

PRELIMINARY ENGINEERING REPORT

SOUTH LOGAN WATER ASSOCIATION WATER OFFICE & RUSSELLVILLE SOUTHERN BYPASS EXTENSION

July 2019



MCGHEE ENGINEERING, INC.

202 South Ewing Street
Guthrie, Kentucky 42234

(270) 483-9985
www.mcgheeengineering.com

PRELIMINARY ENGINEERING REPORT
Water Office & Russellville Southern Bypass Extension

prepared for the

**South
Logan
Water
Association**



Jeff Campbell
Board Member

Bob Allen
Board Member

George Fugate
Board Member

Joel Armistead
Board Member

Jim Wilkerson
Board Member

Tamara Ramsey
Board Member

John Mason Barnes
Board Member

prepared by

McGhee Engineering, Inc.
202 Ewing Street, P. O. Box 267
Guthrie, Kentucky 42234
(270) 483-9985



Chris Wilcutt

Preliminary Engineering Report
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1.0 INTRODUCTION

The South Logan Water Association (SLWA) was chartered in 1971 to supply potable water to residents of southern Logan County, Kentucky. The Association consists of six board members, and it is regulated by the Kentucky Public Service Commission. South Logan has authority to plan, design, finance, construct, operate, replace and maintain the distribution facilities within its service area.

The South Logan water system is comprised of over 210 miles of water distribution lines and three water storage tanks with a total capacity of 736,000 gallons, all of which serves approximately 1,723 customers in southern Logan County. As of the end of March 2003, the South Logan Water Association began to purchase all of their treated water from the recently completed water system of the Logan Todd Regional Water Commission (LTRWC). The Commission's water treatment facility is rated at 10 million gallons per day, and their distribution system consists of nearly 85 miles of pipeline and three storage tanks totaling 3,500,000 gallons in capacity. The 2018 average daily LTRWC usage within the South Logan system was approximately 390,000 gallons per day. South Logan has two meter stations with the Commission, one located in Russellville and the other near the Mortimer community.

The Association is a relatively large water system covering nearly a third of the Logan County area. Almost all roads within the Association boundary have water service, with only short extensions needed from time to time to accommodate new development.

Over the past 25+ years, the main problems that plagued the Association were associated with its long-term supply of treated water, low pressure in certain areas of the system, extending water service to unserved areas, and installing lines for improved hydraulic performance. Going online with the Logan Todd Regional system and multiple USDA funded upgrade projects have resolved the majority of these problems. However, the growth of the community and water system have created two new critical needs for the Association.

First, the Russellville Southern Bypass opened for traffic in late 2017. This new southern bypass section runs from US Highway 79 to KY Highway 100, crossing KY Highway 96 along the way. It is 4.5 miles long, featuring a two lane roadway with turning lanes at intersections and a truck climbing lane. Cost for the project was \$12,824,639. The proximity of this new roadway to Russellville, with a majority resting in the Association's service territory, created a major unserved corridor. Second, the Association has experienced a customer growth of nearly 50% in the past 25 years (1,160 total customers in 1993). This dramatic growth has created an expanding need in both customer service and system operations. South Logan has outgrown their current office facilities for fulfilling these services, and their present facility has been labeled by USDA as being non-compliant with ADA requirements. To initiate a solution to alleviating these needs, the South Logan Water Association has requested funding assistance to undertake their Water Office & Southern Bypass Extension Project.

The proposed project includes construction of over 3 miles of 8-inch waterline along the Russellville Southern Bypass to provide water service to the unserved area. Also, the project will include construction of a new water office to better serve their expanding customer base and provide ample space for meeting, operations, and bathroom facilities; all within ADA compliance. The total cost of the proposed project is estimated to be \$1,065,000.

2.0 PROJECT PLANNING AREA

2.1 Location

The waterline construction (Contract 1) of the South Logan Water Association's project will be contained to one highway corridor. Over 3 miles of new waterline extension is proposed along the recently opened Russellville Southern Bypass, between the intersections of US Highway 431 South and US Highway 79 South on the fringe of the City of Russellville. The Bypass extension will consist of 8" piping, and PVC and ductile iron piping will be considered for the project.

