Raising Homes)	25	EA	60,000.00	1,500,000	525,000	35%	2,025,000
	County Road 19B Raising							
	AC (asphalt concrete)	218	Ton	50.00	10,900	2,180	20%	13,100
	Aggregate Base Class II	0	Ton	20.00	0	0	20%	0
	Aggregate Subbase	42	Ton	15.00	630	126	20%	800
	Pulverize and Blend	667	SY	3.00	2,001	400	20%	2,400
	Striping	1,200	LF	1.50	1,800	360	20%	2,200
	Clear & Grub	0	AC	1,500.00	0	0	20%	0
	Culvert (18")	20	LF	35.00	700	140	20%	800
	Headwalls (sacked concrete Slope protection)	1.2	CY	500.00	600.00	120	20%	700
	County Road 97A Raising							
	AC (asphalt concrete)	389	Ton	50.00	19,450	3,890	20%	23,300
	Aggregate Base Class II	1,166	Ton	20.00	23,320	4,664	20%	28,000
	Aggregate Subbase	704	Ton	15.00	10,560	2,112	20%	12,700
	Pulverize and Blend	2,680	SY	3.00	8,040	1,608	20%	9,600
	Striping	2,010	LF	1.50	3,015	603	20%	3,600
	Clear & Grub	0.31	AC	1,500.00	465	93	20%	600
	Culvert (36")	60	LF	85.00	5,100	1,020	20%	6,100
	Headwalls (sacked concrete Slope protection)	1.3	CY	500.00	650.00	130	20%	800
	State Highway 16 Raising							
	AC (asphalt concrete)	836	Ton	50.00	41,800	8,360	20%	50,200
	Aggregate Base Class II	3,132	Ton	20.00	62,640	12,528	20%	75,200
	Aggregate Subbase	2,420	Ton	15.00	36,300	7,260	20%	43,600
	Pulverize and Blend	3,840	SY	3.00	11,520	2,304	20%	13,800
	Striping	2,880	LF	1.50	4,320	864	20%	5,200

[1]Lands and damages costs are detailed in Appendix F, Real Estate Plan.

Table K-15
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN
WITH 20-FOOT LEVEE CROWN

78,000 cfs Inlet Weir (Elev. 45') 3000' long, Ultimate Outlet Weir (Elev. 41') with 20-Foot Levee Crown

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Clear & Grub	0.44	AC	1,500.00	660	132	20%	800
	Culvert (60")	80	LF	150.00	12,000	2,400	20%	14,400
	Headwalls (sacked concrete Slope protection)	3.6	CY	500.00	1,800.00	360	20%	2,200
	County Road 99 Raising							
	AC (asphalt concrete)	667	Ton	50.00	33,350	6,670	20%	40,000
	Aggregate Base Class II	2,001	Ton	20.00	40,020	8,004	20%	48,000
	Aggregate Subbase	7,165	Ton	15.00	107,475	21,495	20%	129,000
	Pulverize and Blend	4,089	SY	3.00	12,267	2,453	20%	14,700
	Striping	3,450	LF	1.50	5,175	1,035	20%	6,200
	Clear & Grub	0.52	AC	1,500.00	780	156	20%	900
	Culvert (2-60")	160	LF	150.00	24,000	4,800	20%	28,800
	Headwalls (sacked concrete Slope protection)	6.0	CY	500.00	3,000.00	600	20%	3,600
	Frontage Road Dubach Field							
	AC (asphalt concrete)	131	Ton	50.00	6,550	1,310	20%	7,900
	Aggregate Base Class II	261	Ton	20.00	5,220	1,044	20%	6,300
	Aggregate Subbase	6,356	Ton	15.00	95,340	19,068	20%	114,400
	Pulverize and Blend	978	SY	3.00	2,934	587	20%	3,500
	Striping	1,200	LF	1.50	1,800	360	20%	2,200
	Clear & Grub	0.18	AC	1,500.00	270	54	20%	300
	Culvert (3-60")	120	LF	150.00	18,000	3,600	20%	21,600
	Headwalls (sacked concrete Slope protection)	9.0	CY	500.00	4,500.00	900	20%	5,400
	Churchill Downs Raising							
	AC (asphalt concrete)	387	Ton	50.00	19,350	3,870	20%	23,200
	Aggregate Base Class II	1,450	Ton	20.00	29,000	5,800	20%	34,800
	Aggregate Subbase	1,363	Ton	15.00	20,445	4,089	20%	24,500
	Pulverize and Blend	1,778	SY	3.00	5,334	1,067	20%	6,400
	Striping	1,200	LF	1.50	1,800	360	20%	2,200
	Clear & Grub	0.18	AC	1,500.00	270	54	20%	300
	County Road 101 (Pioneer) Raising							
	AC (asphalt concrete)	1,044	Ton	50.00	52,200	10,440	20%	62,600
	Aggregate Base Class II	3,132	Ton	20.00	62,640	12,528	20%	75,200
	Aggregate Subbase	17,896	Ton	15.00	268,440	53,688	20%	322,100
	Pulverize and Blend	6,400	SY	3.00	19,200	3,840	20%	23,000
	Striping	5,400	LF	1.50	8,100	1,620	20%	9,700
	Clear & Grub	0.83	AC	1,500.00	1,245	249	20%	1,500

