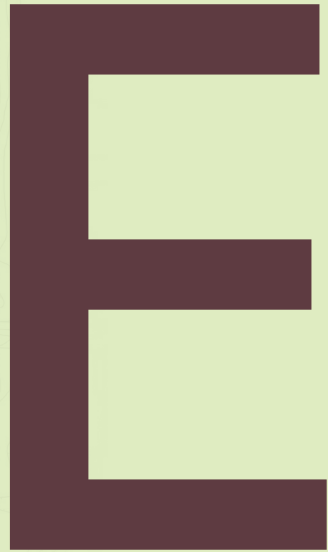


Miller Creek Greenway Concept Report



APPENDIX



PLANNING LEVEL PROJECT COST

<u>Facility</u>		<u>Total Cost</u>
STORMWATER POND PR	\$	2,440,000
STORMWATER POND #1	\$	1,870,000
STORMWATER POND #2	\$	1,090,000
STORMWATER POND #3	\$	2,760,000
STORMWATER POND #4	\$	730,000
STORMWATER VAULT PR	\$	4,280,000
STORMWATER VAULT #1	\$	7,330,000
STORMWATER VAULT #2	\$	2,470,000
STORMWATER VAULT #3	\$	9,200,000
STORMWATER VAULT #4	\$	2,150,000

PLANNING LEVEL PROJECT COST					
PROJECT: STORMWATER POND PR			CHECK BY:		
PROJECT ID: 31235			DATE: 11/24/2009		
BY: JSA					
ITEM NO.	ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
<i>Construction Elements</i>					
1	CLEARING AND GRUBBING	2.5	AC	\$ 9,000	\$ 23,000
2	POND EXCAVATION AND GRADING INCL. HAUL	53,000	CY	\$ 10	\$ 530,000
3	INLET AND OUTLET CONTROLS	1	LS	\$ 100,000	\$ 100,000
3	RETAINING WALL	11,000	SF	\$ 30	\$ 330,000
4	MISC POND ITEMS	1	LS	\$ 6,000	\$ 6,000
5	HMA, CL 1/2-IN PG	50	TON	\$ 250	\$ 13,000
6	ASPHALT TREATED BASE	90	TON	\$ 250	\$ 23,000
7	CRUSHED SURFACING BASE COURSE	60	TON	\$ 45	\$ 3,000
8	SCHEDULE A STORM SEWER PIPE 18 IN. DIAM.	500	LF	\$ 80	\$ 40,000
9	MANHOLE 48 IN. DIAM.	5	EA	\$ 2,500	\$ 13,000
10	SHORING OR EXTRA EXCAVATION CLASS B	3000	LF	\$ 1	\$ 2,000
11	STRUCTURE EXCAVATION CLASS B INCL HAUL	540	CY	\$ 10	\$ 6,000
12	GRAVEL BORROW INCL. HAUL	100	CY	\$ 15	\$ 2,000
13	SAWCUTTING	1000	LF	\$ 4	\$ 4,000
14	DEWATERING	1	LS	\$ 150,000	\$ 150,000
Subtotal Construction Elements					\$ 1,245,000
<i>Required Ancillary Items</i>					
15	EROSION AND SEDIMENTATION CONTROL		2%	\$	\$ 24,900
16	TRAFFIC CONTROL		2%	(see note 4) \$	\$ 24,900
18	MOBILIZATION		5%	\$	\$ 62,300
17	CONTINGENCY		30%	\$	\$ 373,500
Subtotal Ancillary Elements					\$ 485,600
Subtotal Conveyance Construction Elements					\$ 1,731,000
<i>Tax/Engineering/Management/Permitting</i>					
19	STATE SALES TAX		9.5%	\$	\$ 170,000
20	ENGINEERING/LEGAL/ADMIN		15%	\$	\$ 260,000
21	CONSTRUCTION MANAGEMENT		10%	\$	\$ 180,000
22	PERMITTING		5%	\$	\$ 90,000
23	EASEMENTS AND PROPERTY ACQUISITION		NOT INCLUDED		
Subtotal					\$ 700,000
Subtotal Construction + Ancillary + Tax/Engineering/Management/Permitting					\$ 2,431,000
2009 Dollars			Total Estimated Project Cost (Rounded)		\$ 2,440,000
<i>Notes:</i>					
1. The above cost opinion is in 2009 dollars and does not include future escalation, financing, or O&M costs.					
2. The order-of-magnitude cost opinion has been prepared for guidance in project evaluation from the information available at the time of preparation and for the assumptions stated. The final costs of the project will depend on actual labor and material.					
3. Increase percentage markup if work is in or immediately adjacent to flowing or standing water, steep slope, and/or other erosion-prone conditions.					
4. Increase percentage markup if work is in or immediately adjacent to secondary, arterial, or other high-volume road or temporarily closes a roadway.					

