

FINAL ENGINEERING REPORT
2019 WATER AND SEWER SYSTEM IMPROVEMENTS
PHASE 18

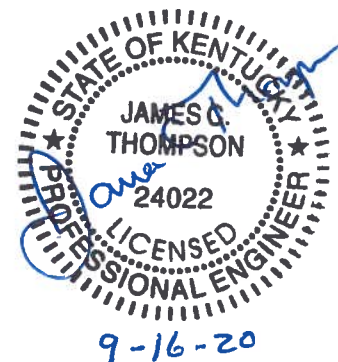
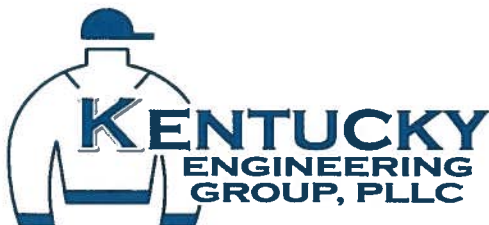
FOR THE

COLUMBIA/ADAIR UTILITIES DISTRICT

109 GRANT LANE

Columbia, Kentucky 42728

August 2019



**COLUMBIA/ADAIR UTILITIES DISTRICT
FINAL ENGINEERING REPORT
SEPTEMBER 2020**

PROJECT PLANNING

Adair County is located in south central Kentucky. The current population estimate is 19,215. The County's population has had steady increases since the 1970 census. The census counts since 1960 are show in the table below:

Census Year	Population	Percent Change
2010	18,656	8.2%
2000	17,244	12.3%
1990	15,360	0.8%
1980	15,233	16.8%
1970	13,037	-11.3%
1960	14,699	

The median household income per the American Community Survey five-year average of 2013-2017 is \$36,575 for the county.

The Columbia/Adair County Utilities District was created in 2009-2010 as a result of the combining the City of Columbia's water and wastewater with the Adair County Water District. The Adair County Water District was formed in 1971 and served the rural, unincorporated areas of Adair County. In 2003, Columbia and the Adair County Water District formed the Columbia/Adair County Water Commission to construct a new water treatment plant for both entities. The Commission is no longer viable with the combining of the City and Water District.

The District's service area is the city of Columbia and all of Adair County. The District currently has 7,972 water customers of which the majority – 7,283 are residential and 1,720 wastewater customers.

PROPOSED PROJECT

The proposed project consists of improvements to both the water and wastewater systems of CAUD. The improvements include:

- Installation of 8-inch water main around the KY 55 Bypass
- Replacement of approximately 2,800 LF of water main on Liberty Road
- Extension of water lines on White Oak and Acree Road
- Installation of telemetry on 19 existing sites; detailed listing is found in Appendix A
- Installation of 3 new influent pumps at the wastewater treatment plant

With remaining funds, CAUD would like to do additions to the project. The first three items listed below were identified in the Preliminary Engineering Report. The remaining item is an improvement that recently came to light as needing to be undertaken to improve operations at the wastewater treatment plant.

1. Water line extensions on Corbin Richards Road, Canaan Land Road and Garman Road – these were included in the environmental review of the project,
2. Telemetry improvements to additional facilities, these were also included in the environmental review. Originally it was proposed to install new telemetry at nineteen (19) CAUD facilities. However, during design, it appeared that this activity could exceed the budgeted amount. The bid schedule only included sites that were in the CAUD County service area excluding facilities within the City of Columbia former service area. With the bid prices received, it will be possible to do all 19 sites.
3. Improvements to the carbon feed system at the WTP, this was in the environmental review.
4. Grit Conveyor replacement at WWTP; this was not in the original environmental review but would be categorically exempt as the construction will take place at the existing wastewater treatment plant.

PROJECT BUDGET & FINANCING

The project was advertised for bids and the bid opening held September 10, 2020. There are two contracts – Contract NO. 1 – Water System Improvements and Contract NO. 2 – Sewer System Improvements. The certified bid tabulations are attached to the end of this report.

The low bidders for each contract were: Contract NO. 1 – Clay Pipeline, Manchester KY and Contract NO. 2 – Flo-Line Construction, Monticello KY. Kentucky Engineering Group has worked with each of these contractors in the past and have found their work to be satisfactory and have recommended to CAUD that they accept the bids as they are below the engineering estimate for the total construction.

The financing for the project is a Rural Development loan and grant. The revised budget for the project based on the low bids is as follows:

Development – Water	\$1,194,978
Development – Sewer	\$261,250
Legal	\$19,500
Engineering	\$308,230
Interest	\$61,000
Contingencies – Water	\$119,498
Contingencies – Sewer	\$26,125
Other – Water	\$552,349
Other – Sewer	<u>\$50,000</u>
Total	\$2,592,930

Financing for the project is as follows:

RD Loan	\$1,945,000
RD Grant	<u>\$647,930</u>
Total	\$2,592,930

PROPOSED PROJECT SCHEDULE

The proposed schedule for the project is:

- PSC submittal: 10/01/2020
- PSC Order: 11/01/2020
- Pre-Closing 11/10/2020
- Construction Start: 11/30/2020
- Construction Complete: 06/30/2021



BID TABULATION

2019 Phase 18 Water and Sewer System Improvements

Contract 2

Columbia Adair Utility District

KEG Project No. 19013

BID OPENING: Thursday, September 10, 2020, 2:00 pm CST

Item No.	Description	Quantity		Unit	Bid Amount		Bid Amount
1	Base Bid Contract Price		1	LS	\$	261,250.00	\$ 324,200.00
TOTAL CALCULATED BASE BID AMOUNT					\$	261,250.00	\$ 324,200.00

Flo-Line Contracting, LLC
Monticello, KY

Herrick Company, Inc
Lawrencburg, KY



* indicates mathematical error

KENTUCKY ENGINEERING GROUP, PLLC

By: 

Mark Upton, P.E.