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JUN 22 2017

Public Service
Commission

**Final Engineering Report
Rowan Water, Inc.
2016 Water System Improvements
June, 2017**

prepared by:



Submitted By:


Bryan K. Lovan, P.E.
Project Engineer



ROWAN WATER ASSOCIATION, INC.
FINAL ENGINEERING REPORT
JUNE 2017

PROJECT PLANNING

The project areas are scattered throughout Rowan County. Maps showing all locations are attached to this report.

The 2010 population for Rowan County was 25,333. The Kentucky State Data Center projects the County population to grow continuously over the next thirty years. By 2050 the population is estimated to be 27,658.

In 1987 RWI had a customer base of approximately 2,022 customers. The customers have grown to an average of 6,960 today. Most of the customers are residential with the balance being commercial customers. Rowan Water has two wholesale customers, Fleming County Water Association and the City of Olive Hill.

EXISTING FACILITIES

RWI has a contract to purchase water from the Morehead Utility Plant Board (MUPB). The contract allows RWI to purchase up to 30 percent of the capacity of the current water treatment plant. The MUPB water treatment plant and storage/transmission system was upgraded in the early part of this decade increasing the plant capacity to 8.5 MGD. RWI's allocated portion of this plant is 30 percent or 2.7 MGD. RWI averages 1.6 MGD. The contract was signed in February 2001 and is valid for a period of 40 years. RWI sells water to two water systems; the Fleming County Water Association which purchases approximately 500,000 gallons per month and the City of Olive Hill, which purchases an average of 80,000 gallon per month.

NEED FOR PROJECT

The existing 3-C Trail tank is too small and very old to be effective for the water system. It tends to float on the system, resulting in water that is not turn over as much as is needed to keep the water fresh. Only about a quarter of the entire size is usable because of low pressure that occurs once it gets below about 20 feet. A new tank at a higher elevation is necessary to serve this area efficiently. The Frank Johnson, Rock Fork and Maxy Flats storage tanks have a number of years on them since they were constructed or last re-painted.

ALTERNATIVES CONSIDERED

Alternatives considered include:

The alternative considered to the elevated storage tank would be the construction of a ground storage tank but it would require a much larger pump station and have higher operating costs due to increased electric cost.

SELECTED ALTERNATIVE/PROPOSED PROJECT

Included in the project are: construction of a new 150,000 gallon elevated storage tank, a new pump station to service the tank, access road, fencing, site work, valve vault, piping, demolition of the existing 3-C Trail tank, rehab of the Frank Johnson Tank, Maxy Flats Tank, and the Rock Fork Tank, transfer of the RTU, and replacement of the master meter vault between RWI and MUPB.

ANNUAL OPERATING COSTS

Per the 2015 audit, RWI had income of \$2,887,173; most of this income was from water sales - \$2,733,682 while the balance was for connect, reconnect, disconnect charges, forfeited discounts, and miscellaneous.

RWI’s operating expenses totaled \$2,431,420 for the same period. They had interest and bond principal payments of \$191,647, and \$112,000 respectively.

For the year 2015 they had positive cash flow.

This proposed project will increase their annual debt payment by approximately \$40,000 per year. A rate increase will be required to ensure that the District covers all expenses and maintains at least a 1.2 debt coverage ratio and all reserve requirements.

The proposed rates with an RD grant are:

	<i>Proposed Rates</i>
<u>5/8 inch</u>	
first 2000	\$18.53 minimum
next 3000	\$7.45 per 1000 gallons
next 10000	\$6.95 per 1000 gallons
next 10000	\$6.80 per 1000 gallons
next 10000	\$6.45 per 1000 gallons
next 15000	\$6.15 per 1000 gallons
over 50000	\$5.95 per 1000 gallons
<u>3/4 inch</u>	
first 4000	\$33.43 minimum
next 1000	\$7.45 per 1000 gallons
next 10000	\$6.95 per 1000 gallons
next 10000	\$6.90 per 1000 gallons
next 10000	\$6.45 per 1000 gallons
next 15000	\$6.15 per 1000 gallons
over 50000	\$5.95 per 1000 gallons