PLANNING LEVEL PROJECT COST					
PROJECT: STORMWATER POND #1			CHECK BY:		
PROJECT ID: 31235			DATE: 11/24/2009		
BY: JSA					
ITEM NO.	ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
<i>Construction Elements</i>					
1	CLEARING AND GRUBBING	3.6	AC	\$ 9,000	\$ 33,000
2	POND EXCAVATION AND GRADING	33,000	CY	\$ 10	\$ 330,000
3	INLET AND OUTLET CONTROLS	1	LS	\$ 100,000	\$ 100,000
4	MISC POND ITEMS	1	LS	\$ 6,000	\$ 6,000
5	HMA, CL 1/2-IN PG	130	TON	\$ 250	\$ 33,000
6	ASPHALT TREATED BASE	250	TON	\$ 250	\$ 63,000
7	CRUSHED SURFACING BASE COURSE	170	TON	\$ 45	\$ 8,000
8	SCHEDULE A STORM SEWER PIPE 18 IN. DIAM.	1500	LF	\$ 80	\$ 120,000
9	MANHOLE 48 IN. DIAM.	10	EA	\$ 2,500	\$ 25,000
10	SHORING OR EXTRA EXCAVATION CLASS B	8000	LF	\$ 1	\$ 4,000
11	STRUCTURE EXCAVATION CLASS B INCL HAUL	1600	CY	\$ 10	\$ 16,000
12	GRAVEL BORROW INCL. HAUL	280	CY	\$ 15	\$ 5,000
13	SAWCUTTING	3000	LF	\$ 4	\$ 12,000
14	DEWATERING	1	LS	\$ 200,000	\$ 200,000
Subtotal Construction Elements					\$ 955,000
<i>Required Ancillary Items</i>					
15	EROSION AND SEDIMENTATION CONTROL		2%	\$	19,100
16	TRAFFIC CONTROL		2%	(see note 4) \$	19,100
18	MOBILIZATION		5%	\$	47,800
17	CONTINGENCY		30%	\$	286,500
Subtotal Ancillary Elements					\$ 372,500
Subtotal Conveyance Construction Elements					\$ 1,328,000
<i>Tax/Engineering/Management/Permitting</i>					
19	STATE SALES TAX		9.5%	\$	130,000
20	ENGINEERING/LEGAL/ADMIN		15%	\$	200,000
21	CONSTRUCTION MANAGEMENT		10%	\$	140,000
22	PERMITTING		5%	\$	70,000
23	EASEMENTS AND PROPERTY ACQUISITION		NOT INCLUDED		
Subtotal					\$ 540,000
Subtotal Construction + Ancillary + Tax/Engineering/Management/Permitting					\$ 1,868,000
2009 Dollars			Total Estimated Project Cost (Rounded)		\$ 1,870,000
<i>Notes:</i>					
1. The above cost opinion is in 2009 dollars and does not include future escalation, financing, or O&M costs.					
2. The order-of-magnitude cost opinion has been prepared for guidance in project evaluation from the information available at the time of preparation and for the assumptions stated. The final costs of the project will depend on actual labor and material.					
3. Increase percentage markup if work is in or immediately adjacent to flowing or standing water, steep slope, and/or other erosion-prone conditions.					
4. Increase percentage markup if work is in or immediately adjacent to secondary, arterial, or other high-volume road or temporarily closes a roadway.					