Table K-15
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN
WITH 20-FOOT LEVEE CROWN

78,000 cfs Inlet Weir (Elev. 45') 3000' long, Ultimate Outlet Weir (Elev. 41') with 20-Foot Levee Crown

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Culvert (3-60")	240	LF	150.00	36,000	7,200	20%	43,200
	Headwalls (sacked concrete Slope protection)	9.0	CY	500.00	4,500.00	900	20%	5,400
	County Road 102 Raising							
	AC (asphalt concrete)	2,480	Ton	50.00	124,000	24,800	20%	148,800
	Aggregate Base Class II	8,280	Ton	20.00	165,600	33,120	20%	198,700
	Aggregate Subbase	36,164	Ton	15.00	542,460	108,492	20%	651,000
	Pulverize and Blend	8,440	SY	3.00	25,320	5,064	20%	30,400
	Striping	5,700	LF	1.50	8,550	1,710	20%	10,300
	Clear & Grub	2	AC	1,500.00	2,610	522	20%	3,100
	Culvert (3-60")	360	LF	150.00	54,000	10,800	20%	64,800
	Headwalls (sacked concrete Slope protection)	9.0	CY	500.00	4,500.00	900	20%	5,400
	Total Relocations							**5,479,500**
06	**FISH AND WILDLIFE MITIGATION[2]**	1	LS	1,597,000				**1,597,000**
08	**ROADS**							
	Levee Patrol Roads - Levee (4" aggregate base)	15,494	TON	20.00	309,880	61,976	20%	**371,900**
09	**CHANNELS AND CANALS**							
	Mobilization & Demobilization	1	LS	250,000.00				250,000
	Clearing and Grubbing	31	AC	1,500.00	46,500.00	9,300	20%	55,800
	Excavation	133,334	CY	5.00	666,670	133,334	20%	800,000
	Seeding	27	AC	2,500.00	67,500	13,500	20%	81,000
	Reinforced Concrete Pipe (60")	1,350	LF	150.00	202,500	40,500	20%	243,000
	Bore and Jack (60" RCP, I-5))	750	LF	1,000.00	750,000	150,000	20%	900,000
	Bore and Jack (60" RCP, SH 113)	600	LF	1,000.00	600,000	120,000	20%	720,000
	Inlet and Outlet Structures (I-5 and SH-113)	4	EA	6,000.00	24,000	4,800	20%	28,800
	Box Culvert (West Levee into Settling Basin 3'x3')	150	LF	300.00	45,000	9,000	20%	54,000
	Box Culvert (LCCFB to City Drain, 3'x3')	1,800	LF	300.00	540,000	108,000	20%	648,000
	Inlet and Outlet Structures (West Levee, City Drain)	4	EA	6,000.00	24,000	4,800	20%	28,800

[2]Fish and wildlife mitigation costs are detailed in Appendix I of the EIS/EIR.