1 inch

first 5000	\$40.88 minimum
next 10000	\$6.95 per 1000 gallons
next 10000	\$6.80 per 1000 gallons
next 10000	\$6.45 per 1000 gallons
next 15000	\$6.15 per 1000 gallons
over 50000	\$5.95 per 1000 gallons

1.5 inch

first 15000	\$110.38 minimum
next 10000	\$6.80 per 1000 gallons
next 10000	\$6.45 per 1000 gallons
next 15000	\$6.15 per 1000 gallons
over 50000	\$5.95 per 1000 gallons

2 inch

first 25000	\$178.38 minimum
next 10000	\$6.45 per 1000 gallons
next 15000	\$6.15 per 1000 gallons
over 50000	\$5.95 per 1000 gallons

Wholesale

Fleming County	\$1.93 Per 1000 gallons
City of Olive Hill	\$1.93 Per 1000 gallons

PROJECT BUDGET AND FINANCING

The project was advertised for construction bids on May 23, 2017 with a bid opening of June 8, 2017. There were three contracts advertised: Contract 1 – new 150,000 gallon elevated water tank; Contract 2 – Rehabilitation of Maxey Flats, Rock Fork, and F. Johnson Tanks; and Contract 3 – 3-C Trail Booster Pump Station and US 60 Master Meter. There were two bidders on Contract 1, two bidders on Contract 2, and one bidder on Contract 3.

The low bidder on Contract 1 was Caldwell Tanks, Inc. with a low bid of \$622,700. Kentucky Engineering Group, PLLC has worked with Caldwell Tanks and has found them to be a responsible and responsive bidder and contractor. Therefore, a letter of recommendation will be provided to RWI.

The low bidder on Contract 2 was Currens Construction, Inc. with a low bid of \$143,750. Staff at Kentucky Engineering Group, PLLC have had experience with Currens previously and have found them to be responsible and responsive. Therefore, a letter of recommendation will be provided to RWI.

The only bidder on Contract 3 was KM Specialty with a low bid of \$299,905. Kentucky Engineering Group, PLLC has worked with KM Specialty (through their related company –

Straeffer Pump and Supply) and have found them to be responsive and responsible. Therefore, a letter of recommendation will be provided to RWI.

All three Contracts are below the engineers estimate for the project, therefore RWI has identified a few additional items that they will seek approval from Rural Development to be added to either one of the contractor's contract through a change order or purchased with project funds at the end of the construction period by the owner. These additional activities include the rehab of the Pond Lick storage tank, purchase of billing software, and purchase of VFD's for the Old Hilda Tank.

The funding available for the project consists of the following source:

Rural Development Loan	\$1,106,000
Rural Development Grant	\$474,000
Total:	\$1,580,000

The revised budget for the project is as follows:

Legal and Administrative	\$15,000
Land	\$10,000
Preliminary Engineering Report	\$10,000
Additional Engineering Services	\$15,500
Engineering Design	\$105,180
Construction Inspection	\$65,900
Interest	\$35,000
Construction – Contract 1	\$622,700
Construction – Contract 2	\$143,750
Construction – Contract 3	\$299,905
Change Order – Pond Lick Tan	\$25,000
Change Order – VFD's	\$20,000
Other	
Billing Software	\$30,000
Contingencies	\$182,065
Total:	\$1,580,000

It is the recommendation of Kentucky Engineering Group, PLLC to proceed to the construction phase of this project after submittal of Rural Development post bid documents and proceed with the pre-closing and pre-construction conferences.

ATTACHMENTS:

Bid Tabulation – Contracts 1, 2, and 3

Letter of Recommendations – Contracts 1, 2, and 3



BID TABULATION
2016 WATER SYSTEM IMPROVEMENTS
CONTRACT 1 - 150,000 GALLON WELDED STEEL ELEVATED WATER STORAGE TANK
ROWAN WATER, INC.
THURSDAY, JUNE 8, 2017