PLANNING LEVEL PROJECT COST					
PROJECT: STORMWATER POND #2			CHECK BY:		
PROJECT ID: 31235			DATE: 11/24/2009		
BY: JSA					
ITEM NO.	ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
<i>Construction Elements</i>					
1	CLEARING AND GRUBBING	2.2	AC	\$ 9,000	\$ 20,000
2	POND EXCAVATION AND GRADING	12,000	CY	\$ 10	\$ 120,000
3	INLET AND OUTLET CONTROLS	1	LS	\$ 100,000	\$ 100,000
4	MISC POND ITEMS	1	LS	\$ 6,000	\$ 6,000
5	HMA, CL 1/2-IN PG	50	TON	\$ 250	\$ 13,000
6	ASPHALT TREATED BASE	90	TON	\$ 250	\$ 23,000
7	CRUSHED SURFACING BASE COURSE	60	TON	\$ 45	\$ 3,000
8	SCHEDULE A STORM SEWER PIPE 18 IN. DIAM.	500	LF	\$ 80	\$ 40,000
9	MANHOLE 48 IN. DIAM.	5	EA	\$ 2,500	\$ 13,000
10	SHORING OR EXTRA EXCAVATION CLASS B	3000	LF	\$ 1	\$ 2,000
11	STRUCTURE EXCAVATION CLASS B INCL HAUL	540	CY	\$ 10	\$ 6,000
12	GRAVEL BORROW INCL. HAUL	100	CY	\$ 15	\$ 2,000
13	SAWCUTTING	1000	LF	\$ 4	\$ 4,000
14	DEWATERING	1	LS	\$ 200,000	\$ 200,000
Subtotal Construction Elements					\$ 552,000
<i>Required Ancillary Items</i>					
15	EROSION AND SEDIMENTATION CONTROL		2%	\$	\$ 11,000
16	TRAFFIC CONTROL		2%	(see note 4) \$	\$ 11,000
18	MOBILIZATION		5%	\$	\$ 27,600
17	CONTINGENCY		30%	\$	\$ 165,600
Subtotal Ancillary Elements					\$ 215,200
Subtotal Conveyance Construction Elements					\$ 768,000
<i>Tax/Engineering/Management/Permitting</i>					
19	STATE SALES TAX		9.5%	\$	\$ 80,000
20	ENGINEERING/LEGAL/ADMIN		15%	\$	\$ 120,000
21	CONSTRUCTION MANAGEMENT		10%	\$	\$ 80,000
22	PERMITTING		5%	\$	\$ 40,000
23	EASEMENTS AND PROPERTY ACQUISITION		NOT INCLUDED		
Subtotal					\$ 320,000
Subtotal Construction + Ancillary + Tax/Engineering/Management/Permitting					\$ 1,088,000
2009 Dollars					Total Estimated Project Cost (Rounded) \$ 1,090,000
Notes:					
1. The above cost opinion is in 2009 dollars and does not include future escalation, financing, or O&M costs.					
2. The order-of-magnitude cost opinion has been prepared for guidance in project evaluation from the information available at the time of preparation and for the assumptions stated. The final costs of the project will depend on actual labor and material.					
3. Increase percentage markup if work is in or immediately adjacent to flowing or standing water, steep slope, and/or other erosion-prone conditions.					
4. Increase percentage markup if work is in or immediately adjacent to secondary, arterial, or other high-volume road or temporarily closes a roadway.					

PLANNING LEVEL PROJECT COST					
PROJECT: STORMWATER POND #3			CHECK BY:		
PROJECT ID: 31235			DATE: 11/24/2009		
BY: JSA					
ITEM NO.	ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
<i>Construction Elements</i>					
1	CLEARING AND GRUBBING	8.7	AC	\$ 9,000	\$ 79,000
2	POND EXCAVATION AND GRADING	54,000	CY	\$ 10	\$ 540,000
3	INLET AND OUTLET CONTROLS	1	LS	\$ 100,000	\$ 100,000
4	24" WATER MAIN REALIGNMENT	800	LF	\$ 250	\$ 200,000
5	MISC POND ITEMS	1	LS	\$ 6,000	\$ 6,000
6	HMA, CL 1/2-IN PG	130	TON	\$ 250	\$ 33,000
7	ASPHALT TREATED BASE	250	TON	\$ 250	\$ 63,000
8	CRUSHED SURFACING BASE COURSE	170	TON	\$ 45	\$ 8,000
9	SCHEDULE A STORM SEWER PIPE 18 IN. DIAM.	1500	LF	\$ 80	\$ 120,000
10	MANHOLE 48 IN. DIAM.	10	EA	\$ 2,500	\$ 25,000
11	SHORING OR EXTRA EXCAVATION CLASS B	8000	LF	\$ 1	\$ 4,000
12	STRUCTURE EXCAVATION CLASS B INCL HAUL	1600	CY	\$ 10	\$ 16,000
13	GRAVEL BORROW INCL. HAUL	280	CY	\$ 15	\$ 5,000
14	SAWCUTTING	3000	LF	\$ 4	\$ 12,000
15	DEWATERING	1	LS	\$ 200,000	\$ 200,000
Subtotal Construction Elements					\$ 1,411,000
<i>Required Ancillary Items</i>					
16	EROSION AND SEDIMENTATION CONTROL		2%	\$	\$ 28,200
17	TRAFFIC CONTROL		2%	(see note 4) \$	\$ 28,200
19	MOBILIZATION		5%	\$	\$ 70,600
18	CONTINGENCY		30%	\$	\$ 423,300
Subtotal Ancillary Elements					\$ 550,300
Subtotal Conveyance Construction Elements					\$ 1,962,000
<i>Tax/Engineering/Management/Permitting</i>					
20	STATE SALES TAX		9.5%	\$	\$ 190,000
21	ENGINEERING/LEGAL/ADMIN		15%	\$	\$ 300,000
22	CONSTRUCTION MANAGEMENT		10%	\$	\$ 200,000
23	PERMITTING		5%	\$	\$ 100,000
24	EASEMENTS AND PROPERTY ACQUISITION		NOT INCLUDED		
Subtotal					\$ 790,000
Subtotal Construction + Ancillary + Tax/Engineering/Management/Permitting					\$ 2,752,000
2009 Dollars			Total Estimated Project Cost (Rounded)		
					\$ 2,760,000
Notes:					
1. The above cost opinion is in 2009 dollars and does not include future escalation, financing, or O&M costs.					
2. The order-of-magnitude cost opinion has been prepared for guidance in project evaluation from the information available at the time of preparation and for the assumptions					
3. Increase percentage markup if work is in or immediately adjacent to flowing or standing water, steep slope, and/or other erosion-prone conditions.					
4. Increase percentage markup if work is in or immediately adjacent to secondary, arterial, or other high-volume road or temporarily closes a roadway.					
5. Land Acquisition unit costs are based on the Snohomish County Tax Assessor Web page					

