

**CAPITAL IMPROVEMENTS PROJECTS SUMMARY
FOR THE
MARSHALL COUNTY FISCAL COURT
Oct-16**

PROJECT No.	PROJECT ID	ESTIMATE OF PROBABLE COST	CUMULATIVE TOTAL
MARSHALL COUNTY SANITATION DISTRICT No. 2			
1A	MARSHALL CO. HIGH SCHOOL	\$ 1,208,750	\$ 1,208,750
1B	EFFLUENT FORCE MAIN FROM MCHS TO SD2 WWTP & PARALLEL GRAVITY SEWER	\$ 1,111,163	\$ 2,319,914
2	CHRISTIAN FELLOWSHIP EXTENSION	\$ 125,340	\$ 2,445,254
3	U.S. 641 SEWER EXTENSION	\$ 639,627	\$ 3,084,881
4	U.S. 68 GRAVITY SEWER EXTENSIONS	\$ 575,183	\$ 3,660,064
5	U.S. 68 LOW PRESSURE SEWER EXTENSIONS	\$ 565,458	\$ 4,225,522
6	CACTUS DRIVE LOW PRESSURE SEWER EXTENSIONS	\$ 355,689	\$ 4,581,211
7	WASTEWATER TREATMENT PLANT IMPROVEMENTS	\$ 382,000	\$ 4,963,211
8	PHASE 1 SANITARY SEWER EVALUATION STUDY (SSES) & REHABILITATION	\$ 500,000	\$ 5,463,211
	***Typical costs associated with performance of a SSES are 25% of the project cost		
MARSHALL COUNTY SANITATION DISTRICT No. 1			
1	AURORA LIFT STATION REPLACEMENTS	\$ 600,000	\$ 6,063,211
2	AURORA WWTP IMPROVEMENTS	\$ 1,035,000	\$ 7,098,211
3	PHASE 1 SANITARY SEWER EVALUATION STUDY (SSES) & REHABILITATION	\$ 500,000	\$ 7,598,211
	***Typical costs associated with performance of a SSES are 25% of the project cost		

**MARSHALL COUNTY SANITATION DISTRICT No. 2 / MARSHALL COUNTY
FISCAL COURT SEWER EXPANSION PROJECTS**

PROJECT DESCRIPTIONS FOR PHASES 1 THRU 6

I. Project 1A – Marshall County High School

This project consists of the installation of approximately 6,200 l.f. of gravity sanitary sewer, a duplex lift station, manholes, and appurtenances for the purposes of decommissioning and eliminating an existing package style wastewater treatment plant located on the Marshall County High School property. The existing WWTP has reached the end of its intended useful life cycle, and is in need of either replacement or elimination. This project, combined with Project 1B, will allow for the elimination of the existing package treatment plant, and provide for the expansion of the District's sanitary sewer system to add needed customers and to eliminate the aged septic systems serving those properties.

II. Project 1B – Effluent Force Main from Marshall County High School to Marshall Co. Sanitation District No. 2 WWTP

This project is to include the installation of approximately 7,100 l.f. of sanitary sewer force main, as well as the addition of approximately 2,800 l.f. of paralleling gravity sewer and appurtenances to provide sanitary sewer service to the Marshall County High School property and potential customers along the west side of U.S. Highway 641 in Draffenville. This project, combined with Project 1A, will allow for the elimination the high school's package style wastewater treatment plant and 1 no-discharge lagoon treatment facility at Steeple Chase. In addition, this project will provide for the expansion of the District's sanitary sewer system in providing public sewer access to approximately 70 previously unserved customers, while eliminating the aged septic systems serving these properties.

III. Project 2 – Christian Fellowship Sanitary Sewer Extension

This project consists of the installation of approximately 800 l.f. of gravity sewer and appurtenances to extend sanitary sewer service to the Christian Fellowship school facilities located along U.S. Highway 68 in Draffenville. Implementation of this project, combined with projects 1A and 1B, will allow for the elimination of the school's existing septic system, which is currently operating at its maximum capacity.

IV. Project 3 – U.S. Highway 641 Sewer Extension

This project includes the expansion of the District's existing collection system to add new sewer customers along the U.S. Highway 641 corridor in Draffenville. The project will consist of the installation of approximately 3,400 l.f. of gravity

sewer and appurtenances, which will provide public sewer access to 24 previously unserved properties.

