Appendix H – Opinion of Probable Cost

Rock McCarran Flood Mitigation Project
DRAFT 30% Opinion of Probable Construction Costs

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs. Opinion of probable construction costs prepared by J-U-B Engineers, Inc.

Rock McCarran Flood Mitigation Project Bid Schedule Opinion of Probable Cost		Totals
Cost Summary		
Base		
1	Mobilization/Demobilization (4%)	$ 3,097,000
2	Civil Site Work	$ 57,029,000
3	Transportation	$ 7,810,000
4	Recreation - Base	$ 12,582,000
	Subtotal	**$ 80,518,000**
	15% Contingency	$ 12,078,000
	TOTAL	**$ 92,596,000**
Base + Supplemental		
1-S	Mobilization/Demobilization - Supplemental (4%)	$ 389,000
4-S	Recreation - Supplemental	$ 9,709,000
	Subtotal	**$ 90,616,000**
	15% Contingency	$ 13,593,000
	TOTAL	**$ 104,209,000**

Bid Item No.	Pay Item Description	Unit	Quantity	Unit Price	Extended Total
Civil Site Work					
SITE MANAGEMENT					
1	Environmental Protection - Water/Air Pollution and Erosion Controls	LS	1	$ 500,000	$ 500,000
2	Removal and Control of Water	LS	1	$ 250,000	$ 250,000
3	Clearing, Grubbing, and Stripping	AC	133	$ 8,000	$ 1,066,000
4	Construction Phasing	LS	1	$ 350,000	$ 350,000
DEMOLITION					
5	Remove and Dispose - Existing Fence	LS	1	$ 32,795	$ 33,000
6	Remove and Dispose - Existing Concrete	LS	1	$ 444,502	$ 445,000
7	Remove and Dispose - Existing Pavement	LS	1	$ 510,120	$ 511,000
8	Remove and Dispose - Existing Rock	LS	1	$ 72,282	$ 73,000
9	Remove and Salvage - Existing Trees	EA	1,349	$ 160	$ 216,000
10	Remove and Dispose - Existing Utilities	LS	1	$ 707,138	$ 708,000
11	Remove and Dispose - Existing Miscellaneous Items	LS	1	$ 48,041	$ 49,000
12	Remove and Dispose - Existing Structure and Foundation	LS	1	$ 578,191	$ 579,000
13	Remove and Dispose - Existing Curb and Gutter	LS	1	$ 30,854	$ 31,000
EARTHWORK					
14	Unclassified Excavation and Grading - River and Terracing	CY	484,350	$ 18	$ 8,719,000
15	Unclassified Excavation and Grading - Levees, Floodwall, and Berm	CY	139,384	$ 18	$ 2,509,000
16	Unclassified Excavation and Grading - Toe Drain	CY	7,922	$ 18	$ 143,000
17	Unclassifed Excavation and Grading - Access Ramps	CY	253	$ 18	$ 5,000
18	Unsuitable/Unused Offhaul	CY	69,379	$ 9.00	$ 625,000
19	Place and Compact - River and Terracing	CY	46,516	$ 33	$ 1,536,000
20	Import, Place and Compact - Levees, Floodwall, and Berm	CY	291,829	$ 50	$ 14,592,000
21	Place and Compact - Levees, Floodwall, and Berm	CY	70,000	$ 30	$ 2,100,000
22	Place and Compact - Toe Drain - Unclassified Backfill	CY	1,980	$ 25	$ 50,000
23	Place and Compact - Recreation Area	CY	220,000	$ 15	$ 3,300,000
24	Place and Compact - Access Ramps	CY	2,186	$ 25	$ 55,000
25	Furnish and Install Toe Drain - 3/4" Crushed Rock	CY	5,941	$ 140	$ 832,000
26	Furnish and Install 12" Slotted HDPE Toe Drain Pipe	LF	6,206	$ 200	$ 1,242,000
27	Cast-In-Place Concrete Floodwall	CY	294	$ 1,300	$ 383,000
28	North and South Levee 10' Wide 4" Asphalt Multiuse Path	SF	135,073	$ 9.00	$ 1,216,000
29	Place and Compact Type 2 Aggregate Base for Path	SF	135,073	$ 4.00	$ 541,000
REVETMENT					
30	Furnish and Install Filter Fabric	SF	50,950	$ 6.50	$ 332,000
31	Furnish and Install Riprap Bedding - All Classes	CY	6,370	$ 120	$ 765,000
32	Furnish and Install Class 1 Riprap	CY	1,885	$ 130	$ 246,000
33	Furnish and Install Class 2 Riprap	CY	5,000	$ 140	$ 700,000
34	Furnish and Install Class 4 Riprap	CY	7,230	$ 150	$ 1,085,000

