

Drainage Improvement Project - Grandview Avenue Stormdrain
August 3, 2020
Conceptual Plans Construction Cost Estimate
Engineer's Opinion of Quantities and Probable Cost of Construction

DESCRIPTION	QNTY	UNIT	UNIT COST	TOTAL
REMOVALS				
SAWCUT, REMOVE AND DISPOSE OF ASPHALT	12,850	SY	\$ 15.00	\$ 192,750.00
REMOVE AND DISPOSE OF EXISTING SEWER MANHOLE	3	EA	\$ 1,500.00	\$ 4,500.00
REMOVE AND DISPOSE OF EXISTING SEWER LINE	182	LF	\$ 20.00	\$ 3,640.00
REMOVE AND DISPOSE OF EXISTING WATERLINE	354	LF	\$ 20.00	\$ 7,080.00
REMOVE AND DISPOSE OF EXISTING WATER VALVE, BOX AND COVER	2	EA	\$ 300.00	\$ 600.00
REMOVE AND DISPOSE OF EXISTING WATER SERVICE CONNECTION	2	EA	\$ 500.00	\$ 1,000.00
ADJUST MANHOLE RING, FRAME AND COVER TO FINISHED GRADE	19	EA	\$ 1,000.00	\$ 19,000.00
ADJUST VALVE BOX AND COVER TO FINISHED GRADE	11	EA	\$ 600.00	\$ 6,600.00
REMOVALS SUBTOTAL				\$ 235,170.00
ROADWAY CONSTRUCTION				
NEW 3" AC/6" ABC ASPHALT	2,779	SY	\$ 50.00	\$ 138,950.00
NEW TYPE 'A' CONCRETE CURB AND GUTTER PER MAG STD DET 220-1	762	LF	\$ 25.00	\$ 19,050.00
NEW 3" AC/8" ABC ASPHALT	10,071	SY	\$ 60.00	\$ 604,260.00
ROADWAY SUBTOTAL				\$ 762,260.00
WATER CONSTRUCTION				
NEW VERTICAL WATER MAIN REALIGNMENT PER MAG STD DET 370	4	EA	\$ 5,000.00	\$ 20,000.00
NEW 8" CLASS 235 C-900 PVC WATERLINE	370	LF	\$ 80.00	\$ 29,600.00
NEW 8" CLASS 250 GATE VALVE	2	EA	\$ 2,000.00	\$ 4,000.00
NEW WATER SERVICE CONNECTION PER COK STD DET 344	2	EA	\$ 1,500.00	\$ 3,000.00
WATER SUBTOTAL				\$ 56,600.00
SEWER CONSTRUCTION				
NEW SEWER MANHOLE	3	EA	\$ 7,500.00	\$ 22,500.00
NEW DROP SEWER CONNECTION	2	EA	\$ 1,500.00	\$ 3,000.00
NEW 8" PVC SEWER LINE	212	LF	\$ 80.00	\$ 16,960.00
SEWER SUBTOTAL				\$ 42,460.00
STORM WATER CONSTRUCTION				
NEW 84" CMP STORMDRAIN	325	LF	\$ 750.00	\$ 243,750.00
NEW DOUBLE 98"x60" REINFORCED CONCRETE BOX CULVERT	330	LF	\$ 1,200.00	\$ 396,000.00
NEW 48" STORMDRAIN ACCESS RISER	6	EA	\$ 7,500.00	\$ 45,000.00
NEW 90" CMP STORMDRAIN	2,480	LF	\$ 800.00	\$ 1,984,000.00
NEW 84" CMP 30 DEGREE BEND	5	EA	\$ 5,000.00	\$ 25,000.00
NEW 84" CMP 45 DEGREE BEND	1	EA	\$ 5,000.00	\$ 5,000.00
NEW CONCRETE OUTLET HEADWALL WITH SAFETY RAIL	1	EA	\$ 20,000.00	\$ 20,000.00
NEW 10'X24' PRECAST CONCRETE JUNCTION STRUCTURE	1	EA	\$ 35,000.00	\$ 35,000.00
NEW 90" CMP 30 DEGREE BEND	4	EA	\$ 6,000.00	\$ 24,000.00
NEW CONCRETE INLET HEADWALL WITH SAFETY RAIL	1	EA	\$ 15,000.00	\$ 15,000.00
NEW 18" CMP STORMDRAIN	140	LF	\$ 75.00	\$ 10,500.00
NEW MAG TYPE D CATCHBASIN WITH 17" WING	10	EA	\$ 7,500.00	\$ 75,000.00
NEW STORMDRAIN LATERAL PIPE CONNECTION	10	EA	\$ 1,500.00	\$ 15,000.00
30" THICK D50 - 12" RIPRAP PAD WITH NON-WOVEN FILTER FABRIC	150	CY	\$ 120.00	\$ 18,000.00
STORM WATER SUBTOTAL				\$ 2,667,500.00
EARTHWORK				
CUT AND HAUL	30	CY	\$ 10.00	\$ 300.00
FILL	1,266	CY	\$ 20.00	\$ 25,320.00
EARTHWORK SUBTOTAL				\$ 25,620.00
CONTRACT ALLOWANCES				
CONTINGENCY #1: ROCK TRENCHING	2,810	CY	\$ 100.00	\$ 281,000.00
CONTINGENCY #2: UNSUITABLE MATERIAL HAUL OFF & IMPORT	2,810	CY	\$ 100.00	\$ 281,000.00
SUBTOTAL ALLOWANCES				\$ 562,000.00
NON-CONSTRUCTION ITEMS *				
MOBILIZATION & ADMINISTRATION (INCLUDES SURVEY STAKING)	1	LS	10%	\$ 435,161.00
TRAFFIC CONTROL	1	LS	2%	\$ 87,032.20
AS-BUILT MEASUREMENTS/RECORD DRAWINGS	1	LS	5%	\$ 217,580.50
EROSION CONTROL/SWPPP	1	LS	5%	\$ 217,580.50
SUBTOTAL NON-CONSTRUCTION ITEMS				\$ 957,354.20
PROJECT ADMINISTRATION**				
PROJECT DESIGN	1	LS	12%	\$ 637,075.70
CITY ADMINISTRATION	1	LS	12%	\$ 637,075.70
CONSTRUCTION CONTINGENCY	1	LS	30%	\$ 1,592,689.26
SUBTOTAL PROJECT ADMINISTRATION				\$ 2,866,840.67
PROJECT TOTAL				\$ 8,175,804.87

* Percentages shown are based on all allowances and construction items

** Percentages shown are based on all allowances, construction items, and non-construction items

OPINION OF COST

The opinions of cost shown, and any resulting conclusions on project financial or economic feasibility or funding requirements, have been prepared for guidance in project budgeting and implementation from the information available at the time the opinion was prepared. The final costs of the project will depend on actual labor and material costs, competitive market conditions, actual site conditions, implementation schedule, continuity of personnel and engineering, and other variable factors. As a result, the final project costs will vary from the opinions of cost presented herein. Construction costs are presented in June 2020 dollars.