V. Project 4 – U.S. Highway 68 Sewer Extensions

This project includes the expansion of the District's existing collection system to add new sewer customers along the U.S. Highway 68 corridor in Draffenville. The project will consist of the installation of approximately 3,000 l.f. of gravity sewer and appurtenances, which will provide public sewer access to 20 previously unserved properties, while eliminating the septic systems currently serving these properties.

VI. Project 5 – U.S. Highway 68 Low Pressure Sewer Extensions

This project consists of the expansion of the District's existing collection system to add new sewer customers along the U.S. Highway 68 corridor near its intersection with U.S. Highway 641. The project will consist of the installation of approximately 30 residential style low pressure lift stations, as well as the installation of the small diameter force main network to provide service from the properties to the gravity sewer mains located along U.S. Highway 641. This project will provide public sewer access to previously unserved properties.

VII. Project 6 – Cactus Drive Low Pressure Sewer Extensions

This project includes the expansion of the District's existing collection system to add new sewer customers along Cactus Drive in Draffenville. The project will consist of the installation of approximately 17 residential style low pressure lift stations, as well as the installation of the small diameter force main network to provide service from the properties to the existing gravity sewer mains located along Native Circle. This project will provide public sewer access to previously unserved properties.

SEWER EXPANSION PROJECTS 1-6

PRELIMINARY CONSTRUCTION COST ESTIMATE
Marshall County Sanitation District No.2

September 8, 2016

ITEM	DESCRIPTION	UNITS	QTY.	UNIT PRICE	TOTAL COST
PROJECT No. 1A - MARSHALL COUNTY HIGH SCHOOL					
1.	10" PVC Gravity Sewer	l.f.	2,200	60.00	132,000
2.	8" PVC Gravity Sewer	l.f.	4,000	50.00	200,000
3.	4' Diameter Precast Concrete Manhole	each	20	4,000.00	80,000
4.	20" Steel Encasement (Stream Crossing)	l.f.	200	210.00	42,000
5.	16" Steel Encasement (Bore & Jack - 8" Sewer)	l.f.	60	320.00	20,000
6.	Cleanout Assembly	each	20	550.00	11,000
7.	6" PVC service Lateral	l.f.	400	40.00	16,000
8.	200gpm Duplex Lift Station & Site Improvements	l. sum	1.00	250,000.00	250,000
9.	Abandon existing package WWTP	l.s.	1	60,000.00	60,000
10.	Class III Channel Lining (w/ Geotextile Fabric)	s.y.	1,000	30.00	30,000
11.	Landscaping & Seeding	s.y.	12,500	2.00	25,000
12.	Select Fill	tons	1,000	25.00	25,000
13.	Concrete Driveway Replacement	s.y.	200	110.00	22,000
14.	Asphalt Driveway/Roadway Replacement	tons	10	220.00	3,000
Subtotal Cost					\$ 916,000
Engineering (USDA/RD) (8.98%)					\$ 82,234
Inspection (USDA/RD) (5.77%)					\$ 52,853
Contingencies (15.00%)					\$ 157,663
Administrative and Legal Expenses					\$ -
Easements					\$ -
TOTAL COST MC HIGH SCHOOL					\$ 1,208,750

ITEM	DESCRIPTION	UNITS	QTY.	UNIT PRICE	TOTAL COST
PROJECT No. 1B - EFFLUENT FORCE MAIN FROM MCHS TO SD2 WWTP & PARALLEL GRAVITY SEWER					
1.	8" DR-11 HDPE Force Main (Trench)	l.f.	6,700	28.00	188,000
2.	8" DR-11 HDPE Force Main (HDD)	l.f.	400	60.00	24,000
3.	8" PVC Gravity Sewer	l.f.	2,770	58.00	161,000
4.	4' Diameter Precast Concrete Manhole	each	12	4,000.00	48,000
5.	16" Steel Encasement (Stream Crossing)	l.f.	200	180.00	36,000
6.	16" Steel Encasement (Bore & Jack - 8" Sewer)	l.f.	60	320.00	20,000
7.	16" Steel Encasement (Bore & Jack - 8" Force Main)	l.f.	160	280.00	45,000
8.	12" Steel Encasement (Bore & Jack - Service Laterals)	l.f.	0	250.00	-
9.	Cleanout Assembly	each	50	550.00	28,000
10.	6" PVC service Lateral	l.f.	1,000	40.00	40,000
11.	Class III Channel Lining (w/ Geotextile Fabric)	s.y.	800	30.00	24,000
12.	Landscaping & Seeding	l.sum	1	45,000.00	45,000
13.	Flowable Fill (Open Cut Roads)	c.y.	50	150.00	8,000
14.	Select Fill	tons	3,000	25.00	75,000
15.	Concrete Driveway Replacement	s.y.	100	110.00	11,000
16.	Asphalt Driveway Replacement	tons	200	220.00	44,000
Subtotal Cost					\$ 797,000
Engineering (USDA/RD) (9.21%)					\$ 73,424
Inspection (USDA/RD) (6.02%)					\$ 47,979
Contingencies (15.00%)					\$ 137,760
Administrative and Legal Expenses					\$ 5,000
Easements					\$ 50,000
TOTAL COST EFFLUENT FORCEMAIN & PARALLEL GRAVITY SEWER					\$ 1,111,163