Table K-15
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN
WITH 20-FOOT LEVEE CROWN

78,000 cfs Inlet Weir (Elev. 45') 3000' long, Ultimate Outlet Weir (Elev. 41') with 20-Foot Levee Crown

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Closure Structure (Slide Gates) for Box Culverts	2	EA	20,000.00	40,000	8,000	20%	48,000
	Flap Gates (for Box Culverts)	2	EA	5,500.00	11,000	2,200	20%	13,200
	Total Channels and Canals							**3,870,600**
11	**LEVEES AND FLOODWALLS**							
	Mobilization & Demobilization	1	LS	250,000.00				250,000
	Stop Log Structure - County Road 102							
	Concrete	79	CY	500.00	39,500	7,900	20%	47,400
	Reinforcing Steel	5,420	LB	0.80	4,336	867	20%	5,200
	Stop Log Structure - County Road 101 (Pioneer)							
	Concrete	55	CY	500.00	27,500	5,500	20%	33,000
	Reinforcing Steel	3,800	LB	0.80	3,040	608	20%	3,600
	Stop Log Structure - Highway 113							
	Concrete	130	CY	500.00	65,000	13,000	20%	78,000
	Reinforcing Steel	8,850	LB	0.80	7,080	1,416	20%	8,500
	Stop Log Structure - Frontage Rd. Dubach Field							
	Concrete	77	CY	500.00	38,500	7,700	20%	46,200
	Reinforcing Steel	5,300	LB	0.80	4,240	848	20%	5,100
	Stop Log Structure - Railroad Crossing (I-5)							
	Concrete	100	CY	500.00	50,000	10,000	20%	60,000
	Reinforcing Steel	6,800	LB	0.80	5,440	1,088	20%	6,500
	Stop Log Structure - County Road 99							
	Concrete	85	CY	500.00	42,500	8,500	20%	51,000
	Reinforcing Steel	5,775	LB	0.80	4,620	924	20%	5,500
	Levee--New Construction							
	Mobilization & Demobilization	1	LS	25,000.00	25,000	5,000	20%	30,000
	Levee Embankment	483,286	CY	5.00	2,416,430	483,286	20%	2,899,700
	Excavation for Inspection Trench	72,922	CY	5.00	364,610	72,922	20%	437,500
	Removal of Settling Basin West Levee (3000')	83,000	CY	2.50	207,500	41,500	20%	249,000
	Removal of Training Levee (Settling Basin) (5250')	166,250	CY	2.50	415,625	83,125	20%	498,800

Table K-15
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN
WITH 20-FOOT LEVEE CROWN

78,000 cfs Inlet Weir (Elev. 45') 3000' long, Ultimate Outlet Weir (Elev. 41') with 20-Foot Levee Crown

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Clearing and Grubbing	74.0	AC	1,000.00	74,000	14,800	20%	88,800
	Stripping (6 Inches)	59,206	CY	1.50	88,809	17,762	20%	106,600
	Slope Protection (water side of levee)	53,405	TON	28.00	1,495,340	299,068	20%	1,794,400
	Bedding (for Slope protection)	18,206	TON	22.00	400,532	80,106	20%	480,600
	Slope Protection Cover (Soil)	56,518	CY	5.00	282,590	56,518	20%	339,100
	Seeding	34	AC	2,500.00	85,000	17,000	20%	102,000
	Slurry Wall (from CR101 to west levee)	55200	SF	5.80	320,160	64,032	20%	384,200
	Slope protection (1500' of railroad near I-5)	2,250	TON	28.00	63,000	12,600	20%	75,600
	Bedding (for Slope protection)	775	TON	22.00	17,050	3,410	20%	20,500
	West Levee Improvements							
	Slope Embankment (from 2:1 to 3:1)	52,270	CY	5.00	261,350	52,270	20%	313,600
	Slope protection	50,010	TON	28.00	1,400,280	280,056	20%	1,680,300
	Bedding (for Slope protection)	16,968	TON	22.00	373,296	74,659	20%	448,000
	Clearing and Grubbing	8.3	AC	1,000.00	8,300	1,660	20%	10,000
	Stripping (6 inches)	6661.0	CY	1.50	9,992	1,998	20%	12,000
	Slope Protection Cover (Soil)	43,099	CY	5.00	215,495	43,099	20%	258,600
	Seeding	9.7	AC	2,500.00	24,250	4,850	20%	29,100
	Slope protection for I-5 (north and south of LCCFB)	3,910	TON	28.00	109,480	21,896	20%	131,400
	Bedding (for Slope protection)	1,347	TON	22.00	29,634	5,927	20%	35,600
	Total Levee -- New Construction							**11,025,400**
15	**FLOOD CONTROL AND DIVERSION STRUCTURES**							
	Mobilization & Demobilization	1	LS	250,000.00	250,000	50,000	20%	300,000
	Inlet Weir (3000 ft long)							
	Roller Compacted Concrete	11,850	CY	100.00	1,185,000	237,000	20%	1,422,000
	Conventional Concrete	2,667	CY	500.00	1,333,500	266,700	20%	1,600,200
	Slope protection	8,910	TON	22.00	196,020	39,204	20%	235,200
	Geotextile Filter Fabric	10,000	SY	3.00	30,000	6,000	20%	36,000
	Gravel Backfill	5,248	TON	22.00	115,456	23,091	20%	138,500