Drainage Improvement Project - Detention Upstream of Andy Devine
August 3, 2020
Conceptual Plans Construction Cost Estimate
Engineer's Opinion of Quantities and Probable Cost of Construction

DESCRIPTION	QNTY	UNIT	UNIT COST	TOTAL
REMOVALS				
REMOVE AND DISPOSE OF EXISTING 72" STORMDRAIN	30	LF	\$ 150.00	\$ 4,500.00
REMOVALS SUBTOTAL				\$ 4,500.00
STORM WATER CONSTRUCTION				
NEW 24" HDPE STORMDRAIN	12	LF	\$ 100.00	\$ 1,200.00
NEW 24" HDPE END SECTION	1	EA	\$ 750.00	\$ 750.00
NEW CONCRETE OUTLET STRUCTURE	1	EA	\$ 25,000.00	\$ 25,000.00
GRADE SLOPE TO MATCH OUTLET STRUCTURE	1	EA	\$ 5,000.00	\$ 5,000.00
STORM WATER SUBTOTAL				\$ 31,950.00
CONTRACT ALLOWANCES				
CONTINGENCY #1: ROCK TRENCHING	-	CY	\$ 100.00	\$ -
CONTINGENCY #2: UNSUITABLE MATERIAL HAUL OFF & IMPORT	20	CY	\$ 100.00	\$ 2,000.00
SUBTOTAL ALLOWANCES				\$ 2,000.00
NON-CONSTRUCTION ITEMS *				
MOBILIZATION & ADMINISTRATION (INCLUDES SURVEY STAKING)	1	LS	10%	\$ 3,845.00
TRAFFIC CONTROL	1	LS	2%	\$ 769.00
AS-BUILT MEASUREMENTS/RECORD DRAWINGS	1	LS	5%	\$ 1,922.50
EROSION CONTROL/SWPPP	1	LS	5%	\$ 1,922.50
SUBTOTAL NON-CONSTRUCTION ITEMS				\$ 8,459.00
PROJECT ADMINISTRATION**				
PROJECT DESIGN	1	LS	12%	\$ 5,629.08
CITY ADMINISTRATION	1	LS	12%	\$ 5,629.08
CONSTRUCTION CONTINGENCY	1	LS	30%	\$ 14,072.70
SUBTOTAL PROJECT ADMINISTRATION				\$ 25,330.86
PROJECT TOTAL				\$ 72,239.86

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OPINION OF COST

The opinions of cost shown, and any resulting conclusions on project financial or economic feasibility or funding requirements, have been prepared for guidance in project budgeting and implementation from the information available at the time the opinion was prepared. The final costs of the project will depend on actual labor and material costs, competitive market conditions, actual site conditions, implementation schedule, continuity of personnel and engineering, and other variable factors. As a result, the final project costs will vary from the opinions of cost presented herein. Construction costs are presented in June 2020 dollars.

Drainage Improvement Project - 4th Avenue Basin

August 3, 2020

Conceptual Plans Construction Cost Estimate

Engineer's Opinion of Quantities and Probable Cost of Construction

DESCRIPTION	QNTY	UNIT	UNIT COST	TOTAL
ROADWAY CONSTRUCTION				
GRADE NEW DETENTION BASIN ¹				
CONSTRUCT NEW DETENTION BASIN MAINTENANCE ACCESS	1	EA	\$ 5,000.00	\$ 5,000.00
NEW CONCRETE SPILLWAY PER DETAIL 3	4,000	SF	\$ 20.00	\$ 80,000.00
NEW 12" HDPE STORMDRAIN	50	LF	\$ 50.00	\$ 2,500.00
NEW 12" HDPE END SECTION	2	EA	\$ 500.00	\$ 1,000.00
NEW CHAINLINK FENCE WITH ACCESS GATE PER COK SPECIFICATIONS	1,380	LF	\$ 30.00	\$ 41,400.00
30" THICK D50 = 12" RIPRAP PAD WITH MIRAFI NON-WOVEN FABRIC	200	CY	\$ 150.00	\$ 30,000.00
12" THICK D50 = 6" RIPRAP PAD WITH MIRAFI NON-WOVEN FABRIC	73	CY	\$ 120.00	\$ 8,760.00
ROADWAY SUBTOTAL				\$ 168,660.00
EARTHWORK				
CUT AND HAUL	4,902	CY	\$ 10.00	\$ 49,020.00
FILL	1,169	CY	\$ 20.00	\$ 23,380.00
EARTHWORK SUBTOTAL				\$ 72,400.00
CONTRACT ALLOWANCES				
CONTINGENCY #1: ROCK TRENCHING	300	CY	\$ 100.00	\$ 30,000.00
CONTINGENCY #2: UNSUITABLE MATERIAL HAUL OFF & IMPORT	300	CY	\$ 100.00	\$ 30,000.00
SUBTOTAL ALLOWANCES				\$ 60,000.00
NON-CONSTRUCTION ITEMS *				
MOBILIZATION & ADMINISTRATION (INCLUDES SURVEY STAKING)	1	LS	10%	\$ 30,106.00
TRAFFIC CONTROL	1	LS	2%	\$ 6,021.20
AS-BUILT MEASUREMENTS/RECORD DRAWINGS	1	LS	5%	\$ 15,053.00
EROSION CONTROL/SWPPP	1	LS	5%	\$ 15,053.00
SUBTOTAL NON-CONSTRUCTION ITEMS				\$ 66,233.20
PROJECT ADMINISTRATION**				
PROJECT DESIGN	1	LS	12%	\$ 44,075.18
CITY ADMINISTRATION	1	LS	12%	\$ 44,075.18
CONSTRUCTION CONTINGENCY	1	LS	30%	\$ 110,187.96
SUBTOTAL PROJECT ADMINISTRATION				\$ 198,338.33
PROJECT TOTAL				\$ 565,631.53

* Percentages shown are based on all allowances and construction items

** Percentages shown are based on all allowances, construction items, and non-construction items

1. Grading of detention basin is included in earthwork summary

OPINION OF COST

The opinions of cost shown, and any resulting conclusions on project financial or economic feasibility or funding requirements, have been prepared for guidance in project budgeting and implementation from the information available at the time the opinion was prepared. The final costs of the project will depend on actual labor and material costs, competitive market conditions, actual site conditions, implementation schedule, continuity of personnel and engineering, and other variable factors. As a result, the final project costs will vary from the opinions of cost presented herein. Construction costs are presented in June 2020 dollars.

Drainage Improvement Project - Main Street Stormdrain Extension
August 3, 2020
Conceptual Plans Construction Cost Estimate
Engineer's Opinion of Quantities and Probable Cost of Construction

DESCRIPTION	QNTY	UNIT	UNIT COST	TOTAL
REMOVALS				
REMOVE AND DISPOSE OF ASPHALT	7,110	SY	\$ 15.00	\$ 106,643.33
REMOVE AND DISPOSE OF SEWER LINE	180	LF	\$ 50.00	\$ 9,000.00
ADJUST MANHOLE RING, FRAME AND COVER TO FINISHED GRADE	23	EA	\$ 1,000.00	\$ 23,000.00
REMOVALS SUBTOTAL				\$ 138,643.33
ROADWAY CONSTRUCTION				
NEW 3" AC/6" ABC ASPHALT	7,110	SY	\$ 50.00	\$ 355,477.78
ROADWAY SUBTOTAL				\$ 355,477.78
SEWER CONSTRUCTION				
NEW SEWER MANHOLE	5	EA	\$ 7,500.00	\$ 37,500.00
NEW DROP SEWER CONNECTION	5	EA	\$ 1,500.00	\$ 7,500.00
NEW 8" PVC SEWER LINE	200	LF	\$ 80.00	\$ 16,000.00
NEW SEWER LINE CONNECTION TO EXISTING MANHOLE	5	EA	\$ 2,000.00	\$ 10,000.00
WATER SUBTOTAL				\$ 71,000.00
STORM WATER CONSTRUCTION				
NEW 36" RCP STORMDRAIN	10,940	LF	\$ 130.00	\$ 1,422,200.00
NEW TRANSVERSE GRATE CATCHBASIN PER DETAIL 2	9	EA	\$ 15,000.00	\$ 135,000.00
STORM WATER SUBTOTAL				\$ 1,557,200.00
CONTRACT ALLOWANCES				
CONTINGENCY #1: ROCK TRENCHING	1,620	CY	\$ 100.00	\$ 162,000.00
CONTINGENCY #2: UNSUITABLE MATERIAL HAUL OFF & IMPORT	1,620	CY	\$ 100.00	\$ 162,000.00
SUBTOTAL ALLOWANCES				\$ 324,000.00
NON-CONSTRUCTION ITEMS *				
MOBILIZATION & ADMINISTRATION (INCLUDES SURVEY STAKING)	1	LS	10%	\$ 244,632.11
TRAFFIC CONTROL	1	LS	2%	\$ 48,926.42
AS-BUILT MEASUREMENTS/RECORD DRAWINGS	1	LS	5%	\$ 122,316.06
EROSION CONTROL/SWPPP	1	LS	5%	\$ 122,316.06
SUBTOTAL NON-CONSTRUCTION ITEMS				\$ 538,190.64
PROJECT ADMINISTRATION**				
PROJECT DESIGN	1	LS	12%	\$ 358,141.41
CITY ADMINISTRATION	1	LS	12%	\$ 358,141.41
CONSTRUCTION CONTINGENCY	1	LS	30%	\$ 895,353.53
SUBTOTAL PROJECT ADMINISTRATION				\$ 1,611,636.35
PROJECT TOTAL				\$ 4,596,148.10