Bid Item No.	Pay Item Description	Unit	Quantity	Unit Price	Extended Total
35	Furnish and Install Class 5 Riprap	CY	630	$ 165	$ 104,000
36	Furnish and Install Class 6 Riprap	CY	2,440	$ 190	$ 464,000
37	Furnish and Install Class 7 Riprap	CY	700	$ 225	$ 158,000
38	Furnish and Install Gravel Drain Rock for ACB	CY	1,600	$ 85	$ 136,000
39	Furnish and Install ACB	SF	129,000	$ 18	$ 2,322,000
40	Cast-In-Place Concrete Key Trench for ACB	CY	305	$ 1,300	$ 397,000
41	Furnish and Plant Seed for 6" Geocell	AC	1	$ 262	$ 1,000
42	Furnish and Install Gravel for 6" Geocell	CY	500	$ 65	$ 33,000
43	Furnish and Install Sand for 6" Geocell	CY	500	$ 45	$ 23,000
44	Furnish and Install 6" Geocell	SF	44,700	$ 2.00	$ 90,000
45	Furnish and Install Rootwad Log Toe Protection	LF	560	$ 1,000	$ 560,000
46	Furnish and Install Bank Jam	EA	30	$ 5,000	$ 150,000
47	Furnish and Install Wood Habitat A/B	EA	4	$ 7,000	$ 28,000
48	Furnish and Install Apex Jam C	EA	8	$ 20,000	$ 160,000
49	Furnish and Install Instream Log Jam	EA	9	$ 5,000	$ 45,000
50	Furnish and Install Apex Jam B	EA	4	$ 40,000	$ 160,000
51	Furnish and Install Habitat Bench with Buried Logs	LF	1,650	$ 1,000	$ 1,650,000
52	Furnish and Install Habitat Bench with Coir Logs or Willow Fascines	LF	1,000	$ 450	$ 450,000
53	Furnish and Install Logs for Downstream Rock Weir	LF	330	$ 250	$ 83,000
54	McCarran Bridge Modification TBD	LS	1	$ 350,000	$ 350,000
	SITE RESTORATION				
55	Potted Plants	LS	1	$ 1,116,697	$ 1,117,000
56	Grass Seed Mixes	LS	1	$ 95,552	$ 96,000
57	Pollinator Mixes	LS	1	$ 171,747	$ 172,000
	UTILITIES				
58	Furnish and install XX secondary water pipeline	LF	5,100	$ 90	$ 459,000
59	Furnish and install XX sewer pipeline	LF	4,000	$ 90	$ 360,000
60	Furnish and Install XX potable water pipeline	LF	4,000	$ 120	$ 480,000
61	Storm Water Treatment System	LS	1	$ 150,000	$ 150,000
62	Flood Storage Area Outlet Works	LS	1	$ 250,000	$ 250,000
63	Storm Drain Removal and Extension - North	LS	1	$ 793,268	$ 794,000
				Subtotal	**$ 57,029,000**
	Transportation Site Work				
64	Furnish and Install 4-inch Plantmix Bituminous Pavement, Complete and in Place - Road	SF	263,655	$ 2.00	$ 528,000
65	Furnish and Install 4-inch Plantmix Bituminous Pavement, Complete and in Place - Parking	SF	428,900	$ 1.75	$ 751,000
66	4-inch Plantmix Bituminous Pavement - Access Ramps	SF	15,976	$ 2.50	$ 40,000
67	Furnish and Install 6-inch Plantmix Bituminous Pavement, Complete and in Place - Bus Parking	SF	28,500	$ 2.50	$ 72,000
68	Type 2 Aggregate Base Roadbed Modification, Complete and in Place	SF	737,031	$ 4.00	$ 2,949,000
69	Overexcavation of Unsuitable Material, Furnish & Place Type 1 Aggregate Base, Complete and in Place (Contingent Item)	CY	2,000	$ 30	$ 60,000
70	Build Back Cut and Fill, Complete and in Place	CY	3,000	$ 45	$ 135,000
71	Construct PCC Type I Curb and Gutter, Complete and in Place	LF	9,547	$ 30	$ 287,000
72	Construct PCC Sidewalk, Complete and in Place	SF	47,735	$ 15	$ 717,000
73	Construct PCC ADA Accessible Ramp, Complete and in Place	EA	33	$ 1,500	$ 50,000
74	Install 4-inch Solid White Parking Lot Striping (Type II Waterborne), Complete and in Place	LF	24,710	$ 1.50	$ 38,000
75	Install 4-inch Solid Double Yellow Centerline Striping (Type II Waterborne), Complete and in Place	LF	7,102	$ 2.00	$ 15,000
76	Install 24-Inch Stop Bar (Thermoplastic), Complete and in Place	LF	188	$ 11	$ 3,000
77	Install International Crosswalk (Thermoplastic), Complete and in Place	LF	1,120	$ 14	$ 16,000
78	Install Speed Hump, Complete and in Place	EA	7	$ 25,000	$ 175,000
79	Install 8-Foot Stop Legends (Thermoplastic), Complete and in Place	EA	15	$ 400	$ 6,000
80	Install Preformed White Multi-Directional Arrow Pavement Marking (Theromplastic), Complete and in Place	EA	5	$ 250	$ 2,000
81	Install Preformed White Directional Arrow Pavement Marking (Theromplastic), Complete and in Place	EA	100	$ 250	$ 25,000
82	Furnish and Install New Signs, Complete and in Place	EA	25	$ 520	$ 13,000
83	Furnish and Install Signalized Intersection, Complete and in Place - East	LS	1	$ 950,000	$ 950,000
84	Furnish and Install Signalized Intersection, Complete and in Place - West	LS	1	$ 750,000	$ 750,000
85	Traffic Control - 3%	LS	1	$ 227,460	$ 228,000
				Subtotal	**$ 7,810,000**