Table K-15
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN
WITH 20-FOOT LEVEE CROWN

78,000 cfs Inlet Weir (Elev. 45') 3000' long, Ultimate Outlet Weir (Elev. 41') with 20-Foot Levee Crown

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Compacted Structural Backfill	1,778	CY	10.00	17,780	3,556	20%	21,300
	Excavation	8,000	CY	5.00	40,000	8,000	20%	48,000
	Total Levee -- New Construction							**3,801,200**
	TOTAL CONSTRUCTION COSTS (excludes Lands & Damages)							**26,145,600**
18	**CULTURAL RESOURCE PRESERVATION**	1	%					**261,500**
20	**PERMANENT OPERATING EQUIPMENT**							
	Flood Warning System	1	LS	$1,000,000.00	1,000,000	200,000	20%	**1,200,000**
30	**PLANNING, ENGINEERING & DESIGN**	12	%					**3,137,500**
31	**CONSTRUCTION MANAGEMENT**	8.5	%					**2,222,400**
	TOTAL FIRST COST							**41,712,400**

Table K-15
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
LOWER CACHE CREEK FLOOD BARRIER PLAN
WITH 20-FOOT LEVEE CROWN

INVESTMENT COST

78,000 cfs Inlet Weir (Elev. 45') 3000' long, Ultimate Outlet Weir (Elev. 41') with 20-Foot Levee Crown

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST DURING CONSTRUCTION				
Interest Rate	6.125	%		
Construction Period	2	YR		
Project First Costs				41,712,400
Interest during Construction				
At midyear (year 1.5, and .5)				2,837,700
Outlays 60% first year, 40% second year				
TOTAL INVESTMENT COST				44,550,100

ANNUAL COST

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST AND AMORTIZATION				
Interest Rate	6.125	%		
Amortization Period	50.0	YR		2,875,900
OPERATION AND MAINTENANCE				
LCCFB				48,000
Flood Warning System				25,000
County Road Damages				25,000
TOTAL ANNUAL COST				2,973,900