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OPINION OF COST

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Drainage Improvement Project - Fairgrounds Boulevard Stormdrain Extension

August 3, 2020

Conceptual Plans Construction Cost Estimate

Engineer's Opinion of Quantities and Probable Cost of Construction

DESCRIPTION	QNTY	UNIT	UNIT COST	TOTAL
REMOVALS				
REMOVE AND DISPOSE OF ASPHALT	6,238	SY	\$ 15.00	\$ 93,570.00
REMOVALS SUBTOTAL				\$ 93,570.00
ROADWAY CONSTRUCTION				
NEW 3" AC/6" ABC ASPHALT	6,238	SY	\$ 50.00	\$ 311,900.00
ROADWAY SUBTOTAL				\$ 311,900.00
STORM WATER CONSTRUCTION				
NEW 60" RCP STORMDRAIN	5,463	LF	\$ 300.00	\$ 1,638,900.00
NEW STORMDRAIN MANHOLE AND SHAFT PER MAG 521 & 522	9	EA	\$ 7,500.00	\$ 67,500.00
NEW TRANSVERSE GRATE CATCHBASIN PER DETAIL 2	5	EA	\$ 12,000.00	\$ 60,000.00
NEW TRANSVERSE GRATE CATCHBASIN PER DETAIL 3	1	EA	\$ 15,000.00	\$ 15,000.00
STORM WATER SUBTOTAL				\$ 1,781,400.00
CONTRACT ALLOWANCES				
CONTINGENCY #1: ROCK TRENCHING	2,500	CY	\$ 100.00	\$ 250,000.00
CONTINGENCY #2: UNSUITABLE MATERIAL HAUL OFF & IMPORT	2,500	CY	\$ 100.00	\$ 250,000.00
SUBTOTAL ALLOWANCES				\$ 500,000.00
NON-CONSTRUCTION ITEMS *				
MOBILIZATION & ADMINISTRATION (INCLUDES SURVEY STAKING)	1	LS	10%	\$ 268,687.00
TRAFFIC CONTROL	1	LS	2%	\$ 53,737.40
AS-BUILT MEASUREMENTS/RECORD DRAWINGS	1	LS	5%	\$ 134,343.50
EROSION CONTROL/SWPPP	1	LS	5%	\$ 134,343.50
SUBTOTAL NON-CONSTRUCTION ITEMS				\$ 591,111.40
PROJECT ADMINISTRATION**				
PROJECT DESIGN	1	LS	12%	\$ 393,357.77
CITY ADMINISTRATION	1	LS	12%	\$ 393,357.77
CONSTRUCTION CONTINGENCY	1	LS	30%	\$ 983,394.42
SUBTOTAL PROJECT ADMINISTRATION				\$ 1,770,109.96
PROJECT TOTAL				\$ 5,048,091.36

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OPINION OF COST

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Drainage Improvement Project - Harrod Avenue Basin Improvements
 August 3, 2020
 Conceptual Plans Construction Cost Estimate
 Engineer's Opinion of Quantities and Probable Cost of Construction

DESCRIPTION	QNTY	UNIT	UNIT COST	TOTAL
REMOVALS				
REMOVE AND DISPOSE OF EXISTING CONCRETE AND ROCK SPILLWAY	1	LS	\$ 7,500.00	\$ 7,500.00
ADJUST MANHOLE RING, FRAME, AND COVER TO FINISHED GRADE	1	EA	\$ 1,000.00	\$ 1,000.00
REMOVALS SUBTOTAL				\$ 8,500.00
STORM WATER CONSTRUCTION				
GRADE NEW DETENTION BASIN ¹				
NEW CONCRETE SPILLWAY	2,430	SF	\$ 15.00	\$ 36,450.00
REGRADE EXISTING SPILLWAY	48	CY	\$ 25.00	\$ 1,200.00
30" THICK D50 = 12" RIPRAP PAD WITH NON-WOVEN FILTER FABRIC	58	CY	\$ 150.00	\$ 8,700.00
12" THICK D50 = 6" RIPRAP PAD WITH NON-WOVEN FILTER FABRIC	12	CY	\$ 120.00	\$ 1,440.00
STORM WATER SUBTOTAL				\$ 47,790.00
EARTHWORK				
CUT AND HAUL	3,430	CY	\$ 10.00	\$ 34,300.00
FILL	915	CY	\$ 20.00	\$ 18,300.00
EARTHWORK SUBTOTAL				\$ 52,600.00
CONTRACT ALLOWANCES				
CONTINGENCY #1: ROCK TRENCHING	100	CY	\$ 100.00	\$ 10,000.00
CONTINGENCY #2: UNSUITABLE MATERIAL HAUL OFF & IMPORT	100	CY	\$ 100.00	\$ 10,000.00
SUBTOTAL ALLOWANCES				\$ 20,000.00
NON-CONSTRUCTION ITEMS *				
MOBILIZATION & ADMINISTRATION (INCLUDES SURVEY STAKING)	1	LS	10%	\$ 12,889.00
TRAFFIC CONTROL	1	LS	2%	\$ 2,577.80
AS-BUILT MEASUREMENTS/RECORD DRAWINGS	1	LS	5%	\$ 6,444.50
EROSION CONTROL/SWPPP	1	LS	5%	\$ 6,444.50
SUBTOTAL NON-CONSTRUCTION ITEMS				\$ 28,355.80
PROJECT ADMINISTRATION**				
PROJECT DESIGN	1	LS	12%	\$ 18,869.50
CITY ADMINISTRATION	1	LS	12%	\$ 18,869.50
CONSTRUCTION CONTINGENCY	1	LS	30%	\$ 47,173.74
SUBTOTAL PROJECT ADMINISTRATION				\$ 84,912.73
PROJECT TOTAL				\$ 242,158.53

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1. Grading of detention basin is included in earthwork summary

OPINION OF COST

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Drainage Improvement Project - I-40 Regional Retention
August 3, 2020
Conceptual Plans Construction Cost Estimate
Engineer's Opinion of Quantities and Probable Cost of Construction

