

SUMMERFORD ENGINEERING, INC.

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August 26, 2019

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

Attn: Ms. Christina Brown
Enforcement Analyst
Office of Water Quality

RE: NPDES Permit AR004380, AFIN 01-00214
Sewerage System
Stuttgart, Arkansas

Dear Ms. Brown:

During our meeting August 16, 2019, it was suggested that a "Summary of What's Going on in Stuttgart" regarding the sewer rehabilitation. We have revised the earlier report of Sewer Construction and Rehab Work updated to current time. We are enclosing a copy for your information.

Under contracts we have replaced 73,119 LF of gravity sewers and from trouble calls and collapsed sewers under emergency conditions another 32,940 LF of gravity sewers for a total of 20.09 miles of gravity sewers replaced. All manholes along the replaced sewer lines have been rehabbed or new manholes installed, plus another approximately 200 manholes outside the construction area rehabbed.

The contractors installed 21,860 LF of force mains to put the sewerage in trunk sewers ahead of the treatment plant to get a lot of sewerage out of the small diameter sewers in the collection system.

The work has involved rehabbing four (4) primary sewerage pumping stations.

Also, page 4 lists the completed work and costs done at the sewer plant, not including rehabbing the final clarifiers which is part of the CAP, with the new gear drives on hand when the ground can dry up enough to get cranes on site to lift bridges and gear drives in place.

We hope this letter and report will adequately cover the rehab work on the Stuttgart Sewerage System work.

Very truly yours,

SUMMERFORD ENGINEERING, INC.


Charles R. Summerford, P.E.

CRS:ms

Enclosure: Report Copy

cc: Mayor David Earney w/enclosure
Mr. Tommy Lawson w/enclosure

**REPORT OF SEWER CONSTRUCTION AND REHAB WORK
FOR STUTTGART MUNICIPAL WATER WORKS
STUTTGART, ARKANSAS
FOR 10-YEAR PERIOD 2008 TO 2018
AUGUST 17, 2018
REVISED AUGUST 21, 2019**

AVAILABLE FUNDING:

Sales Tax Bond Issue by City - Water Works Allocation	\$2.5 Million
Water Works Reserve Funds from Customer Billing	\$4.0 Million
Loan Funds from USDA Rural Development	\$15.072 Million

COLLECTION SYSTEM:

- I. The work began in 2008 with water and sewer extensions in the newly annexed North Area. The project involved approximately 11,000 LF of gravity sewer, two sewerage pumping stations and force mains. Also, involved were approximately 19,400 LF of 10" and 12" fire mains with 28 fire hydrants. The project was completed in 2008 at a construction cost of \$998,600.00 using proceeds from sales tax bonds.
- II. Beumer Street Water Line Replacement and Sewer Line "F" Pipe Bursting off Meadow Lane - Replaced 1,350 LF of 2-inch rusted out galvanized water line on Beumer Street, installed a fire hydrant, and reconnected 32 water services to new 6-inch PVC water line. Also, replaced 1,000 LF of 8" gravity sewer with HDPE fused joint pipe by pipe bursting method. Project completed 2010 at a construction cost of \$123,500.00 using Tax Bond funds.
- III. Phase I-Water and Sewer Upgrades - The project involved water line and fire hydrant replacements in Downtown (Note: One of the new hydrants was used to fight the fire at Steadman's at 2nd Street and College) Debrah Street and 7th Street. Sewer line replacements were made on Porter Street from 3rd Street to 7th Street and on East 6th Street from Maple Street to near Vine Street, a distance of 4,000 LF. Also, the project involved rehabilitating the McCracken Sewer Pumping Station and 12-inch force main across town discharging into trunk sewer main just ahead of the sewerage treatment plant. Post Aeration was added to the plant. Completed 2010 at a cost of \$1,340,000 with Tax Bond funds.
- IV. Step 1-Sewer Upgrades and Improvements - The project involved rehabbing three (3) primary sewerage pumping stations, Cleveland Street, 13th Street and Lennox; installing 12" HDPE Force Main from Cleveland Street Station along 2nd Street to Prairie Street discharging into 24" trunk sewer at Prairie Street; installing 12" HDPE force main from 13th Street Station west along 13th and 12th Streets to 11th and Prairie discharging into 18" trunk sewer immediately upstream of sewer plant, completed 2013 at a cost of \$1,021,000 using USDA Rural Development loan funds and City bond funds.