PLANNING LEVEL PROJECT COST					
PROJECT: STORMWATER POND #4			CHECK BY:		
PROJECT ID: 31235			DATE: 11/24/2009		
BY: JSA					
ITEM NO.	ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
<i>Construction Elements</i>					
1	CLEARING AND GRUBBING	1.5	AC	\$ 9,000	\$ 14,000
2	POND EXCAVATION AND GRADING	12,000	CY	\$ 10	\$ 120,000
3	INLET AND OUTLET CONTROLS	1	LS	\$ 100,000	\$ 100,000
4	MISC POND ITEMS	1	LS	\$ 6,000	\$ 6,000
5	HMA, CL 1/2-IN PG	20	TON	\$ 250	\$ 5,000
6	ASPHALT TREATED BASE	40	TON	\$ 250	\$ 10,000
7	CRUSHED SURFACING BASE COURSE	30	TON	\$ 45	\$ 2,000
8	SCHEDULE A STORM SEWER PIPE 18 IN. DIAM.	200	LF	\$ 80	\$ 16,000
9	MANHOLE 48 IN. DIAM.	4	EA	\$ 2,500	\$ 10,000
10	SHORING OR EXTRA EXCAVATION CLASS B	1000	LF	\$ 1	\$ 1,000
11	STRUCTURE EXCAVATION CLASS B INCL HAUL	220	CY	\$ 10	\$ 3,000
12	GRAVEL BORROW INCL. HAUL	40	CY	\$ 15	\$ 1,000
13	SAWCUTTING	400	LF	\$ 4	\$ 2,000
14	DEWATERING	1	LS	\$ 75,000	\$ 75,000
Subtotal Construction Elements					\$ 365,000
<i>Required Ancillary Items</i>					
15	EROSION AND SEDIMENTATION CONTROL		2%	\$	7,300
16	TRAFFIC CONTROL		2%	(see note 4) \$	7,300
18	MOBILIZATION		5%	\$	18,300
17	CONTINGENCY		30%	\$	109,500
Subtotal Ancillary Elements					\$ 142,400
Subtotal Conveyance Construction Elements					\$ 508,000
<i>Tax/Engineering/Management/Permitting</i>					
19	STATE SALES TAX		9.5%	\$	50,000
20	ENGINEERING/LEGAL/ADMIN		15%	\$	80,000
21	CONSTRUCTION MANAGEMENT		10%	\$	60,000
22	PERMITTING		5%	\$	30,000
23	EASEMENTS AND PROPERTY ACQUISITION		NOT INCLUDED		
Subtotal					\$ 220,000
Subtotal Construction + Ancillary + Tax/Engineering/Management/Permitting					\$ 728,000
2009 Dollars			Total Estimated Project Cost (Rounded)		\$ 730,000
<i>Notes:</i>					
1. The above cost opinion is in 2009 dollars and does not include future escalation, financing, or O&M costs.					
2. The order-of-magnitude cost opinion has been prepared for guidance in project evaluation from the information available at the time of preparation and for the assumptions stated. The final costs of the project will depend on actual labor and material.					
3. Increase percentage markup if work is in or immediately adjacent to flowing or standing water, steep slope, and/or other erosion-prone conditions.					
4. Increase percentage markup if work is in or immediately adjacent to secondary, arterial, or other high-volume road or temporarily closes a roadway.					