DESCRIPTION	QNTY	UNIT	UNIT COST		TOTAL
STORM WATER CONSTRUCTION					
GRADE NEW DETENTION BASIN ¹					
COMPACTED EMBANKMENT ²					
SOIL CEMENT WEIR	6,600	CY	\$ 110.00	\$	725,963.45
6" CONCRETE SPILLWAY	24,820	SF	\$ 15.00	\$	372,303.18
NEW 18" RCP CLASS III (1350-D)	805	LF	\$ 95.00	\$	76,475.00
NEW 24" RCP CLASS III (1350-D)	475	LF	\$ 110.00	\$	52,250.00
NEW 36" RCP CLASS III (1350-D)	420	LF	\$ 130.00	\$	54,600.00
RIPRAP (D50=6")	2,871	CY	\$ 100.00	\$	287,102.22
CONSTRUCT NEW DETENTION BASIN MAINTENANCE ACCESS	6	EA	\$ 10,000.00	\$	60,000.00
NEW CHAINLINK FENCE WITH ACCESS GATE PER COK SPECIFICATIONS	7900	LF	\$ 30.00	\$	237,000.00
				\$	-
STORM WATER SUBTOTAL				\$	1,865,693.86
EARTHWORK					
CUT AND HAUL	58,593	CY	\$ 10.00	\$	585,930.00
FILL	10,955	CY	\$ 20.00	\$	219,106.64
EARTHWORK SUBTOTAL				\$	805,036.64
CONTRACT ALLOWANCES					
CONTINGENCY #1: ROCK TRENCHING	1,200	CY	\$ 100.00	\$	120,000.00
CONTINGENCY #2: UNSUITABLE MATERIAL HAUL OFF & IMPORT	1,200	CY	\$ 100.00	\$	120,000.00
SUBTOTAL ALLOWANCES				\$	240,000.00
NON-CONSTRUCTION ITEMS *					
MOBILIZATION & ADMINISTRATION (INCLUDES SURVEY STAKING)	1	LS	10%	\$	291,073.05
TRAFFIC CONTROL	1	LS	2%	\$	58,214.61
AS-BUILT MEASUREMENTS/RECORD DRAWINGS	1	LS	5%	\$	145,536.53
EROSION CONTROL/SWPPP	1	LS	5%	\$	145,536.53
SUBTOTAL NON-CONSTRUCTION ITEMS				\$	640,360.71
PROJECT ADMINISTRATION**					
PROJECT DESIGN	1	LS	12%	\$	426,130.95
CITY ADMINISTRATION	1	LS	12%	\$	426,130.95
CONSTRUCTION CONTINGENCY	1	LS	30%	\$	1,065,327.37
SUBTOTAL PROJECT ADMINISTRATION				\$	1,917,589.26
PROJECT TOTAL				\$	5,468,680.47

* Percentages shown are based on all allowances and construction items

** Percentages shown are based on all allowances, construction items, and non-construction items

1. Grading of detention basin is included in earthwork cut and haul summary

2. Compacted embankment included in earthwork fill summary

OPINION OF COST

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Drainage Improvement Project - Pinal Street Basin

August 3, 2020

Conceptual Plans Construction Cost Estimate

Engineer's Opinion of Quantities and Probable Cost of Construction

DESCRIPTION	QNTY	UNIT	UNIT COST	TOTAL
REMOVALS				
REMOVE AND DISPOSE OF ASPHALT	135	SY	\$ 15.00	\$ 2,025.00
ADJUST MANHOLE RING, FRAME AND COVER TO FINISHED GRADE	1	EA	\$ 1,000.00	\$ 1,000.00
REMOVALS SUBTOTAL				\$ 3,025.00
ROADWAY CONSTRUCTION				
3" AC/6" ABC ASPHALT	2,275	SY	\$ 50.00	\$ 113,750.00
NEW TYPE 'A' CONCRETE CURB AND GUTTER	1,240	LF	\$ 25.00	\$ 31,000.00
ROADWAY SUBTOTAL				\$ 144,750.00
STORM WATER CONSTRUCTION				
DETENTION BASIN EXCAVATION ¹				
NEW GRADE NEW DETENTION BASIN MAINTENANCE ACCESS	2	EA	\$ 5,000.00	\$ 10,000.00
6" CONCRETE SPILLWAY	2,725	SF	\$ 15.00	\$ 40,875.00
NEW DOUBLE 6'x4' CONCRETE BOX CULVERT	160	LF	\$ 1,200.00	\$ 192,000.00
NEW DOUBLE 6'x4' CONCRETE BOX CULVERT INLET	1	EA	\$ 20,000.00	\$ 20,000.00
NEW DOUBLE 6'x4' CONCRETE BOX CULVERT OUTLET	1	EA	\$ 15,000.00	\$ 15,000.00
NEW 36" HDPE STORMDRAIN	250	LF	\$ 100.00	\$ 25,000.00
NEW 36" HDPE ENDSECTION	6	EA	\$ 1,000.00	\$ 6,000.00
NEW 24" HDPE STORMDRAIN	50	LF	\$ 75.00	\$ 3,750.00
NEW 24" HDPE ENDSECTION	2	EA	\$ 750.00	\$ 1,500.00
12" THICK D50 = 6" RIPRAP PAD WITH MIRAFI NON-WOVEN FILTER FABRIC UNDER ROCK	222	CY	\$ 120.00	\$ 26,640.00
30" THICK D50 = 12" RIPRAP PAD WITH MIRAFI NON-WOVEN FILTER FABRIC UNDER ROCK	190	CY	\$ 150.00	\$ 28,500.00
DRAINAGE CHANNEL EXCAVATION ¹				
FENCE	2,930	LF	\$ 30.00	\$ 87,900.00
STORM WATER SUBTOTAL				\$ 457,165.00
EARTHWORK				
CUT AND HAUL	48,405	CY	\$ 10.00	\$ 484,050.00
FILL	3,925	CY	\$ 20.00	\$ 78,500.00
EARTHWORK SUBTOTAL				\$ 562,550.00
CONTRACT ALLOWANCES				
CONTINGENCY #1: ROCK TRENCHING	1,000	CY	\$ 100.00	\$ 100,000.00
CONTINGENCY #2: UNSUITABLE MATERIAL HAUL OFF & IMPORT	1,000	CY	\$ 100.00	\$ 100,000.00
SUBTOTAL ALLOWANCES				\$ 200,000.00
NON-CONSTRUCTION ITEMS *				
MOBILIZATION & ADMINISTRATION (INCLUDES SURVEY STAKING)	1	LS	10%	\$ 136,749.00
TRAFFIC CONTROL	1	LS	2%	\$ 27,349.80
AS-BUILT MEASUREMENTS/RECORD DRAWINGS	1	LS	5%	\$ 68,374.50
EROSION CONTROL/SWPPP	1	LS	5%	\$ 68,374.50
SUBTOTAL NON-CONSTRUCTION ITEMS				\$ 300,847.80
PROJECT ADMINISTRATION**				
PROJECT DESIGN	1	LS	12%	\$ 200,200.54
CITY ADMINISTRATION	1	LS	12%	\$ 200,200.54
CONSTRUCTION CONTINGENCY	1	LS	30%	\$ 500,501.34
SUBTOTAL PROJECT ADMINISTRATION				\$ 900,902.41
PROJECT TOTAL				\$ 2,569,240.21

* Percentages shown are based on all allowances and construction items

** Percentages shown are based on all allowances, construction items, and non-construction items

1. Grading of detention basin and channel is included in earthwork cut and haul summary

OPINION OF COST

The opinions of cost shown, and any resulting conclusions on project financial or economic feasibility or funding requirements, have been prepared for guidance in project budgeting and implementation from the information available at the time the opinion was prepared. The final costs of the project will depend on actual labor and material costs, competitive market conditions, actual site conditions, implementation schedule, continuity of personnel and engineering, and other variable factors. As a result, the final project costs will vary from the opinions of cost presented herein. Construction costs are presented in June 2020 dollars.