- V. Sewer Lines Replacement Morgan Manor Addition - Replacing all the sewer lines in Morgan Manor Subdivision by pipe bursting and installing HDPE fused joint pipe and PVC pipe. Completed 2015. Total cost of sewer replacement \$375,000 using USDA Rural Development loan funds and City funds.

- VI. Section 1-Step 2-Sewer - Generally north of Michigan and south of Superior Street, from Buerkle to Leslie Street using pipe bursting method with HDPE fused joint pipe. After rehabbing manholes in this area, project was underrunning on cost; so we added an extra 450 VF of manhole rehabbing to reduce inflow. Project completed 2017 at a cost of \$823,439.88 using USDA Rural Development loan funds.

- VII. Section 2-Step 2-Sewer Upgrades and Improvements - The general work area was from East 6th Street north to 2nd Street and from Main Street east to Vine Street. The existing sewer lines were replaced using pipe bursting and HDPE pipe fused joint. All sewer users were reconnected to the new sewer lines under contract. Project completed in early 2018 at a cost of \$994,697.18 using USDA Rural Development loan funds.

- VIII. Section 3-Step 2-Sewer Upgrades and Improvements - The general work area is from East 6th Street south to 10th with few lines down to 12th and 13th Streets, then from Main Street east to Park Avenue. All sewers, except where a few replacements had been previously made, were replaced with HDPE fused joint pipe using pipe bursting method. All sewer customers were reconnected to new lines under contract. Project is substantially completed 2018 and almost ready to be finaled out. Total cost \$721,573.80 paid for from USDA Rural Development loan funds.

- IX. Section 4-Step 2-Sewer Upgrades and Improvements - This is the last section of a four (4) part replacement of sanitary sewers in the application for \$4,989,000 loan for sewer. The original contract was for the amount of \$1,171,480.00; Change Order No. 2 added \$330,352.00 for an adjusted contract price of \$1,501,832.00. The original contract is now about 70% complete. This Section 4-Step 2 project will about use up the rest of the loan funds. The project should be completed about late 2019. The general work area is south of 15th Street to 22nd Street and from Beumer Street over to Crockett Street.

Line Work - Total Construction Cost 9 Projects	\$7,899,622.86
Adding Indirect Costs	\$9,874,553.58
Trouble Call Replacements	\$1,498,860.00

City of Stuttgart Sewer Expended Cost on Recent Work on Collection System Pumping Stations, Force Mains, Collection System and Treatment Facilities.

Collection System	\$11,373,313.58
Treatment Facilities	<u>2,628,819.45</u>
Total	\$14,002,133.03

The City has replaced a total of 73,119 LF of gravity sewer lines in the Items II thru IX.

PUMPING STATIONS REHAB WHICH IS PART OF THE COLLECTION SYSTEM:

A. McCracken Pumping Station Rehabbed 2010	\$ 58,000.00
12" FM SDR-26 PVC 10,380 LF @ \$13.25	<u>137,535.00</u>
Subtotal	\$195,535.00
B. Cleveland Street Pumping Station Rehabbed 2013	\$ 87,900.80
12" FM HDPE SDR-17 6,450 LF @ \$29.00	<u>187,050.00</u>
Subtotal	\$274,950.80
C. 13th Street Pumping Station Rehabbed 2013	\$ 81,570.00
12" FM HDPE SDR-17 5,030 LF @ \$29.00	<u>145,870.00</u>
Subtotal	\$227,440.00
D. Lennox Pumping Station Rehabbed 2013	<u>\$ 72,852.70</u>
Total Cost Pumping Stations & Force Mains	\$770,778.50

The large force mains discharge into truck sewers immediately upstream ahead of the treatment plant. These force mains get the sewerage out of the small diameter sewers and more quickly to the treatment plant.

There was a total of 21,860 LF of new 12" force main laid in the projects.