PLANNING LEVEL PROJECT COST					
PROJECT: STORMWATER VAULT PR			CHECK BY:		
PROJECT ID: 31235			DATE: 11/24/2009		
BY: JSA					
ITEM NO.	ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
<i>Construction Elements</i>					
1	CLEARING AND GRUBBING	1.2	AC	\$ 9,000	\$ 11,000
2	DETENTION VAULT	12.2	AC-FT	\$ 138,000	\$ 1,684,000
3	WETVAULT	22,900	CF	\$ 3	\$ 69,000
4	STORMFILTER VAULT	1	LS	\$ 125,000	\$ 125,000
5	HMA, CL 1/2-IN PG	50	TON	\$ 250	\$ 13,000
6	ASPHALT TREATED BASE	90	TON	\$ 250	\$ 23,000
7	CRUSHED SURFACING BASE COURSE	60	TON	\$ 45	\$ 3,000
8	SCHEDULE A STORM SEWER PIPE 18 IN. DIAM.	500	LF	\$ 80	\$ 40,000
9	MANHOLE 48 IN. DIAM.	5	EA	\$ 2,500	\$ 13,000
10	SHORING OR EXTRA EXCAVATION CLASS B	3000	LF	\$ 1	\$ 2,000
11	STRUCTURE EXCAVATION CLASS B INCL HAUL	540	CY	\$ 10	\$ 6,000
12	GRAVEL BORROW INCL. HAUL	100	CY	\$ 15	\$ 2,000
13	SAWCUTTING	1000	LF	\$ 4	\$ 4,000
14	DEWATERING	1	LS	\$ 200,000	\$ 200,000
Subtotal Construction Elements					\$ 2,195,000
<i>Required Ancillary Items</i>					
15	EROSION AND SEDIMENTATION CONTROL		2%	\$	\$ 43,900
16	TRAFFIC CONTROL		2%	(see note 4) \$	\$ 43,900
18	MOBILIZATION		5%	\$	\$ 109,800
17	CONTINGENCY		30%	\$	\$ 658,500
Subtotal Ancillary Elements					\$ 856,100
Subtotal Conveyance Construction Elements					\$ 3,052,000
<i>Tax/Engineering/Management/Permitting</i>					
19	STATE SALES TAX		9.5%	\$	\$ 290,000
20	ENGINEERING/LEGAL/ADMIN		15%	\$	\$ 460,000
21	CONSTRUCTION MANAGEMENT		10%	\$	\$ 310,000
22	PERMITTING		5%	\$	\$ 160,000
23	EASEMENTS AND PROPERTY ACQUISITION		NOT INCLUDED		
Subtotal					\$ 1,220,000
Subtotal Construction + Ancillary + Tax/Engineering/Management/Permitting					\$ 4,272,000
2009 Dollars			Total Estimated Project Cost (Rounded) \$ 4,280,000		
<i>Notes:</i>					
1. The above cost opinion is in 2009 dollars and does not include future escalation, financing, or O&M costs.					
2. The order-of-magnitude cost opinion has been prepared for guidance in project evaluation from the information available at the time of preparation and for the assumptions stated. The final costs of the project will depend on actual labor and material.					
3. Increase percentage markup if work is in or immediately adjacent to flowing or standing water, steep slope, and/or other erosion-prone conditions.					
4. Increase percentage markup if work is in or immediately adjacent to secondary, arterial, or other high-volume road or temporarily closes a roadway.					

PLANNING LEVEL PROJECT COST					
PROJECT: STORMWATER VAULT #1			CHECK BY:		
PROJECT ID: 31235			DATE: 11/24/2009		
BY: JSA					
ITEM NO.	ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
<i>Construction Elements</i>					
1	CLEARING AND GRUBBING	2.1	AC	\$ 9,000	\$ 19,000
2	DETENTION VAULT	21.0	AC-FT	\$ 138,000	\$ 2,898,000
3	WETVAULT	49,300	CF	\$ 3	\$ 148,000
4	STORMFILTER VAULT	1	LS	\$ 212,000	\$ 212,000
5	HMA, CL 1/2-IN PG	130	TON	\$ 250	\$ 33,000
6	ASPHALT TREATED BASE	250	TON	\$ 250	\$ 63,000
7	CRUSHED SURFACING BASE COURSE	170	TON	\$ 45	\$ 8,000
8	SCHEDULE A STORM SEWER PIPE 18 IN. DIAM	1500	LF	\$ 80	\$ 120,000
9	MANHOLE 48 IN. DIAM.	10	EA	\$ 2,500	\$ 25,000
10	SHORING OR EXTRA EXCAVATION CLASS B	8000	LF	\$ 1	\$ 4,000
11	STRUCTURE EXCAVATION CLASS B INCL HAU	1600	CY	\$ 10	\$ 16,000
12	GRAVEL BORROW INCL. HAUL	280	CY	\$ 15	\$ 5,000
13	SAWCUTTING	3000	LF	\$ 4	\$ 12,000
14	DEWATERING	1	LS	\$ 200,000	\$ 200,000
Subtotal Construction Elements					\$ 3,763,000
<i>Required Ancillary Items</i>					
15	EROSION AND SEDIMENTATION CONTROL		2%	\$	75,300
16	TRAFFIC CONTROL		2%	(see note 4) \$	75,300
18	MOBILIZATION		5%	\$	188,200
17	CONTINGENCY		30%	\$	1,128,900
Subtotal Ancillary Elements					\$ 1,467,700
Subtotal Conveyance Construction Elements					\$ 5,231,000
<i>Tax/Engineering/Management/Permitting</i>					
19	STATE SALES TAX		9.5%	\$	500,000
20	ENGINEERING/LEGAL/ADMIN		15%	\$	790,000
21	CONSTRUCTION MANAGEMENT		10%	\$	530,000
22	PERMITTING		5%	\$	270,000
23	EASEMENTS AND PROPERTY ACQUISITION		NOT INCLUDED		
Subtotal					\$ 2,090,000
Subtotal Construction + Ancillary + Tax/Engineering/Management/Permitting					\$ 7,321,000
2009 Dollars			Total Estimated Project Cost (Rounded)		\$ 7,330,000
<i>Notes:</i>					
1. The above cost opinion is in 2009 dollars and does not include future escalation, financing, or O&M costs.					
2. The order-of-magnitude cost opinion has been prepared for guidance in project evaluation from the information available at the time of preparation and for the assumptions stated. The final costs of the project will depend on actual labor and material.					
3. Increase percentage markup if work is in or immediately adjacent to flowing or standing water, steep slope, and/or other erosion-prone conditions.					
4. Increase percentage markup if work is in or immediately adjacent to secondary, arterial, or other high-volume road or temporarily closes a roadway.					