SEWER EXPANSION PROJECTS 1-6

PRELIMINARY CONSTRUCTION COST ESTIMATE
Marshall County Sanitation District No.2

September 8, 2016

ITEM	DESCRIPTION	UNITS	QTY.	UNIT PRICE	TOTAL COST
PROJECT No. 2 - CHRISTIAN FELLOWSHIP EXTENSION					
1.	8" PVC Gravity Sewer	l.f.	800	58.00	47,000
2.	4' Diameter Precast Concrete Manhole	each	2	4,000.00	8,000
3.	Cleanout Assembly	each	7	550.00	4,000
4.	6" PVC service Lateral	l.f.	140	40.00	6,000
5.	Landscaping & Seeding	l.sum	1	5,000.00	5,000
6.	Select Fill	tons	60	25.00	2,000
7.	Concrete Driveway Replacement	s.y.	30	110.00	4,000
8.	Asphalt Driveway Replacement	tons	15	220.00	4,000
Subtotal Cost					\$ 80,000
Engineering (USDA/RD) (14.00%)					\$ 11,200
Inspection (USDA/RD) (13.00%)					\$ 10,400
Contingencies (15.00%)					\$ 15,240
Administrative and Legal Expenses					\$ 1,500
Land, Structures, rights-of-way, appraisals, etc.					\$ 7,000
TOTAL COST CHRISTIAN FELLOWSHIP EXTENSION					\$ 125,340

SEWER EXPANSION PROJECTS 1-6

**PRELIMINARY CONSTRUCTION COST ESTIMATE
Marshall County Sanitation District No.2**

September 30, 2016

ITEM	DESCRIPTION	UNITS	QTY.	UNIT PRICE	TOTAL COST
PROJECT No. 3 - U.S. 641 SEWER EXTENSION					
1.	8" PVC Gravity Sewer	l.f.	3,440	58.00	200,000
2.	4' Diameter Precast Concrete Manhole	each	10	4,000.00	40,000
3.	16" Steel Encasement (Stream Crossing)	l.f.	100	180.00	18,000
4.	16" Steel Encasement (Bore & Jack - 8" Sewer)	l.f.	120	320.00	39,000
5.	10" Steel Encasement (Bore & Jack - Service Laterals)	l.f.	200	240.00	48,000
6.	Cleanout Assembly	each	24	550.00	14,000
7.	6" PVC service Lateral	l.f.	480	40.00	20,000
8.	Class III Channel Lining (w/ Geotextile Fabric)	s.y.	200	30.00	6,000
9.	Landscaping & Seeding	l.sum	1	8,000.00	8,000
10.	Flowable Fill (Open Cut Roads)	c.y.	20	150.00	3,000
11.	Select Fill	tons	800	25.00	20,000
12.	Concrete Driveway Replacement	s.y.	110	110.00	13,000
13.	Asphalt Driveway Replacement	tons	20	220.00	5,000
Subtotal Cost					\$ 434,000
Engineering (USDA/RD) (10.58%)					\$ 45,917
Inspection (USDA/RD) (7.82%)					\$ 33,939
Contingencies (20.00%)					\$ 102,771
Administrative and Legal Expenses					\$ 5,000
Easements					\$ 18,000
TOTAL COST U.S. 641 SEWER EXTENSION					\$ 639,627