Item No.	Description	Quantity	Unit	CALDWELL TANKS Louisville, KY		PHOENIX TANK/TOWER Avon, IN	
				\$/unit	Bid Amount	\$/unit	Bid Amount
1	150,000 Gallon Elevated Water Storage Tank	1	LS	\$397,450.00	\$397,450.00	\$499,745.00	\$499,745.00
2	Tank Foundation, Site Grading, and Access Road	1	LS	\$101,760.00	\$101,760.00	\$68,500.00	\$68,500.00
3	Inlet/Outlet Piping, Valves Vault, Fittings and Electric	1	LS	\$14,410.00	\$14,410.00	\$12,250.00	\$12,250.00
4	Chain Link Fencing and Gate	1	LS	\$10,220.00	\$10,220.00	\$10,000.00	\$10,000.00
5	Demolition 161,000 Gallon Glass Lined Standpipe Tank	1	LS	\$21,140.00	\$21,140.00	\$18,000.00	\$18,000.00
6	8" PVC Class 200 Water Main	1,880	LF	\$30.00	\$56,400.00	\$25.00	\$47,000.00
7	6" Check Valve in Existing Line	1	EA	\$2,940.00	\$2,940.00	\$2,500.00	\$2,500.00
8	Connection to Existing Water Main w/8" Gate Valve	2	EA	\$2,940.00	\$5,880.00	\$2,500.00	\$5,000.00
9	6" Flushing Hydrant	1	EA	\$3,530.00	\$3,530.00	\$3,000.00	\$3,000.00
10	Reconnect Existing Meters to New Water Main	3	EA	\$590.00	\$1,770.00	\$500.00	\$1,500.00
11	Highway Steel Casing Bore	40	LF	\$180.00	\$7,200.00	\$150.00	\$6,000.00
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TOTAL BID CALCULATED BID AMOUNT

\$622,700.00

\$673,495.00

I certify that this is true and accurate tabulation of the bids.

The above is a true and complete tabulation of the bids received, Thursday, June 8, 2017 @ 10 am EST

KENTUCKY ENGINEERING GROUP, PLLC

By: 

Riley Sumner, Project Manager



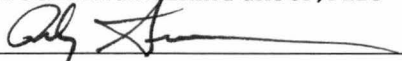
BID TABULATION
2016 WATER SYSTEM IMPROVEMENTS
CONTRACT 2 - REHABILITATION OF MAXEY FLATS, ROCK FORK, AND FRANK JOHNSON TANKS
ROWAN WATER, INC.
THURSDAY, JUNE 8, 2017

Item No.	Description	Quantity	Unit	CURRENS CONSTRUCTION, INC. Harrodsburg, KY		HUFFMAN TANK/TOWER INC. Albany, KY	
				\$/unit	Bid Amount	\$/unit	Bid Amount
1	Maxey Flats Tank Rehabilitation	1	LS	\$64,600.00	\$64,600.00	\$69,000.00	\$69,000.00
2	Frank Johnson Tank Rehabilitation	1	LS	\$42,850.00	\$42,850.00	\$43,000.00	\$43,000.00
3	Rock Fork Tank Rehabilitation	1	LS	\$36,300.00	\$36,300.00	\$52,000.00	\$52,000.00
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TOTAL BID CALCULATED BID AMOUNT					\$143,750.00		\$164,000.00

I certify that this is true and accurate tabulation of the bids.

The above is a true and complete tabulation of the bids received, Thursday, June 8, 2017 @ 10 am EST

KENTUCKY ENGINEERING GROUP, PLLC

By: 

Riley Sumner, Project Manager




BID TABULATION
2016 WATER SYSTEM IMPROVEMENTS
CONTRACT 3 - 3C TRAIL BOOSTER PUMP STATION & US 60 MASTER METER
ROWAN WATER, INC.
THURSDAY, JUNE 8, 2017

Item No.	Description	Quantity	Unit	KM SPECIALTY PUMP Chandler, IN		\$/unit	Bid Amount
1	8" PVC Class 250 Water Main	1,200	LF	\$29.50	\$35,400.00		
2	8" Tapping Sleeve and Valve	2	EA	\$3,530.00	\$7,060.00		
3	Cut and Plug Existing Water Main	2	EA	\$280.00	\$560.00		
4	Master Meter Vault and Appurtenances	1	LS	\$31,100.00	\$31,100.00		
5	Above Ground Built in Place Boost. PS, Elec. Fence, Site	1	LS	\$195,795.00	\$195,795.00		
6	14" Steel Casing Bore	80	LF	\$176.50	\$14,120.00		
7	Connect to Existing Water Main	1	EA	\$1,760.00	\$1,760.00		
8	8" Gate Valve and Box	4	EA	\$1,762.50	\$7,050.00		
9	6" Flushing Hydrant	1	EA	\$3,530.00	\$3,530.00		
10	4" Blow Off Assembly	1	EA	\$3,530.00	\$3,530.00		
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TOTAL BID CALCULATED BID AMOUNT
\$299,905.00