PLANNING LEVEL PROJECT COST					
PROJECT: STORMWATER VAULT #2		CHECK BY:			
PROJECT ID: 31235		DATE: 11/24/2009			
BY: JSA					
ITEM NO.	ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
<i>Construction Elements</i>					
1	CLEARING AND GRUBBING	0.6	AC	\$ 9,000	\$ 6,000
2	DETENTION VAULT	6.0	AC-FT	\$ 138,000	\$ 828,000
3	WETVAULT	13,800	CF	\$ 3	\$ 42,000
4	STORMFILTER VAULT	1	LS	\$ 80,000	\$ 80,000
5	HMA, CL 1/2-IN PG	50	TON	\$ 250	\$ 13,000
6	ASPHALT TREATED BASE	90	TON	\$ 250	\$ 23,000
7	CRUSHED SURFACING BASE COURSE	60	TON	\$ 45	\$ 3,000
8	SCHEDULE A STORM SEWER PIPE 18 IN. DIAM	500	LF	\$ 80	\$ 40,000
9	MANHOLE 48 IN. DIAM.	5	EA	\$ 2,500	\$ 13,000
10	SHORING OR EXTRA EXCAVATION CLASS B	3000	LF	\$ 1	\$ 2,000
11	STRUCTURE EXCAVATION CLASS B INCL HAU	540	CY	\$ 10	\$ 6,000
12	GRAVEL BORROW INCL. HAUL	100	CY	\$ 15	\$ 2,000
13	SAWCUTTING	1000	LF	\$ 4	\$ 4,000
14	DEWATERING	1	LS	\$ 200,000	\$ 200,000
Subtotal Construction Elements					\$ 1,262,000
<i>Required Ancillary Items</i>					
15	EROSION AND SEDIMENTATION CONTROL		2%	\$	\$ 25,200
16	TRAFFIC CONTROL		2%	(see note 4) \$	\$ 25,200
18	MOBILIZATION		5%	\$	\$ 63,100
17	CONTINGENCY		30%	\$	\$ 378,600
Subtotal Ancillary Elements					\$ 492,100
Subtotal Conveyance Construction Elements					\$ 1,755,000
<i>Tax/Engineering/Management/Permitting</i>					
19	STATE SALES TAX		9.5%	\$	\$ 170,000
20	ENGINEERING/LEGAL/ADMIN		15%	\$	\$ 270,000
21	CONSTRUCTION MANAGEMENT		10%	\$	\$ 180,000
22	PERMITTING		5%	\$	\$ 90,000
23	EASEMENTS AND PROPERTY ACQUISITION		NOT INCLUDED		
Subtotal					\$ 710,000
Subtotal Construction + Ancillary + Tax/Engineering/Management/Permitting					\$ 2,465,000
2009 Dollars		Total Estimated Project Cost (Rounded)			\$ 2,470,000
<i>Notes:</i>					
1. The above cost opinion is in 2009 dollars and does not include future escalation, financing, or O&M costs.					
2. The order-of-magnitude cost opinion has been prepared for guidance in project evaluation from the information available at the time of preparation and for the assumptions stated. The final costs of the project will depend on actual labor and material.					
3. Increase percentage markup if work is in or immediately adjacent to flowing or standing water, steep slope, and/or other erosion-prone conditions.					
4. Increase percentage markup if work is in or immediately adjacent to secondary, arterial, or other high-volume road or temporarily closes a roadway.					