Contract 2 will consist of constructing a new water office with as much as 3,000 SF of new space. The Association has preliminarily identified 3 potential locations, illustrated in Exhibit E-1. It is anticipated that the new office will include a secure lobby area that offers protection to the customer service reps accepting payments, include sufficient meeting space for Board meetings and public participation, storage space for both records and water parts/materials, plus public restroom facilities; all sized and designed in full ADA compliance.

The proposed project locations are illustrated in Exhibit E-1 with a county road map background. The affected areas of waterline work, including alternates, are listed in Table 1.

Table 1
Waterline Information

Exhibit	Map I.D.	PRIMARY ROUTES ROAD NAME	Length (miles)	Line Size (inches)
1	A	Russellville Southern Bypass	3.0	8
1	B	New Water Office - Site Options 1/2/3	N/A	-
		SUBTOTAL	3.0	
		ALTERNATE ROUTES		
2	E	KY Highway 96	3.2	6
2	F	Smith Grove Road	2.9	4
2	G	Bores Road	1.8	4
2	H	Conn Road	2.7	6
2	I	Tillett Lane	0.6	4
2	J	Kenny Stratton Road	0.8	4
2	K	Beauchamp Road	1.0	4
2	L	Clay Dockins Road	1.4	4
2	M	Lawrence Road	0.7	4
		SUBTOTAL	15.1	
		TOTAL	18.1	

2.2 Land Use and Environmental Resources Present

As stated earlier, the line portion of the project is spread out over three miles of roadway, mostly within agriculture areas of southern Logan County. The line work is proposed to be constructed within utility easements previously acquired or to be acquired by the South Logan Water Association. The overall project could affect four main resources during construction: flood plains, residential, agriculture, and transportation. The general construction effect to the resources is the disturbance associated with building the facilities. No long-term impact is expected to any environmental resource.

The requirement for an archeological investigation is yet to be determined, but much of the affected line route has been previously disturbed by prior water projects. However, if such an investigation is warranted, Lee Foster, MA/RPA of Pennyrile Archeological Services LLC will conduct any necessary reviews with a report submitted to the State Historical Preservation Officer. Regardless, it is expected that no historical resource will be affected by the proposed project.

The following exhibits indicate the environmental resources present within the project planning area:

- A topographic map of the proposed water line (excluding alternates) and possible water office sites, indicating the areas to be affected and the surrounding area. These are attached as Exhibits 3 thru 5. The base maps are USGS 7.5' quadrangles images.
- The possible water office sites and the proposed waterline that are near or traverse through defined FEMA floodplain zones are illustrated in Exhibits 6 and 8.
- Soil survey data from the Soil Conservation Service is shown as Exhibit 9.

2.3 Growth Areas and Population Trends

The population history of Logan County is an important element in determining the growth patterns over the last 60 years. Analysis of the population history will assist in forming a reliable estimate of the future water needs of the project area.

According to historical records, Logan County's population was 20,896 in 1960, which represents its lowest census year during the last 60 years. Steady growth has been the trend in Logan County since the 1960's. Table 2 provides the population history and projections of the county based on data obtained from the U.S. Bureau of the Census.

Table 2
Population History and Projections

YEAR	Projections												
	1	1	1	1	1	2	2	2	2	2	2	2	2
	9	9	9	9	9	0	0	0	0	0	0	0	0
	5	6	7	8	9	0	1	1	2	2	3	3	4
	0	0	0	0	0	0	0	5	0	5	0	5	0
L Adairville	800	848	973	1,105	906	920	852	854	854	850	841	828	813
O Auburn	994	1,013	1,160	1,467	1,273	1,444	1,340	1,344	1,343	1,337	1,323	1,302	1,279
G Lewisburg	496	512	651	972	772	903	810	812	812	808	800	787	773
A Russellville	4,529	5,861	6,456	7,520	7,454	7,149	6,960	6,979	6,974	6,943	6,872	6,764	6,644
N Rural Areas	15,516	12,662	12,553	13,074	14,011	16,157	16,873	16,921	16,907	16,832	16,658	16,397	16,109
N Logan County	22,335	20,896	21,793	24,138	24,416	26,573	26,835	26,910	26,890	26,770	26,494	26,078	25,618
% Change		-6.4%	4.3%	10.8%	1.2%	8.8%	1.0%	0.3%	-0.1%	-0.4%	-1.0%	-1.6%	-1.8%
Notes to Table 1	1. Shaded areas have been calculated based on census and projection data.												
Source to Table 1	1. Historical & Projections provided by the KY State Data Center and Census Bureau University of Louisville, State Data Center.												