Drainage Improvement Project - Anson Smith Road Collector Channel and Basins
August 3, 2020

Conceptual Plans Construction Cost Estimate
Engineer's Opinion of Quantities and Probable Cost of Construction

DESCRIPTION	QNTY	UNIT	UNIT COST	TOTAL
REMOVALS				
REMOVE AND DISPOSE OF ASPHALT	360	SY	\$ 15.00	\$ 5,400.00
REMOVE AND DISPOSE OF EXISING WATERLINE	760	LF	\$ 20.00	\$ 15,200.00
REMOVE AND DISPOSE OF EXISTING WATER VALVE, BOX AND COVER	2	EA	\$ 500.00	\$ 1,000.00
REMOVALS SUBTOTAL				\$ 21,600.00
ROADWAY CONSTRUCTION				
3" AC/6" ABC ASPHALT	360	SY	\$ 50.00	\$ 18,000.00
ROADWAY SUBTOTAL				\$ 18,000.00
WATER CONSTRUCTION				
NEW VERTICAL WATER MAIN REALIGNMENT PER MAG STD DET 370	180	LF	\$ 80.00	\$ 14,400.00
NEW 8" CLASS 235 C-900 PVC WATERLINE	430	LF	\$ 80.00	\$ 34,400.00
NEW 8" CLASS 250 GATE VALVE	2	EA	\$ 2,000.00	\$ 4,000.00
NEW WATER SERVICE CONNECTION PER COK STD DET 344	1	EA	\$ 1,500.00	\$ 1,500.00
RELOCATE EXISTING FIRE HYDRANT TO NEW LOCATION	1	EA	\$ 3,000.00	\$ 3,000.00
NEW 16" CLASS 350 DIP WATERLINE	485	LF	\$ 150.00	\$ 72,750.00
WATER SUBTOTAL				\$ 130,050.00
STORM WATER CONSTRUCTION				
NEW CONCRETE CHANNEL PER DETAIL 3A	10,200	SF	\$ 10.00	\$ 102,000.00
NEW CONCRETE CHANNEL PER DETAIL 3B	10,500	SF	\$ 10.00	\$ 105,000.00
NEW CONCRETE CHANNEL PER DETAIL 3C	30,360	SF	\$ 10.00	\$ 303,600.00
GRADE NEW DETENTION BASIN ¹				\$ -
CONSTRUCT NEW DETENTION BASIN MAINTENANCE ACCESS	4	EA	\$ 10,000.00	\$ 40,000.00
NEW CONCRETE SPILLWAY PER DETAIL 5	1265	SF	\$ 15.00	\$ 18,975.00
NEW CONCRETE SPILLWAY PER DETAIL 6	865	SF	\$ 15.00	\$ 12,975.00
NEW CONCRETE SPILLWAY PER DETAIL 7	1430	SF	\$ 15.00	\$ 21,450.00
NEW CONCRETE SPILLWAY PER DETAIL 8	875	SF	\$ 15.00	\$ 13,125.00
NEW CONCRETE SPILLWAY PER DETAIL 9	2085	SF	\$ 15.00	\$ 31,275.00
NEW 12" RCP CLASS III	172	LF	\$ 80.00	\$ 13,760.00
NEW 36" RCP STORMDRAIN	170	LF	\$ 130.00	\$ 22,100.00
NEW 12" RCP CONCRETE HEADWALL PER MAG STD DET 501	6	EA	\$ 2,500.00	\$ 15,000.00
NEW 36" RCP CONCRETE HEADWALL PER MAG STD DET 501	1	EA	\$ 5,000.00	\$ 5,000.00
NEW STORMDRAIN MANHOLE AND SHAFT PER MAG 520 & 522	1	EA	\$ 7,500.00	\$ 7,500.00
NEW TRANSVERSE GRATE OUTLET PER DETAIL 4	1	EA	\$ 15,000.00	\$ 15,000.00
NEW 0'-5.1' HIGH RETAINING WALL WITH SAFETY RAIL PER MAG 145	300	LF	\$ 175.00	\$ 52,500.00
12" THICK D50 = 6" RIPRAP WITH MIRAFI NON-WOVEN FILTER FABRIC	274	CY	\$ 120.00	\$ 32,848.89
30" THICK D50 = 12" RIPRAP WITH MIRAFI NON-WOVEN FILTER FABRIC	1061	CY	\$ 150.00	\$ 159,166.67
NEW 6" THICK CONCRETE APRON	21,210	SF	\$ 15.00	\$ 318,150.00
NEW CHAINLINK FENCE WITH ACCESS GATE PER COK SPECIFICATIONS	1,925	LF	\$ 30.00	\$ 57,750.00
STORM WATER SUBTOTAL				\$ 1,347,175.56
EARTHWORK				
CUT AND HAUL	36,643	CY	\$ 10.00	\$ 366,430.00
FILL	422	CY	\$ 20.00	\$ 8,440.00
EARTHWORK SUBTOTAL				\$ 374,870.00
CONTRACT ALLOWANCES				
CONTINGENCY #1: ROCK TRENCHING	1,500	CY	\$ 100.00	\$ 150,000.00
CONTINGENCY #2: UNSUITABLE MATERIAL HAUL OFF & IMPORT	1,500	CY	\$ 100.00	\$ 150,000.00
SUBTOTAL ALLOWANCES				\$ 300,000.00
NON-CONSTRUCTION ITEMS *				
MOBILIZATION & ADMINISTRATION (INCLUDES SURVEY STAKING)	1	LS	10%	\$ 219,169.56
TRAFFIC CONTROL	1	LS	2%	\$ 43,833.91
AS-BUILT MEASUREMENTS/RECORD DRAWINGS	1	LS	5%	\$ 109,584.78
EROSION CONTROL/SWPPP	1	LS	5%	\$ 109,584.78
SUBTOTAL NON-CONSTRUCTION ITEMS				\$ 482,173.02
PROJECT ADMINISTRATION**				
PROJECT DESIGN	1	LS	12%	\$ 320,864.23
CITY ADMINISTRATION	1	LS	12%	\$ 320,864.23
CONSTRUCTION CONTINGENCY	1	LS	30%	\$ 802,160.57
SUBTOTAL PROJECT ADMINISTRATION				\$ 1,443,889.03
PROJECT TOTAL				\$ 4,117,757.61

* Percentages shown are based on all allowances and construction items

** Percentages shown are based on all allowances, construction items, and non-construction items

1. Grading of detention basin is included in earthwork cut and haul summary

OPINION OF COST

The opinions of cost shown, and any resulting conclusions on project financial or economic feasibility or funding requirements, have been prepared for guidance in project budgeting and implementation from the information available at the time the opinion was prepared. The final costs of the project will depend on actual labor and material costs, competitive market conditions, actual site conditions, implementation schedule, continuity of personnel and engineering, and other variable factors. As a result, the final project costs will vary from the opinions of cost presented herein. Construction costs are presented in June 2020 dollars.

Drainage Improvement Project - Harvard Street Improvements and Basins
August 3, 2020
Conceptual Plans Construction Cost Estimate
Engineer's Opinion of Quantities and Probable Cost of Construction