PLANNING LEVEL PROJECT COST					
PROJECT: STORMWATER VAULT #3		CHECK BY:			
PROJECT ID: 31235		DATE: 11/24/2009			
BY: JSA					
ITEM NO.	ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
<i>Construction Elements</i>					
1	CLEARING AND GRUBBING	2.6	AC	\$ 9,000	\$ 24,000
2	DETENTION VAULT	26.2	AC-FT	\$ 138,000	\$ 3,616,000
3	WETVAULT	44,000	CF	\$ 3	\$ 132,000
4	STORMFILTER VAULT	1	LS	\$ 280,000	\$ 280,000
5	24" WATER MAIN REALIGNMENT	800	LF	\$ 250	\$ 200,000
6	HMA, CL 1/2-IN PG	130	TON	\$ 250	\$ 33,000
7	ASPHALT TREATED BASE	250	TON	\$ 250	\$ 63,000
8	CRUSHED SURFACING BASE COURSE	170	TON	\$ 45	\$ 8,000
9	SCHEDULE A STORM SEWER PIPE 18 IN. DIAM	1500	LF	\$ 80	\$ 120,000
10	MANHOLE 48 IN. DIAM.	10	EA	\$ 2,500	\$ 25,000
11	SHORING OR EXTRA EXCAVATION CLASS B	8000	LF	\$ 1	\$ 4,000
12	STRUCTURE EXCAVATION CLASS B INCL HAU	1600	CY	\$ 10	\$ 16,000
13	GRAVEL BORROW INCL. HAUL	280	CY	\$ 15	\$ 5,000
14	SAWCUTTING	3000	LF	\$ 4	\$ 12,000
15	DEWATERING	1	LS	\$ 200,000	\$ 200,000
Subtotal Construction Elements					\$ 4,738,000
<i>Required Ancillary Items</i>					
16	EROSION AND SEDIMENTATION CONTROL		2%	\$	\$ 94,800
17	TRAFFIC CONTROL		2%	(see note 4)	\$ 94,800
19	MOBILIZATION		5%	\$	\$ 236,900
18	CONTINGENCY		30%	\$	\$ 1,421,400
Subtotal Ancillary Elements					\$ 1,847,900
Subtotal Conveyance Construction Elements					\$ 6,586,000
<i>Tax/Engineering/Management/Permitting</i>					
20	STATE SALES TAX		9.5%	\$	\$ 630,000
21	ENGINEERING/LEGAL/ADMIN		15%	\$	\$ 990,000
22	CONSTRUCTION MANAGEMENT		10%	\$	\$ 660,000
23	PERMITTING		5%	\$	\$ 330,000
24	EASEMENTS AND PROPERTY ACQUISITION		NOT INCLUDED		
Subtotal					\$ 2,610,000
Subtotal Construction + Ancillary + Tax/Engineering/Management/Permitting					\$ 9,196,000
2009 Dollars		Total Estimated Project Cost (Rounded)			\$ 9,200,000
<i>Notes:</i>					
1. The above cost opinion is in 2009 dollars and does not include future escalation, financing, or O&M costs.					
2. The order-of-magnitude cost opinion has been prepared for guidance in project evaluation from the information available at the time of preparation and for the					
3. Increase percentage markup if work is in or immediately adjacent to flowing or standing water, steep slope, and/or other erosion-prone conditions.					
4. Increase percentage markup if work is in or immediately adjacent to secondary, arterial, or other high-volume road or temporarily closes a roadway.					