Analyzing Table 2 from 1950 to 2010 shows that the cities in Logan County have grown overall with some fluctuations. Most of the cities' gains came at the expense of the rural populations in Logan County, however the rural area population began to increase dramatically in 2000. Therefore, the population of the East Logan Water District should experience similar growth based upon these projections.

Several factors influence the growth of a community, some of which include accessibility, technology, education, water infrastructure, sewer facilities, and job availability. Over the past twenty years, the community has experienced the benefit of a new four-lane highway, which has increased the area's access to larger Kentucky cities such as Hopkinsville and Bowling Green plus improved access to Interstates 24 and 65. High speed internet and wireless technology is prevalent in Logan County compared to other counties in Kentucky of Logan's size, which has created greater and easier contact to the rest of the world. The local school systems are strong and provide a quality education. Over the last fifteen years, the District and other communities within the county have worked together to secure a reliable source of potable water for the next thirty years as the county goes online with the recently completed Logan Todd Regional Water Commission.

Further analysis of these projections indicates Logan County's population is projected to plateau over the next thirty years with a slight decline. However, it should be noted that population would be impacted by the availability or unavailability of water supply. An ample and steady supply of water will promote growth while the lack thereof will limit growth. These factors must be considered when reviewing this report since many assumptions are dependent on these projections.

3.0 EXISTING FACILITIES

3.1 History and Assets

The South Logan Water Association (SLWA) was formed by Logan County Court order in the early 1970's to supply potable water to residents within the southern portions of Logan County, Kentucky, between the cities of Adairville and Russellville. The water system is comprised of approximately 260 miles of water line and a total water storage capacity of 736,000 gallons. The existing distribution system consists of 8", 6", 4", 3" and 2" PVC lines. The general service area is depicted in Exhibit 1, which illustrates the general distribution layout. The existing transmission and distribution lines generally radiate from Adairville, its former water supplier, and from the Association's water storage tanks south of Russellville. The system is well laid out with many loops. However, there are some dead end and low-flow lines within the system that require frequent flushing.

SLWA has three water storage structures to serve the water system. The primary storage structure is a ground level tank, located just south of Russellville, and the tank has a total capacity of 436,000 gallons and an overflow elevation of 842 feet. The other tanks are elevated storage tanks, located in the Mortimer and Schochoh communities. The Mortimer tank is a leg-style water storage tank, and it has a capacity of 100,000 gallons and an overflow elevation of 746 feet. The Schochoh tank is also a leg-style water storage tank, and it has a capacity of 200,000 gallons and an overflow elevation of 800 feet.

The Logan Todd Regional system initially supplies water to the SLWA system in two locations. The larger feed point is located at the base of the Association's ground level tank in Russellville, and the other is located north of Adairville near the Red River along US Highway 431 to serve the Mortimer tank. A small pump station is utilized within the system to serve and fill the Schochoh tank. Flow through each of these metering points is controlled by the LTRWC SCADA system, and pressure is regulated as flow enters to match the existing tank overflows. System pressures are normally maintained by the level in the respective storage tanks.

The Association's current Water Office and Maintenance Headquarters is located on the public square in Adairville at 114 South Main Street. South Logan purchased the property in 2003. The property has limited parking, mostly in gravel with the exception of a single handicap space paved with asphalt. The building, built in 1950 per Logan County PVA records, has a single bathroom that is elevated above the ground floor and obviously added later. This feature prevents wheelchair access and limits use for those with mobile disabilities.