DESCRIPTION	QNTY	UNIT	UNIT COST	TOTAL
REMOVALS				
REMOVE AND DISPOSE OF ASPHALT	3,070	SY	\$ 15.00	\$ 46,050.00
ADJUST MANHOLE RING, FRAME, AND COVER TO FINISHED GRADE	12	EA	\$ 1,000.00	\$ 12,000.00
ADJUST VALVE BOX AND COVER TO FINISHED GRADE	5	EA	\$ 600.00	\$ 3,000.00
REMOVALS SUBTOTAL				\$ 61,050.00
ROADWAY CONSTRUCTION				
3" AC/6" ABC ASPHALT	7,185	SY	\$ 50.00	\$ 359,250.00
NEW MAG TYPE 'A' CURB AND GUTTER PER MAG STD DET 220	1,945	LF	\$ 25.00	\$ 48,625.00
ROADWAY SUBTOTAL				\$ 407,875.00
WATER CONSTRUCTION				
NEW VERTICAL WATER MAIN REALIGNMENT PER MAG STD DET 370	120	LF	\$ 80.00	\$ 9,600.00
WATER SUBTOTAL				\$ 9,600.00
STORM WATER CONSTRUCTION				
GRADE NEW DETENTION BASIN ¹				\$ -
CONSTRUCT NEW DETENTION BASIN MAINTENANCE ACCESS	1	EA	\$ 10,000.00	\$ 10,000.00
NEW CONCRETE SPILLWAY	1,355	SF	\$ 15.00	\$ 20,325.00
NEW 18" RCP STORMDRAIN	340	LF	\$ 100.00	\$ 34,000.00
NEW 36" RCP STORMDRAIN	2,735	LF	\$ 130.00	\$ 355,550.00
NEW HEADWALL PER MAG STD DET 501	4	EA	\$ 7,500.00	\$ 30,000.00
NEW CONCRETE ROADSIDE CHANNEL PER DETAIL 3	9,490	SF	\$ 10.00	\$ 94,900.00
NEW CONCRETE ROADSIDE CHANNEL PER DETAIL 5	960	SF	\$ 10.00	\$ 9,600.00
SAFETY RAIL PER DETAIL 6	970	LF	\$ 30.00	\$ 29,100.00
NEW TRANSVERSE GRATE OUTLET PER DETAIL 8	1	EA	\$ 15,000.00	\$ 15,000.00
NEW STORMDRAIN MANHOLE AND SHAFT PER MAG 520 & 522	10	EA	\$ 7,500.00	\$ 75,000.00
NEW TRANSVERSE GRATE CATCHBASIN PER DETAIL 6	1	EA	\$ 15,000.00	\$ 15,000.00
12 THICK D50 = 6" RIPRAP PAD WITH NON-WOVEN FILTER FABRIC	55	CY	\$ 120.00	\$ 6,600.00
NEW CHAINLINK FENCE WITH ACCESS GATE PER COK SPECIFICATIONS	1,131	LF	\$ 30.00	\$ 33,930.00
NEW 10'x3' REINFORCED CONCRETE BOX CULVERT	80	LF	\$ 900.00	\$ 306,000.00
				\$ -
STORM WATER SUBTOTAL				\$ 1,035,005.00
EARTHWORK				
CUT AND HAUL	14,264	CY	\$ 10.00	\$ 142,640.00
FILL	34	CY	\$ 20.00	\$ 680.00
EARTHWORK SUBTOTAL				\$ 143,320.00
CONTRACT ALLOWANCES				
CONTINGENCY #1: ROCK TRENCHING	100	CY	\$ 100.00	\$ 10,000.00
CONTINGENCY #2: UNSUITABLE MATERIAL HAUL OFF & IMPORT	100	CY	\$ 100.00	\$ 10,000.00
SUBTOTAL ALLOWANCES				\$ 20,000.00
NON-CONSTRUCTION ITEMS *				
MOBILIZATION & ADMINISTRATION (INCLUDES SURVEY STAKING)	1	LS	10%	\$ 167,685.00
TRAFFIC CONTROL	1	LS	2%	\$ 33,537.00
AS-BUILT MEASUREMENTS/RECORD DRAWINGS	1	LS	5%	\$ 83,842.50
EROSION CONTROL/SWPPP	1	LS	5%	\$ 83,842.50
SUBTOTAL NON-CONSTRUCTION ITEMS				\$ 368,907.00
PROJECT ADMINISTRATION**				
PROJECT DESIGN	1	LS	12%	\$ 245,490.84
CITY ADMINISTRATION	1	LS	12%	\$ 245,490.84
CONSTRUCTION CONTINGENCY	1	LS	30%	\$ 613,727.10
SUBTOTAL PROJECT ADMINISTRATION				\$ 1,104,708.78
PROJECT TOTAL				\$ 3,150,465.78

* Percentages shown are based on all allowances and construction items

** Percentages shown are based on all allowances, construction items, and non-construction items

1. Grading of detention basin is included in earthwork cut and haul summary

OPINION OF COST

The opinions of cost shown, and any resulting conclusions on project financial or economic feasibility or funding requirements, have been prepared for guidance in project budgeting and implementation from the information available at the time the opinion was prepared. The final costs of the project will depend on actual labor and material costs, competitive market conditions, actual site conditions, implementation schedule, continuity of personnel and engineering, and other variable factors. As a result, the final project costs will vary from the opinions of cost presented herein. Construction costs are presented in June 2020 dollars.

Drainage Improvement Project - Western Avenue Stormdrain
August 3, 2020
Conceptual Plans Construction Cost Estimate
Engineer's Opinion of Quantities and Probable Cost of Construction

DESCRIPTION	QNTY	UNIT	UNIT COST	TOTAL
REMOVALS				
REMOVE AND DISPOSE OF ASPHALT	4,505	SY	\$ 15.00	\$ 67,575.00
ADJUST MANHOLE RING, FRAME AND COVER TO FINISHED GRADE	5	EA	\$ 1,000.00	\$ 5,000.00
ADJUST VALVE BOX AND COVER TO FINISHED GRADE	8	EA	\$ 600.00	\$ 4,800.00
REMOVALS SUBTOTAL				\$ 67,575.00
ROADWAY CONSTRUCTION				
4" AC/6" ABC ASPHALT	4,505	SY	\$ 50.00	\$ 225,250.00
NEW MAG TYPE 'A' CURB AND GUTTER PER MAG STD DET 220	754	LF	\$ 25.00	\$ 18,850.00
ROADWAY SUBTOTAL				\$ 244,100.00
WATER CONSTRUCTION				
NEW VERTICAL WATER MAIN REALIGNMENT PER MAG STD DET 370	65	LF	\$ 80.00	\$ 5,200.00
WATER SUBTOTAL				\$ 5,200.00
STORM WATER CONSTRUCTION				
NEW 36" RCP STORMDRAIN	92	LF	\$ 130.00	\$ 11,960.00
NEW 42" RCP STORMDRAIN	945	LF	\$ 140.00	\$ 132,300.00
NEW STORMDRAIN MANHOLE AND SHAFT PER MAG 520 AND 522	3	EA	\$ 7,500.00	\$ 22,500.00
NEW TRANSVERSE GRAGE CATCHBASIN PER DETAIL 4	2	EA	\$ 15,000.00	\$ 30,000.00
NEW TRANSVERSE GRAGE CATCHBASIN PER DETAIL 5	1	EA	\$ 15,000.00	\$ 15,000.00
NEW MAG TYPE 'F' CATCHBASIN PER MAG STD DET 535	1	EA	\$ 7,500.00	\$ 7,500.00
STORM WATER SUBTOTAL				\$ 219,260.00
CONTRACT ALLOWANCES				
CONTINGENCY #1: ROCK TRENCHING	180	CY	\$ 100.00	\$ 18,000.00
CONTINGENCY #2: UNSUITABLE MATERIAL HAUL OFF & IMPORT	180	CY	\$ 100.00	\$ 18,000.00
SUBTOTAL ALLOWANCES				\$ 36,000.00
NON-CONSTRUCTION ITEMS *				
MOBILIZATION & ADMINISTRATION (INCLUDES SURVEY STAKING)	1	LS	10%	\$ 57,213.50
TRAFFIC CONTROL	1	LS	2%	\$ 11,442.70
AS-BUILT MEASUREMENTS/RECORD DRAWINGS	1	LS	5%	\$ 28,606.75
EROSION CONTROL/SWPPP	1	LS	5%	\$ 28,606.75
SUBTOTAL NON-CONSTRUCTION ITEMS				\$ 125,869.70
PROJECT ADMINISTRATION**				
PROJECT DESIGN	1	LS	12%	\$ 83,760.56
CITY ADMINISTRATION	1	LS	12%	\$ 83,760.56
CONSTRUCTION CONTINGENCY	1	LS	30%	\$ 209,401.41
SUBTOTAL PROJECT ADMINISTRATION				\$ 376,922.54
PROJECT TOTAL				\$ 1,074,927.24

* Percentages shown are based on all allowances and construction items

** Percentages shown are based on all allowances, construction items, and non-construction items

OPINION OF COST

The opinions of cost shown, and any resulting conclusions on project financial or economic feasibility or funding requirements, have been prepared for guidance in project budgeting and implementation from the information available at the time the opinion was prepared. The final costs of the project will depend on actual labor and material costs, competitive market conditions, actual site conditions, implementation schedule, continuity of personnel and engineering, and other variable factors. As a result, the final project costs will vary from the opinions of cost presented herein. Construction costs are presented in June 2020 dollars.