SEWER EXPANSION PROJECTS 1-6

**PRELIMINARY CONSTRUCTION COST ESTIMATE
Marshall County Sanitation District No.2**

September 30, 2016

ITEM	DESCRIPTION	UNITS	QTY.	UNIT PRICE	TOTAL COST
PROJECT No. 4 - U.S. 68 GRAVITY SEWER EXTENSIONS					
1.	8" PVC Gravity Sewer	l.f.	3,060	58.00	178,000
2.	4' Diameter Precast Concrete Manhole	each	9	4,000.00	36,000
3.	16" Steel Encasement (Bore & Jack - 8" Sewer)	l.f.	60	320.00	20,000
4.	10" Steel Encasement (Bore & Jack - Service Laterals)	l.f.	240	240.00	58,000
5.	Cleanout Assembly	each	18	550.00	10,000
6.	6" PVC service Lateral	l.f.	360	40.00	15,000
7.	Landscaping & Seeding	l.sum	1	10,000.00	10,000
8.	Flowable Fill (Open Cut Roads)	c.y.	50	150.00	8,000
9.	Select Fill	tons	1,000	25.00	25,000
10.	Concrete Driveway Replacement	s.y.	160	110.00	18,000
11.	Asphalt Driveway Replacement	tons	40	220.00	9,000
	Subtotal Cost				\$ 387,000
	Engineering (USDA/RD) (10.78%)				\$ 41,728
	Inspection (USDA/RD) (8.12%)				\$ 31,424
	Contingencies (20.00%)				\$ 92,031
	Administrative and Legal Expenses				\$ 5,000
	Easements				\$ 18,000
	TOTAL COST U.S. 68 GRAVITY SEWER EXTENSIONS				\$ 575,183

SEWER EXPANSION PROJECTS 1-6

PRELIMINARY CONSTRUCTION COST ESTIMATE
Marshall County Sanitation District No.2

September 30, 2016

ITEM	DESCRIPTION	UNITS	QTY.	UNIT PRICE	TOTAL COST
PROJECT 5 - U.S. 68 LOW PRESSURE SEWER EXTENSIONS					
1.	1.25" HDPE Service Lateral Force Main	l.f.	3,000	15.00	45,000
2.	2" HDPE Force Main	l.f.	3,100	18.00	56,000
3.	3" HDPE Force Main	l.f.	900	26.00	24,000
4.	Low Pressure Lift Station (Includes Plumbing & Electrical)	each	30	5,500.00	165,000
5.	Cleanout Assembly	each	30	550.00	17,000
6.	Air Release Valve w/ Vault	each	3	5,000.00	15,000
7.	Landscaping & Seeding	l.sum	1	16,000.00	16,000
8.	KY Class "B" Concrete	c.y.	10	130.00	2,000
9.	Select Fill	tons	250	25.00	7,000
10.	Concrete Driveway Replacement	s.y.	30	110.00	4,000
11.	Asphalt Driveway/Roadway Replacement	tons	200	220.00	44,000
Subtotal Cost					\$ 395,000
Engineering (USDA/RD) (10.73%)					\$ 42,374
Inspection (USDA/RD) (8.04%)					\$ 31,758
Contingencies (20.00%)					\$ 93,826
Administrative and Legal Expenses					\$ 2,500
Easements					\$ -
TOTAL COST U.S. 68 LOW PRESSURE SEWER EXTENSIONS					\$ 565,458

SEWER EXPANSION PROJECTS 1-6

PRELIMINARY CONSTRUCTION COST ESTIMATE
Marshall County Sanitation District No.2

September 30, 2016

ITEM	DESCRIPTION	UNITS	QTY.	UNIT PRICE	TOTAL COST
PROJECT 6 - CACTUS DRIVE LOW PRESSURE SEWER EXTENSIONS					
1.	1.25" HDPE Service Lateral Force Main	l.f.	1,700	15.00	26,000
2.	2" HDPE Force Main	l.f.	2,800	18.00	51,000
3.	Low Pressure Lift Station (Includes Plumbing & Electrical)	each	17	5,500.00	94,000
4.	Cleanout Assembly	each	17	550.00	10,000
5.	Air Release Valve w/ Vault	each	3	5,000.00	15,000
6.	Landscaping & Seeding	l.sum	1	12,000.00	12,000
7.	KY Class "B" Concrete	c.y.	10	130.00	2,000
8.	Select Fill	tons	100	25.00	3,000
9.	Concrete Driveway Replacement	s.y.	30	110.00	4,000
10.	Asphalt Driveway/Roadway Replacement	tons	50	220.00	11,000
Subtotal Cost					\$ 228,000
Engineering (USDA/RD) (11.96%)					\$ 27,275
Inspection (USDA/RD) (10.00%)					\$ 22,800
Contingencies (20.00%)					\$ 55,615
Administrative and Legal Expenses					\$ 5,000
Easements					\$ 17,000
TOTAL COST CACTUS DRIVE LOW PRESSURE SEWER EXTENSIONS					\$ 355,689