3.2 Regulatory Compliance

According to the recent Public Service Commission inspections plus Division of Water's remarks within the Clearinghouse Comments, the South Logan water system is currently in compliance with appropriate regulatory agencies. No other remarks were given to suggest that the water system was in or near a noncompliance status. The comments of the Division of Water and other agencies are included in Appendix A.

3.3 Existing Financial Charges and Status

3.3.1 *Existing Rate Schedule (Effective March 1, 2014)*

Meter Size 5/8x3/4 Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 23.89</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.52</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.25</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.97</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.70</u>	per 1,000 Gallons

Meter Size 1-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 43.90</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.52</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.25</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.97</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.70</u>	per 1,000 Gallons

Meter Size 1 1/2-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 61.88</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.52</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.25</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.97</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.70</u>	per 1,000 Gallons

Meter Size 2-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 94.41</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.52</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.25</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.97</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.70</u>	per 1,000 Gallons

Meter Size 3-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 126.51</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.52</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.25</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.97</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.70</u>	per 1,000 Gallons

Meter Size 4-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 163.21</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.52</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.25</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.97</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.70</u>	per 1,000 Gallons

3.3.2 O&M Costs (FYE 12/31/18)

Item No.	Expense Item	Amount
1	Purchased Water	\$ 559,568.00
2	Salaries and wages	\$ 172,574.00
3	Directors Fees	\$ 3,838.00
4	Transmission & Distribution	\$ 62,722.00
5	Repairs & maintenance	\$ 6,752.00
6	Contractual Services	\$ -
7	Utilities & Telephone	\$ 12,382.00
8	Professional Fees	\$ 8,370.00
9	Insurance	\$ 28,631.00
10	Taxes & licenses	\$ 1,209.00
11	Office Supplies	\$ 36,638.00
12	Water Tests	\$ 3,754.00
13	Travel	\$ 17,827.00
14	Miscellaneous Expense	\$ 6,937.00
Total Utility Expense		\$ 921,202.00

3.3.3 Long Term Debts (as of 12/31/18)

Date of Issue	Bond/Note Holder	Principal Balance	Payment Date	Bond Type	Amount on Deposit in Reserve *
1993 Issue	FmHA	\$ 221,332.00	2033	Water	\$ 115,265.00
1998 Issue	FmHA	\$ 421,439.00	2038	Water	
2005 Issue	USDA-RD	\$ 658,852.00	2045	Water	
2005 Issue	USDA-RD	\$1,143,577.00	2053	Water	
		\$2,445,200.00			

3.3.4 Short Term Debts (as of 12/31/18)

Lender or Lessor	Date of Issue (Mo. & Year)	Principal Balance	Purpose	Payment Date	Principal & Interest Payment (P&I)	Date to Be Paid In Full
Not Applicable						

4.0 NEED FOR PROJECT

4.1 Health and Safety

Portions of the South Logan Water Association are currently strained due to growth and recent expansion projects to serve unserved areas. The strain limits the Association's ability to deliver drinking water to all its customers at proper pressure and quantity as set forth by the Kentucky Division of Water (KDOW). The Ten State Standards require a minimum working pressure of 35 psi. However, during peak times, some isolated fringe areas, which also contain large number of users, experience pressures dipping to 30 psi.

The Association constantly battles line breaks of older pipelines as well as water loss within the system. Due to the vast area served, South Logan has

methodically broken its system into mini zones to better monitor and locate leaks as they arise. Unfortunately, the attempts to solve the water loss problems also creates pressure problems as more flow is forced into fewer pipelines rather than multiple loops. Thus, the Association constantly has to balance its effort to minimize water loss with its requirement to deliver proper pressure. The Association constantly seeks opportunities to make line improvements in their system in order to provide operational advantages and alternatives to minimize disruptions.

In the area of safety, USDA has periodically performed inspections of the Association's facilities and, in particular, identified deficiencies with ADA compliance. These deficiencies include improper mobility, parking, and bathroom accessibility for the disabled or wheelchair confined patrons. For many years, USDA has impressed upon the Board that failure to address these issues could hinder their ability to fund infrastructure projects in the future. The Board took into consideration a complete remodeling of the current building but determined the solutions was not cost effective for a building of its age plus the space needed for the improvements would compound an already limiting space issue.