PLANNING LEVEL PROJECT COST						
PROJECT: STORMWATER VAULT #4			CHECK BY:			
PROJECT ID: 31235			DATE: 11/24/2009			
BY: JSA						
ITEM NO.	ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	
<i>Construction Elements</i>						
1	CLEARING AND GRUBBING	0.6	AC	\$ 9,000	\$	6,000
2	DETENTION VAULT	6.4	AC-FT	\$ 138,000	\$	884,000
3	WETVAULT	11,600	CF	\$ 3	\$	35,000
4	STORMFILTER VAULT	1	LS	\$ 50,000	\$	50,000
5	HMA, CL 1/2-IN PG	20	TON	\$ 250	\$	5,000
6	ASPHALT TREATED BASE	40	TON	\$ 250	\$	10,000
7	CRUSHED SURFACING BASE COURSE	30	TON	\$ 45	\$	2,000
8	SCHEDULE A STORM SEWER PIPE 18 IN. DIAM.	200	LF	\$ 80	\$	16,000
9	MANHOLE 48 IN. DIAM.	4	EA	\$ 2,500	\$	10,000
10	SHORING OR EXTRA EXCAVATION CLASS B	1000	LF	\$ 1	\$	1,000
11	STRUCTURE EXCAVATION CLASS B INCL HAUL	220	CY	\$ 10	\$	3,000
12	GRAVEL BORROW INCL. HAUL	40	CY	\$ 15	\$	1,000
13	SAWCUTTING	400	LF	\$ 4	\$	2,000
14	DEWATERING	1	LS	\$ 75,000	\$	75,000
Subtotal Construction Elements					\$	1,100,000
<i>Required Ancillary Items</i>						
15	EROSION AND SEDIMENTATION CONTROL		2%		\$	22,000
16	TRAFFIC CONTROL		2%	(see note 4)	\$	22,000
18	MOBILIZATION		5%		\$	55,000
17	CONTINGENCY		30%		\$	330,000
Subtotal Ancillary Elements					\$	429,000
Subtotal Conveyance Construction Elements					\$	1,529,000
<i>Tax/Engineering/Management/Permitting</i>						
19	STATE SALES TAX		9.5%		\$	150,000
20	ENGINEERING/LEGAL/ADMIN		15%		\$	230,000
21	CONSTRUCTION MANAGEMENT		10%		\$	160,000
22	PERMITTING		5%		\$	80,000
23	EASEMENTS AND PROPERTY ACQUISITION		NOT INCLUDED			
Subtotal					\$	620,000
Subtotal Construction + Ancillary + Tax/Engineering/Management/Permitting					\$	2,149,000
2009 Dollars			Total Estimated Project Cost (Rounded) \$ 2,150,000			
<i>Notes:</i>						
1. The above cost opinion is in 2009 dollars and does not include future escalation, financing, or O&M costs.						
2. The order-of-magnitude cost opinion has been prepared for guidance in project evaluation from the information available at the time of preparation and for the assumptions stated. The final costs of the project will depend on actual labor and material.						
3. Increase percentage markup if work is in or immediately adjacent to flowing or standing water, steep slope, and/or other erosion-prone conditions.						
4. Increase percentage markup if work is in or immediately adjacent to secondary, arterial, or other high-volume road or temporarily closes a roadway.						

PROJECT: 31235 Burien NERA
DATE: 11/23/09

	PR	SW 1	SW 2	SW 3	SW 4
<u>Excavation</u>					
Total volume (cf)	1,421,586	869,561	306,710	1,444,348	320,654
Surface Area (sf)	110,244	156,939	96,014	377,969	66,298
Total Area (ac)	2.53	3.60	2.20	8.68	1.52
Total Excavation (cy):	52,651	32,206	11,360	53,494	11,876
<u>Clearing and Grubbing</u>					
Total Area (ac):	2.53	3.60	2.20	8.68	1.52
<u>Pipe Excavation</u>					
Length of new pipe:	500	1500	500	1500	200
Pipe dia (ID):	1.5	1.5	1.5	1.5	1.5
Pipe dia (OD) = 1.5*ID	2	2	2	2	2
Trench width = OD + 1.5'	4	4	4	4	4
Street repair width = trench width + 2'	6	6	6	6	6
Average depth to pipe invert:	5	5	5	5	5
Total Needed:	532	1597	532	1597	213
Length of pipe removal:	0	0	0	0	0
Pipe dia (ID):			0		
Pipe dia (OD) = 1.5*ID					
Trench width = OD + 1.5'					
Street repair width = trench width + 2'					
Average depth to pipe invert:					
Total Removal:					
Total Pipe Excavation (cy):	532	1597	532	1597	213
(New requirements - Removal)					
<u>Pavement Repair</u>					
Pipe/Culvert Span:	1.50	1.50	1.50	1.50	1.50
Total width:	6	6	6	6	6
Pavement Disturbance Width	6	6	6	6	6
Trench Length	500	1500	500	1500	200
TOTAL REMOVAL:	2875	8625	2875	8625	1150
	319	958	319	958	128
<u>HMA (2" thick)</u>					
	479	1438	479	1438	192
assume 2.05 ton/cy	37	110	37	110	15
Volume +10%	41	121	41	121	17
<u>Asphalt Treated Base (4" thick)</u>					
	958	2875	958	2875	383

assume 2.05 ton/cy	73	218	73	218	29
Volume + 10%	80	240	80	240	32

CSBC (3" thick)

	719	2156	719	2156	288
assume 1.85 ton/cy	49	148	49	148	20
Volume +10%	54	163	54	163	22

Shoring

Trench depth x Trench length	2,500	7,500	2,500	7,500	1,000
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Sawcutting

Two times the length of paved trench	1000	3000	1000	3000	400
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Land Acquisition

Quantity
Cost = \$3/SF

Pond PR Average End area calc for addition excavation

Delta sta	area, ft ²	avg area, ft ²	Cumm Vol, ft ³
0	3539		
130	2465	3002	390260
137	1844	2154.5	685426.5
144	311	1077.5	840586.5

Pond 3 addition excavation	
$70 \cdot (28 \cdot 125) / 2$	
122500	

Criblock Wall

delta sta	height, ft	AVG HEIGHT, ft ²	
0	32	0	
130	28	30	3900
137	24	26	7462
144	24	24	10918