Drainage Improvement Project - Vista Drive Basin
August 3, 2020
Conceptual Plans Construction Cost Estimate
Engineer's Opinion of Quantities and Probable Cost of Construction

DESCRIPTION	QNTY	UNIT	UNIT COST	TOTAL
STORM WATER CONSTRUCTION				
GRADE NEW DETENTION BASIN ¹				
NEW GRADE NEW DETENTION BASIN MAINTENANCE ACCESS	1	EA	\$ 10,000.00	\$ 10,000.00
6" CONCRETE SPILLWAY	1,365	SF	\$ 15.00	\$ 20,475.00
NEW 42" ADS STORMDRAIN	130	LF	\$ 100.00	\$ 13,000.00
NEW 42" ADS END SECTION	1	EA	\$ 1,000.00	\$ 1,000.00
NEW 42" CONCRETE END SECTION	1	EA	\$ 5,000.00	\$ 5,000.00
12" THICK D50 = 6" RIPRAP PAD WITH MIRAFI NON-WOVEN FILTER FABRIC UNDER ROCK	150	CY	\$ 120.00	\$ 18,000.00
30" THICK D50 = 12" RIPRAP PAD WITH MIRAFI NON-WOVEN FILTER FABRIC UNDER ROCK	680	CY	\$ 150.00	\$ 102,000.00
FENCE	1,675	LF	\$ 30.00	\$ 50,250.00
STORM WATER SUBTOTAL				\$ 219,725.00
EARTHWORK				
CUT AND HAUL	17,125	CY	\$ 10.00	\$ 171,250.00
FILL	8,822	CY	\$ 20.00	\$ 176,440.00
EARTHWORK SUBTOTAL				\$ 347,690.00
CONTRACT ALLOWANCES				
CONTINGENCY #1: ROCK TRENCHING	200	CY	\$ 100.00	\$ 20,000.00
CONTINGENCY #2: UNSUITABLE MATERIAL HAUL OFF & IMPORT	200	CY	\$ 100.00	\$ 20,000.00
SUBTOTAL ALLOWANCES				\$ 40,000.00
NON-CONSTRUCTION ITEMS *				
MOBILIZATION & ADMINISTRATION (INCLUDES SURVEY STAKING)	1	LS	10%	\$ 60,741.50
TRAFFIC CONTROL	1	LS	2%	\$ 12,148.30
AS-BUILT MEASUREMENTS/RECORD DRAWINGS	1	LS	5%	\$ 30,370.75
EROSION CONTROL/SWPPP	1	LS	5%	\$ 30,370.75
SUBTOTAL NON-CONSTRUCTION ITEMS				\$ 133,631.30
PROJECT ADMINISTRATION**				
PROJECT DESIGN	1	LS	12%	\$ 88,925.56
CITY ADMINISTRATION	1	LS	12%	\$ 88,925.56
CONSTRUCTION CONTINGENCY	1	LS	30%	\$ 222,313.89
SUBTOTAL PROJECT ADMINISTRATION				\$ 400,165.00
PROJECT TOTAL				\$ 1,141,211.30

* Percentages shown are based on all allowances and construction items

** Percentages shown are based on all allowances, construction items, and non-construction items

1. Grading of detention basin is included in earthwork cut and haul summary

OPINION OF COST

The opinions of cost shown, and any resulting conclusions on project financial or economic feasibility or funding requirements, have been prepared for guidance in project budgeting and implementation from the information available at the time the opinion was prepared. The final costs of the project will depend on actual labor and material costs, competitive market conditions, actual site conditions, implementation schedule, continuity of personnel and engineering, and other variable factors. As a result, the final project costs will vary from the opinions of cost presented herein. Construction costs are presented in June 2020 dollars.

Drainage Improvement Project - Lower Crestwood Channel
August 3, 2020
Conceptual Plans Construction Cost Estimate
Engineer's Opinion of Quantities and Probable Cost of Construction

DESCRIPTION	QNTY	UNIT	UNIT COST	TOTAL
REMOVALS				
ADJUST VALVE BOX AND COVER TO FINISHED GRADE	3	EA	\$ 600.00	\$ 1,800.00
REMOVALS SUBTOTAL				\$ 1,800.00
STORM WATER CONSTRUCTION				
NEW RIPRAP LINED CHANNEL PER DETAIL 1 ¹	2,310	CY	\$ 150.00	\$ 346,500.00
STORM WATER SUBTOTAL				\$ 346,500.00
EARTHWORK				
CUT AND HAUL	4,113	CY	\$ 10.00	\$ 41,130.00
FILL	1,484	CY	\$ 20.00	\$ 29,680.00
EARTHWORK SUBTOTAL				\$ 70,810.00
CONTRACT ALLOWANCES				
CONTINGENCY #1: ROCK TRENCHING	400	CY	\$ 100.00	\$ 40,000.00
CONTINGENCY #2: UNSUITABLE MATERIAL HAUL OFF & IMPORT	400	CY	\$ 100.00	\$ 40,000.00
SUBTOTAL ALLOWANCES				\$ 80,000.00
NON-CONSTRUCTION ITEMS *				
MOBILIZATION & ADMINISTRATION (INCLUDES SURVEY STAKING)	1	LS	10%	\$ 49,911.00
TRAFFIC CONTROL	1	LS	2%	\$ 9,982.20
AS-BUILT MEASUREMENTS/RECORD DRAWINGS	1	LS	5%	\$ 24,955.50
EROSION CONTROL/SWPPP	1	LS	5%	\$ 24,955.50
SUBTOTAL NON-CONSTRUCTION ITEMS				\$ 109,804.20
PROJECT ADMINISTRATION**				
PROJECT DESIGN	1	LS	12%	\$ 73,069.70
CITY ADMINISTRATION	1	LS	12%	\$ 73,069.70
CONSTRUCTION CONTINGENCY	1	LS	30%	\$ 182,674.26
SUBTOTAL PROJECT ADMINISTRATION				\$ 328,813.67
PROJECT TOTAL				\$ 937,727.87

* Percentages shown are based on all allowances and construction items

** Percentages shown are based on all allowances, construction items, and non-construction items

1. Grading of channel is included in earthwork cut and haul summary

OPINION OF COST

The opinions of cost shown, and any resulting conclusions on project financial or economic feasibility or funding requirements, have been prepared for guidance in project budgeting and implementation from the information available at the time the opinion was prepared. The final costs of the project will depend on actual labor and material costs, competitive market conditions, actual site conditions, implementation schedule, continuity of personnel and engineering, and other variable factors. As a result, the final project costs will vary from the opinions of cost presented herein. Construction costs are presented in June 2020 dollars.