Bid Item No.	Pay Item Description	Unit	Quantity	Unit Price	Extended Total
RIVER CORRIDOR AND COMMON RECREATION AMENITIES					
BASE					
86	Trail Construction - Unpaved	SF	90,000	$ 3.00	$ 270,000
87	10' Wide Asphalt Multi-Use Trail (Interior Berm)	SF	72,844	$ 9.00	$ 656,000
88	Place and Compact Type 2 Aggregate Base for Interior Berm Path	SF	72,844	$ 4.00	$ 292,000
89	River Drop In / Take Out	EA	3	$ 27,000	$ 81,000
90	Supplemental Trail Landscape	EA	4	$ 1,220	$ 5,000
91	Levee Surface Material (SWPPP - Rock)	SF	170,000	$ 4.25	$ 723,000
92	Trash Receptacle	EA	6	$ 2,500	$ 15,000
				Subtotal	**$ 2,042,000**
SUPPLEMENTAL					
92-S	Trash Receptacle	EA	3	$ 2,500	$ 8,000
93	Bench 6'	EA	6	$ 3,000	$ 18,000
				Subtotal	**$ 26,000**

RECREATION PARK					
Base					
OFF-SITE RECREATION PARK					
94	Fine Grading	CY	43,095	$ 5.00	$ 216,000
95	Street Trees - 36" box	EA	134	$ 800	$ 108,000
96	Street Shrubs - 5 gal	EA	804	$ 35	$ 29,000
97	Vegetative Reseeding - Supplemental to Trail Trees	SY	10,960	$ 1.25	$ 14,000
SITE LANDSCAPE					
98	Site Trees - 24" Box	EA	680	$ 550	$ 374,000
99	Site Shrubs - (t pot)	EA	2,720	$ 20	$ 55,000
100	Site Surface Material	SF	270,000	$ 4.25	$ 1,148,000
101	Site Irrigation System	LS	1	$ 2,160,000	$ 2,160,000
102	Site Concrete	SF	75,000	$ 16	$ 1,200,000
MULTI-USE FIELDS					
103	Fields - Championship (Seed)	SF	744,800	$ 2.00	$ 1,490,000
104	Support Turf (Seed)	SF	195,843	$ 2.00	$ 392,000
105	Soccer Net	EA	16	$ 7,500	$ 120,000
106	20' Tall Field Netting	EA	1	$ 285,000	$ 285,000
107	Multi-Use Fields Misc. Contingency	LS	1	$ 22,344	$ 23,000
PLAYGROUND - ADVENTURE PARK					
108	Rubberized Surfacing	SF	10,000	$ 25	$ 250,000
109	Concrete Playground Header	LF	420	$ 30	$ 13,000
110	Play Structure - Zipline	EA	2	$ 40,000	$ 80,000
111	Play Structure - Climbing Wall	EA	1	$ 95,000	$ 95,000
112	Play Structure - Slope Slide	EA	1	$ 55,000	$ 55,000
113	Play Structure - Log Steppers	EA	12	$ 1,200	$ 15,000
114	GFRC - Playground Natural Stone Climber	EA	6	$ 80,000	$ 480,000
115	Playground Misc. Contingency	LS	1	$ 80,000	$ 80,000
SITE FURNISHINGS & STRUCTURES					
116	Bench 6'	EA	12	$ 3,000	$ 36,000
117	Trash Receptacle	EA	15	$ 2,500	$ 38,000
118	Barbeque	EA	2	$ 1,800	$ 4,000
119	Picnic Table	EA	4	$ 8,500	$ 34,000
120	Bike Rack	EA	4	$ 2,600	$ 11,000
121	Maintenance Yard (8' Tall CMU)	LF	400	$ 60	$ 24,000
122	Single Ramada (500 sq/ft)	EA	2	$ 25,500	$ 51,000
123	Restroom - Floodable	EA	1	$ 200,000	$ 200,000
124	Restroom - Complex - Floodable	EA	1	$ 1,250,000	$ 1,250,000
SIGNAGE					
125	Entry Monumentation	EA	2	$ 105,000	$ 210,000
				Subtotal	**$ 10,540,000**