**LINE REPLACEMENTS AS A RESULT OF TROUBLE CALLS OR
SEWERS THAT CAVED IN AND SEWER DEPARTMENT HAD TO
REPLACE UNDER EMERGENCIES**

<u>Year</u>	<u>Amount of Line Replaced (LF)</u>	<u>Cost</u>
2011	1,790	\$ 157,502.00
2012	2,905	233,298.00
2013	8,369	310,185.00
2014	9,288	196,879.00
2015	960	142,955.00
2016	4,414	136,180.00
2017	150	6,985.00
2018	2,781	179,454.00
2019	<u>2,283</u>	<u>135,325.00</u>
Totals	32,940 LF	\$1,498,760.00

6.24 Mi.

Paid for from Billing Revenue Reserves

**CONTRACT WORK AND CITY EQUIPMENT PURCHASES
AT WASTEWATER TREATMENT PLANT
STUTTGART, ARKANSAS
AUGUST 20, 2018
REVISED AUGUST 21, 2019**

I. Equipment Purchases - John Meunier, Inc.		
New Bar Screen, Roto Pac, Metcan Grit Removal and Sam Dewatering Screen		
Change Order No. 1 Adding 4'-0 Additional Length Bar Screen		
Change Order No. 1 Adding Allen Bradley Logic Controls		
Plus Sales Tax		
Cost to City	\$	467,776.77
II. WesTech Engineering, Inc.		
Slow Speed Surface Aerator and Bridge for East Aerobic Digester		
Plus Sales Tax		<u>122,008.06</u>
Total Initial Equipment Cost to City	\$	589,784.83
III. Contract Installation Cost to City - Bar Screen	\$	82,200.00
Grit Chamber		247,172.00
East Aerobic Digester		<u>51,522.00</u>
Contract Installation Cost	\$	380,894.00
Total Cost Sewerage Treatment	\$	970,678.83
Change Order No. 1		23,517.00
New Control Package Plant Pump Station		<u>18,950.00</u>
Revised Project Cost	\$	1,013,145.83
IV. West Digester Aerator & Mist Shroud	\$	91,815.00
Installation		60,590.00
New 50 Hp Motor		<u>4,776.00</u>
Subtotal	\$	157,181.00
Total Revised Contract Price Engineering		<u>1,170,326.83</u> <u>146,292.62</u>
Total Project Cost 12/19/14	\$	1,316,619.45
V. By City - Replaced Belt Press & Dehydration Unit		1,000,000.00
VI. Replacing Tertiary Pumping Equipment		263,200.00
VII. Added Post Aeration in Back End of Chlorine Contact Chamber		<u>49,000.00</u>
Total Cost Contract Work at Plant	\$	2,628,819.45

The above cost does not include parts, pumps and other miscellaneous items purchased with reserve funds and installed by City plant crew at Sewerage Treatment Plant. It did not include buying new tertiary filter media, the cost to remove and reinstall new media, new gear drives which are on order or rehabilitating the two final clarifiers. The two new gear drives will cost the City \$75,000 plus the clarifiers must be cleaned and rehabbed after the gear drives are received.

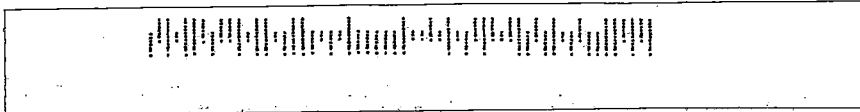
**CURRENT LOANS - STUTTGART MUNICIPAL WATER WORKS
STUTTGART, ARKANSAS
AUGUST 20, 2018**

	<u>Interest Rate</u>	<u>Amount Loan</u>	<u>Monthly Payment</u>	<u>Pay Off</u>
USDA RDA Water Loan	2.75%	\$ 7,079,000	\$ 24,706	5/6/52
USDA RDA Water Loan	2.25%	954,000	3,025	6/22/56
USDA RDA Water Loan	3.125%	<u>1,050,000</u>	<u>3,843</u>	2058
Subtotals		\$ 9,083,000	\$ 31,574	
USDA RDA Sewer Loan	3.00%	\$ 1,000,000	\$ 5,760	2/27/32
USDA RDA Sewer Loan	2.25%	<u>4,989,000</u>	<u>15,816</u>	6/22/56
Subtotals		\$ 5,989,000	\$ 21,641	
Overall Totals		\$15,072,000	\$ 53,215	
Annual Debt Service			\$638,580	

Other Funding Sources that have been spent on Rehabbing Water and Sewer

Proceeds from Sales Tax Bonds by City	\$2.5± Million
Reserve Funds from Water & Sewer Billings	\$4.0± Million
Total Overall Funding	\$21,572,000

OFFICE OF:
SUMMERFORD ENGINEERING, INC.
CONSULTING ENGINEERS
ARKADELPHIA, ARKANSAS



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Environmental Quality
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North Little Rock, AR 72118-5317

ATTENTION: Ms. Christina Brown
Enforcement Analyst
Office of Water Quality

FIRST CLASS

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