Table K-16

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN
WITH 20-FOOT LEVEE CROWN

78,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
01	LANDS AND DAMAGES[1]	1	LS	48,810,300				48,810,300
02	RELOCATIONS							
	Utilities (3% of Total First Cost)	3	%	2,505,000				2,505,000
	Bridges							
	Mobilization & Demobilization	1	LS	1,975,000				1,975,000
	County Road 102 Bridge Replacement	30,000	SF	125.00	3,750,000.00	750,000	20%	4,500,000
	State Highway 113 Bridge Replacement	50,000	SF	125.00	6,250,000.00	1,250,000	20%	7,500,000
	County Road 99W Bridge Enlargement	38,000	SF	125.00	4,750,000	950,000	20%	5,700,000
	Interstate 5 Southbound Bridge Enlargement	48,000	SF	150.00	7,200,000	1,440,000	20%	8,640,000
	Interstate 5 Northbound Bridge Enlargement	40,000	SF	150.00	6,000,000	1,200,000	20%	7,200,000
	Excavation of Bridge Abutment/Causeway	41,667	CY	5.00	208,335	41,667	20%	250,000
	Pulverize and Blend	31,800	SY	3.00	95,400	19,080	20%	114,500
	Clear and Grub	7	AC	1,000.00	7,400	1,480	20%	8,900
	Remove Concrete Pavement	3,490	CY	80.00	279,200	55,840	20%	335,000
	Raise Bridge Ramps--Concrete Pavement	4,980	CY	100.00	498,000	99,600	20%	597,600
	Raise Bridge Ramps--Asphaltic Concrete	7,830	TON	50.00	391,500	78,300	20%	469,800
	Raise Bridge Ramps--Aggregate Base, Class II	24,440	TON	20.00	488,800	97,760	20%	586,600
	Raise Bridge Ramps--Embankment	105,480	TON	15.00	1,582,200	316,440	20%	1,898,600
	Striping	23,850	LF	1.50	35,775	7,155	20%	42,900
	Total Bridges							39,818,900
	Road Realignments							
	County Roads 17, 18, 18A and 97A							
	Mobilization & Demobilization	1	LS	47,000				47,000
	Asphaltic Concrete	3,660	TON	50.00	183,000.00	36,600	20%	219,600
	Aggregate Base, Class II	10,970	TON	20.00	219,400.00	43,880	20%	263,300
	Aggregate Subbase	18,830	TON	15.00	282,450.00	56,490	20%	338,900
	Demolish Existing Road	0	SY	4.00	0.00	0	20%	0
	Pulverize and Blend	0	SY	3.00	0.00	0	20%	0

[1]Lands and damages costs are detailed in Appendix F, Real Estate Plan.

Table K-16
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN
WITH 20-FOOT LEVEE CROWN

78,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Striping	25,200	LF	1.50	37,800.00	7,560	20%	45,400
	Clear and Grubb	11.6	AC	1,500.00	17,400.00	3,480	20%	20,900
	Guard Rail	0	LF	35.00	0.00	0	20%	0
	Right of Way	11.6	AC	3,500.00	40,600.00	8,120	20%	48,700
	Total Road Realignments							983,800
	Total Relocations							43,307,700
06	FISH AND WILDLIFE MITIGATION[2]	1	LS	9,901,000				9,901,000
08	ROADS							
	Mobilization & Demobilization	1	LS	395,000				395,000
	Patrol Roads (4" aggregate base)	47,970	TON	20.00	959,400	191,880	20%	1,151,300
	Bridges							
	Railroad Bridge Replacement	1,000	LF	5,500.00	5,500,000	1,100,000	20%	6,600,000
	Railroad Ballast	180	CY	60.00	10,800	2,160	20%	13,000
	Railroad Ties	1,070	LF	8.00	8,560	1,712	20%	10,300
	Railroad Track	800	LF	135.00	108,000	21,600	20%	129,600
	Total Bridges							6,752,900
	Total Roads							8,299,200
09	CHANNELS AND CANALS							
	Mobilization & Demobilization	1	LS	235,000				235,000
	Creek							
	Clearing and Grubbing (in-channel for rip rap)	4.7	AC	5,000.00	23,500.00	4,700	20%	28,200
	Clearing and Grubbing (in overbank for rip rap)	0.2	AC	1,500.00	300.00	60	20%	400
	Excavation (Layback channel slope and for rip rap)	12,000	CY	5.00	60,000	12,000	20%	72,000
	Rip Rap	26,100	TON	28.00	730,800	146,160	20%	877,000
	Bedding (for riprap)	7,000	TON	21.00	147,000	29,400	20%	176,400

[2]Fish and wildlife mitigation costs are detailed in Appendix I of the EIS/EIR.