Bid Item No.	Pay Item Description	Unit	Quantity	Unit Price	Extended Total
	SUPPLEMENTAL				
	SITE LANDSCAPE				
98-S	Site Trees - 24" Box	EA	98	$ 550	$ 54,000
99-S	Site Shrubs - (t pot)	EA	392	$ 20	$ 8,000
100-S	Site Surface Material	SF	90,000	$ 4.25	$ 383,000
101-S	Site Irrigation System	LS	1	$ 720,000	$ 720,000
102-S	Site Concrete	SF	11,000	$ 16	$ 176,000
	MULTI-USE FIELDS				
103-S	Fields - Championship (Seed)	SF	186,200	$ 2.00	$ 373,000
126	Fields - Junior (Seed)	SF	59,200	$ 2.00	$ 119,000
104-S	Support Turf (Seed)	SF	61,681	$ 2.00	$ 124,000
105-S	Soccer Net	EA	6	$ 7,500	$ 45,000
127	Field Lighting	EA	11	$ 320,000	$ 3,520,000
106-S	20' Tall Field Netting	EA	1	$ 27,000	$ 27,000
107-S	Multi-Use Fields Misc. Contingency	LS	1	$ 9,310	$ 10,000
	PLAYGROUND - HIGH AND DRY				
128	Rubberized Surfacing	SF	10,025	$ 25	$ 251,000
129	Concrete Playground Header	LF	525	$ 30	$ 16,000
130	Shade Structure - 6 Top Fabric Shade	EA	1	$ 42,000	$ 42,000
131	Shade Structure - 3 Top Fabric Shade	EA	1	$ 24,000	$ 24,000
132	Play Structure - Hedra - 3 Tower	EA	1	$ 393,750	$ 394,000
133	Play Structure - Hedra - 5-12 Years	EA	1	$ 105,390	$ 106,000
134	Play Structure - Hedra - 2-5 Years	EA	1	$ 75,275	$ 76,000
135	Play Structure - Hedra - 2 Bay Swings	EA	1	$ 9,500	$ 10,000
136	Playground Misc. Contingency	LS	1	$ 100,250	$ 101,000
	PLAYGROUND - ADVENTURE PARK				
137	Shade Structure - 6 Top Fabric Shade	EA	1	$ 42,000	$ 42,000
138	Play Structure - Log Jam Climber	EA	2	$ 18,000	$ 36,000
139	Play Structure - Log Monkey Bars	EA	1	$ 26,000	$ 26,000
140	GFRC - Playground Animal 4'x4'x4'	EA	10	$ 65,000	$ 650,000
	SITE FURNISHINGS & STRUCTURES				
116-S	Bench 6'	EA	9	$ 3,000	$ 27,000
117-S	Trash Receptacle	EA	15	$ 2,500	$ 38,000
118-S	Barbeque	EA	4	$ 1,800	$ 8,000
119-S	Picnic Table	EA	8	$ 8,500	$ 68,000
120-S	Bike Rack	EA	3	$ 2,600	$ 8,000
141	Drinking Fountain	EA	2	$ 12,000	$ 24,000
122-S	Single Ramada (500 sq/ft)	EA	4	$ 25,500	$ 102,000
123-S	Restroom - Floodable	EA	2	$ 200,000	$ 400,000
	SIGNAGE				
142	Iconic Monument	EA	1	$ 260,000	$ 260,000
143	Wayfinding Signage	EA	25	$ 5,500	$ 138,000
144	Educational Signage	EA	6	$ 4,500	$ 27,000
145	South Levee Enhanced Aesthetics	EA	1	$ 1,250,000	$ 1,250,000
				Subtotal	**$ 9,683,000**