Drainage Improvement Project - Grace Neal Channel

August 3, 2020

Conceptual Plans Construction Cost Estimate

Engineer's Opinion of Quantities and Probable Cost of Construction

DESCRIPTION	QNTY	UNIT	UNIT COST	TOTAL
REMOVALS				
REMOVE AND DISPOSE OF ASPHALT	320	SY	\$ 15.00	\$ 4,800.00
REMOVE AND DISPOSE OF CONCRETE	155	SF	\$ 6.00	\$ 930.00
REMOVE AND DISPOSE OF EXISTING CONCRETE CURB AND GUTTER	155	LF	\$ 8.00	\$ 1,240.00
REMOVE AND DISPOSE OF EXISTING REINFORCED CONCRETE BOX	1	LS	\$ 5,000.00	\$ 5,000.00
REMOVALS SUBTOTAL				\$ 6,970.00
ROADWAY CONSTRUCTION				
3" AC/6" ABC ASPHALT	320	SY	\$ 50.00	\$ 16,000.00
NEW CONCRETE SIDEWALK RAMP	155	SF	\$ 20.00	\$ 3,100.00
NEW MAG TYPE 'C' CONCRETE CURB AND GUTTER	155	LF	\$ 25.00	\$ 3,875.00
ROADWAY SUBTOTAL				\$ 22,975.00
WATER CONSTRUCTION				
NEW VERTICAL WATER MAIN REALIGNMENT PER MAG STD DET 370	160	LF	\$ 80.00	\$ 12,800.00
WATER SUBTOTAL				\$ 12,800.00
STORM WATER CONSTRUCTION				
NEW CONCRETE LINED CHANNEL PER DETAIL 3	101,240	SF	\$ 10.00	\$ 1,012,400.00
NEW ARMOR FLEX LINED CHANNEL PER DETAIL 4	403,450	SF	\$ 10.00	\$ 4,034,500.00
NEW DOUBLE 10'x4' CONCRETE BOX CULVERT INLET	1	EA	\$ 15,000.00	\$ 15,000.00
NEW DOUBLE 10'x4' CONCRETE BOX CULVERT OUTLET	1	EA	\$ 15,000.00	\$ 15,000.00
NEW DOUBLE 10'x4' CONCRETE BOX CULVERT	125	LF	\$ 1,900.00	\$ 237,500.00
			\$	\$ -
STORM WATER SUBTOTAL				\$ 5,314,400.00
EARTHWORK				
CUT AND HAUL	72,380	CY	\$ 10.00	\$ 723,800.00
FILL	1,848	CY	\$ 20.00	\$ 36,960.00
EARTHWORK SUBTOTAL				\$ 760,760.00
CONTRACT ALLOWANCES				
CONTINGENCY #1: ROCK TRENCHING	2,000	CY	\$ 100.00	\$ 200,000.00
CONTINGENCY #2: UNSUITABLE MATERIAL HAUL OFF & IMPORT	2,000	CY	\$ 100.00	\$ 200,000.00
SUBTOTAL ALLOWANCES				\$ 400,000.00
NON-CONSTRUCTION ITEMS *				
MOBILIZATION & ADMINISTRATION (INCLUDES SURVEY STAKING)	1	LS	10%	\$ 651,790.50
TRAFFIC CONTROL	1	LS	2%	\$ 130,358.10
AS-BUILT MEASUREMENTS/RECORD DRAWINGS	1	LS	5%	\$ 325,895.25
EROSION CONTROL/SWPPP	1	LS	5%	\$ 325,895.25
SUBTOTAL NON-CONSTRUCTION ITEMS				\$ 1,433,939.10
PROJECT ADMINISTRATION**				
PROJECT DESIGN	1	LS	12%	\$ 954,221.29
CITY ADMINISTRATION	1	LS	12%	\$ 954,221.29
CONSTRUCTION CONTINGENCY	1	LS	30%	\$ 2,385,553.23
SUBTOTAL PROJECT ADMINISTRATION				\$ 4,293,995.81
PROJECT TOTAL				\$ 12,245,839.91

* Percentages shown are based on all allowances and construction items

** Percentages shown are based on all allowances, construction items, and non-construction items

OPINION OF COST

The opinions of cost shown, and any resulting conclusions on project financial or economic feasibility or funding requirements, have been prepared for guidance in project budgeting and implementation from the information available at the time the opinion was prepared. The final costs of the project will depend on actual labor and material costs, competitive market conditions, actual site conditions, implementation schedule, continuity of personnel and engineering, and other variable factors. As a result, the final project costs will vary from the opinions of cost presented herein. Construction costs are presented in June 2020 dollars.

Drainage Improvement Project - Shane Channel
August 3, 2020

Conceptual Plans Construction Cost Estimate

Engineer's Opinion of Quantities and Probable Cost of Construction

DESCRIPTION	QNTY	UNIT	UNIT COST	TOTAL
REMOVALS				
REMOVE AND DISPOSE OF ASPHALT	2,145	SY	\$ 15.00	\$ 32,175.00
REMOVE AND DISPOSE OF CONCRETE	1,335	SF	\$ 5.00	\$ 6,675.00
REMOVE AND DISPOSE OF EXISTING WATERLINE	725	LF	\$ 20.00	\$ 14,500.00
REMOVE AND DISPOSE OF EX. WATER VALVE, BOX & COVER	3	EA	\$ 500.00	\$ 1,500.00
REMOVE AND DISPOSE OF EX. WATER SERVICE CONNECTION	1	EA	\$ 500.00	\$ 500.00
ADJUST VALVE BOX AND COVER TO FINISHED GRADE	3	EA	\$ 600.00	\$ 1,800.00
REMOVALS SUBTOTAL				\$ 57,150.00
ROADWAY CONSTRUCTION				
4" AC/6" ABC ASPHALT	2,145	SY	\$ 50.00	\$ 107,250.00
NEW CONCRETE DRIVEWAY	1,335	SF	\$ 20.00	\$ 26,700.00
ROADWAY SUBTOTAL				\$ 133,950.00
WATER CONSTRUCTION				
NEW 8" CLASS 235 C-900 PVC WATERLINE	765	LF	\$ 80.00	\$ 61,200.00
NEW 8" CLASS 250 GATE VALVE	2	EA	\$ 2,500.00	\$ 5,000.00
NEW 6" CLASS 350 DIP FIRELINE	10	LF	\$ 80.00	\$ 800.00
NEW 6" CLASS 250 GATE VALVE	1	EA	\$ 2,000.00	\$ 2,000.00
RELOCATE EXISTING FIRE HYDRANT	1	EA	\$ 2,500.00	\$ 2,500.00
WATER SUBTOTAL				\$ 71,500.00
STORM WATER CONSTRUCTION				
NEW 10'x3' REINFORCED CONCRETE BOX CULVERT	306	LF	\$ 1,000.00	\$ 306,000.00
NEW CONCRETE OUTLET HEADWALL	1	EA	\$ 7,500.00	\$ 7,500.00
NEW CONCRETE INLET HEADWALL	1	EA	\$ 7,500.00	\$ 7,500.00
6" THICK D50 = 12" RIPRAP PAD WITH MIRAFI NON-WOVEN FILTER FABRIC UNDER ROCK	155	CY	\$ 120.00	\$ 18,600.00
NEW RIPRAP LINED CHANNEL PER DETAIL 4	185	CY	\$ 175.00	\$ 32,375.00
NEW RIPRAP LINED CHANNEL PER DETAIL 3	620	CY	\$ 175.00	\$ 108,500.00
STORM WATER SUBTOTAL				\$ 480,475.00
EARTHWORK				
CUT AND HAUL	4,610	CY	\$ 10.00	\$ 46,100.00
FILL	66	CY	\$ 20.00	\$ 1,320.00
EARTHWORK SUBTOTAL				\$ 47,420.00
CONTRACT ALLOWANCES				
CONTINGENCY #1: ROCK TRENCHING	100.00	CY	\$ 100.00	\$ 10,000.00
CONTINGENCY #2: UNSUITABLE MATERIAL HAUL OFF & IMPORT	100	CY	\$ 100.00	\$ 10,000.00
SUBTOTAL ALLOWANCES				\$ 20,000.00
NON-CONSTRUCTION ITEMS *				
MOBILIZATION & ADMINISTRATION (INCLUDES SURVEY STAKING)	1	LS	10%	\$ 81,049.50
TRAFFIC CONTROL	1	LS	2%	\$ 16,209.90
AS-BUILT MEASUREMENTS/RECORD DRAWINGS	1	LS	5%	\$ 40,524.75
EROSION CONTROL/SWPPP	1	LS	5%	\$ 40,524.75
SUBTOTAL NON-CONSTRUCTION ITEMS				\$ 178,308.90
PROJECT ADMINISTRATION**				
PROJECT DESIGN	1	LS	12%	\$ 118,656.47
CITY ADMINISTRATION	1	LS	12%	\$ 118,656.47
CONSTRUCTION CONTINGENCY	1	LS	30%	\$ 296,641.17
SUBTOTAL PROJECT ADMINISTRATION				\$ 533,954.11
PROJECT TOTAL				\$ 1,522,758.01

* Percentages shown are based on all allowances and construction items

** Percentages shown are based on all allowances, construction items, and non-construction items

OPINION OF COST

The opinions of cost shown, and any resulting conclusions on project financial or economic feasibility or funding requirements, have been prepared for guidance in project budgeting and implementation from the information available at the time the opinion was prepared. The final costs of the project will depend on actual labor and material costs, competitive market conditions, actual site conditions, implementation schedule, continuity of personnel and engineering, and other variable factors. As a result, the final project costs will vary from the opinions of cost presented herein. Construction costs are presented in June 2020 dollars.