I certify that this is true and accurate tabulation of the bids.
 The above is a true and complete tabulation of the bids received, Thursday, June 8, 2017 @ 10 am EST
KENTUCKY ENGINEERING GROUP, PLLC

By: 
 Riley Sumner, Project Manager



June 14, 2017

Mr. Larry Johnson
Rowan Water, Inc.
1765 Christy Creek
Morehead, Kentucky 40351

RE: Recommendation of Award
2016 Water System Improvements
Contract 1 - 150,000 Gallon Welded Steel Elevated Water Storage Tank

Dear Mr. Johnson:

Bids for the above referenced project were opened Thursday, June 8, 2017 at 10 am EST. The low bidder was Caldwell Tanks, Inc., Louisville, Kentucky with a bid of \$622,700.

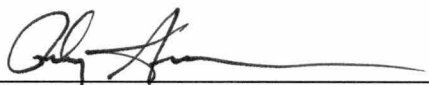
Upon review of the bid documents, and upon checking of references of the low bidder, Kentucky Engineering Group, PLLC would recommend to Rowan Water, Inc. that Caldwell Tanks, Inc. be awarded the Contract 1 - 150,000 Gallon Welded Steel Elevated Water Storage Tank.

A copy of the certified bid tabulation is attached to this letter.

If you have any questions or need additional information please contact me at your earliest convenience.

Sincerely,

KENTUCKY ENGINEERING GROUP, PLLC



Riley Sumner
Project Manager

c: File w/enclosures

P.O. Box 1034
Versailles, Kentucky 40383
Phone: (859) 251.4127
Fax: (859) 251.4137
Email: info@kyengr.com
www.kyengr.com



June 14, 2017

Mr. Larry Johnson
Rowan Water, Inc.
1765 Christy Creek
Morehead, Kentucky 40351

RE: Recommendation of Award
2016 Water System Improvements
Contract 2 – Rehabilitation of Maxey Flats, Rock Fork, and Frank Johnson Tanks

Dear Mr. Johnson:

Bids for the above referenced project were opened Thursday, June 8, 2017 at 10 am EST. The low bidder was Currens Construction Services, LLC, Harrodsburg, Kentucky with a bid of \$143,750.

Upon review of the bid documents, and upon checking of references of the low bidder, Kentucky Engineering Group, PLLC would recommend to Rowan Water, Inc. that Currens Construction Services, LLC. be awarded Contract 2 – Rehabilitation of Maxey Flats, Rock Fork, and Frank Johnson Tanks.

A copy of the certified bid tabulation is attached to this letter.

If you have any questions or need additional information please contact me at your earliest convenience.

Sincerely,

KENTUCKY ENGINEERING GROUP, PLLC

Riley Sumner
Project Manager

c: File w/enclosures

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June 14, 2017

Mr. Larry Johnson
Rowan Water, Inc.
1765 Christy Creek
Morehead, Kentucky 40351

RE: Recommendation of Award
2016 Water System Improvements
Contract 3 - 3C Trail Booster Pump Station & US 60 Master Meter

Dear Mr. Johnson:

Bids for the above referenced project were opened Thursday, June 8, 2017 at 10 am EST. The low (and only) bidder was KM Specialty Pump (Straeffe Pump and Supply), Chandler, Indiana with a bid of \$299,905.

Upon review of the bid documents, and Kentucky Engineering Group having worked with KM Specialty on several successful projects in the past for Rowan Water, Inc., Kentucky Engineering Group, PLLC would recommend to Rowan Water, Inc. that KM Specialty be awarded Contract 3 - 3C Trail Booster Pump Station & US 60 Master Meter project.

A copy of the certified bid tabulation is attached to this letter.

If you have any questions or need additional information please contact me at your earliest convenience.

Sincerely,

KENTUCKY ENGINEERING GROUP, PLLC

Riley Sumner
Project Manager

c: File w/enclosures

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