Table K-16
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN
WITH 20-FOOT LEVEE CROWN

78,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Stripping (for rip rap, 6")	4,000	CY	10.00	40,000	8,000	20%	48,000
	Gabions	1,500	CY	125.00	187,500	37,500	20%	225,000
	Concrete Lining	4,140	CY	275.00	1,138,500	227,700	20%	1,366,200
	Clearing and Grubbing (for Hardpoints)	1.7	AC	3,750.00	6,375	1,275	20%	7,700
	Excavation (for Hardpoints)	40,000	CY	5.00	200,000	40,000	20%	240,000
	Stone (for Hardpoints)	31,700	TON	22.00	697,400	139,480	20%	836,900
	Total Creek Channels							3,877,800
	Toe Drain							
	Excavation	184,500	CY	2.00	369,000	73,800	20%	442,800
	Reinforced Concrete Inlet and Outlet Transitions	337	CY	500.00	168,500	33,700	20%	202,200
	24"-Diameter RCP	4,000	LF	40.00	160,000	32,000	20%	192,000
	Seeding	9.9	AC	2,500.00	24,750	4,950	20%	29,700
	Total Toe Drain							866,700
	Total Channels and Canals							4,979,500
11	LEVEES AND FLOODWALLS							
	Mobilization & Demobilization	1	LS	930,000				930,000
	Degradation of Existing Levees							
	Stripping (6 Inches)	86,100	CY	1.50	129,150	25,830	20%	155,000
	Excavation (Includes training levee)	861,600	CY	2.00	1,723,200	344,640	20%	2,067,800
	Total Degradation of Levees							2,222,800
	Levee--New Construction							
	Levee Embankment	1,940,229	CY	5.00	9,701,145	1,940,229	20%	11,641,400
	Excavation for Inspection Trench	277,300	CY	5.00	1,386,500	277,300	20%	1,663,800
	Slurry Wall	595500	SF	5.80	3,453,900	690,780	20%	4,144,700
	Clearing and Grubbing	132	AC	1,000.00	131,500	26,300	20%	157,800
	Stripping (6 Inches)	112,072	CY	1.50	168,108	33,622	20%	201,700
	Seeding	89.3	AC	2,500.00	223,250	44,650	20%	267,900
	Total Construction of New Levees							18,077,300

Table K-16
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN
WITH 20-FOOT LEVEE CROWN

78,000 cfs Design

Acct. No.	Description	Estimated Quantity	Unit	Unit Cost $	Extended Cost $	Contingency $	%	Total Cost $
	Levee--Improvements							
	Levee Embankment	22,710	CY	5.00	113,548	22,710	20%	136,300
	Sheet Pile	0	SF	15.00	0	0	20%	0
	Excavation for Inspection Trench	13,350	CY	5.00	66,750	13,350	20%	80,100
	Clearing and Grubbing	3.0	AC	1,000.00	2,950	590	20%	3,500
	Stripping (6 Inches)	6,488	CY	1.50	9,731	1,946	20%	11,700
	Seeding	1.5	AC	2,500.00	3,750	750	20%	4,500
	Total Levee--Improvements							236,100
	Total Levees							21,466,200
	TOTAL CONSTRUCTION COSTS (excludes Lands & Damages)							87,953,600
18	CULTURAL RESOURCE PRESERVATION	1	%					879,500
30	PLANNING, ENGINEERING & DESIGN	12	%					10,554,400
31	CONSTRUCTION MANAGEMENT	8.5	%					7,476,100
	TOTAL FIRST COST							**155,673,900**

Table K-16
(Continued)

PRELIMINARY CURRENT WORKING ESTIMATE
MODIFIED WIDE SETBACK LEVEE PLAN
WITH 20-FOOT LEVEE CROWN

INVESTMENT COST

78,000 cfs

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST DURING CONSTRUCTION				
Interest Rate	6.125	%		
Construction Period	2	YR		
Project First Costs				155,673,900
Interest during Construction				
At midyear (year 1.5, and .5)				10,590,300
Outlays 60% first year, 40% second year				
TOTAL INVESTMENT COST				166,264,200

ANNUAL COST

Description	Estimated Quantity	Unit	Unit Cost $	Total Cost $
INTEREST AND AMORTIZATION				
Interest Rate	6.125	%		
Amortization Period	50.0	YR		10,733,000
OPERATION AND MAINTENANCE				
Allowance (from DWR)				415,000
TOTAL ANNUAL COST				11,148,000