4.2 System O&M

When developing this project, the primary purpose was is to extend water service along a major new thoroughfare. However, aside from the potential of serving expected new customers along the corridor, the project can reduce interruptions of service to others in the area from older line breaks by providing operational alternative feed methods. The Association has done a remarkable job over the last 24-36 months in reducing their water loss system wide, but there are portions of their system that are over 50 years old. The roots of South Logan Water's formation is the evolution and acquisition of the old Russellville Water District No. 1 that was constructed in the 1960's. This older portion of the system rests within the proposed waterline loop connecting two major SLWA distribution arteries; US Highway 431 and US Highway 79. With an interconnection of these two arteries, the Association will have unlimited options to minimize areas disrupted by breaks in the older areas of the water system. Its worth noting that the older areas of the system referenced include the county hospital, an assisted living facility for the elderly, and 100+ bed nursing/rehab center.

4.3 Growth

As mentioned earlier, the rural population of Logan County should hold steady over the next ten to fifteen years based upon reliable census records and expected growth. The proposed project is necessary to continue the Association's ability to serve the recent growth plus new developments that are likely in the future. Overall, the proposed project is ultimately being designed to offer improvements and benefits to their existing 1,723 customers. The new infrastructure will insure the Association's ability to properly serve the existing customer base plus future growth in the area.

5.0 ALTERNATIVES CONSIDERED

A resolution to the problems faced by the South Logan Water Association is a relatively simple project with two alternatives.

5.1 Alternative 1

The first obvious alternative is to do nothing or a smaller variation of the project. However, the Association would be unable to continue their current endurance of operation, maintenance and water flow problems. Therefore, the 'do nothing' alternative is not a viable option as it would only prolong the inevitable.

5.2 Alternative 2

The second alternative is one that offers several advantages and resolves the two most immediate deficiencies in the water system. The alternative provides water service along a new major thoroughfare in Russellville. This portion of the project adheres with the Commonwealth's drive to provide a reliable and potable water source to all serviceable customers by the year 2020. Also, the project provides a solution to South Logan's limited operational space for customer service, meetings, material storage, and general maintenance operations.

5.2.1 *Description*

The project involves construction of over 3 miles of water line along an unserved roadway in the Russellville area. The line is being built to provide water service to a prime area for residential and commercial development as well as connecting sections of the water system that will improve the hydraulic performance of the existing distribution system. The loop will offer alternate feed options and backdoor supply during interruptions in the older, original portions of the South Logan System in southern Russellville.

In a further attempt to improve service to customers, South Logan is also proposing to construct a new water office and operational headquarters. Although the final selection of a site is yet to be determined, the Association intends to provide a facility with secure entry for payment transactions with staff, drive-thru window options, expanded meeting space for public participation at monthly board meetings, plus ADA compliant access and restroom facilities. The alternative is illustrated in Exhibit 1.

5.2.2 *Environmental Impacts and Land Requirements*

The alternative has little to no impact upon the environment and land resources because the proposed construction will be done mostly along existing easements and roadways. The line extension is proposed for construction in existing pipeline easements where possible or in state right-of-way and new easements, as needed. As mentioned earlier, the project will affect four main resources during construction: residential, agriculture, floodplains, and transportation. The general construction effect to the resources is the disturbances associated with building the facilities. No other

effect to the resources is expected after construction of the improvements is complete.

5.2.3 *Construction Problems*

There are no severe construction problems foreseen for the project. The Logan County area has varying soil conditions ranging from near ideal in some of the southern parts of the county, to sporadic instances of rock outcrops in the north. The entire pipeline route is very accessible, and there is little evidence of a high water table. Mobilization issues should be minimal since the work is contained along the same corridor throughout. However, portions of the waterline will require stream crossings and road bores, none of which should be unmanageable or exceptionally costly.

5.2.4 *Cost Estimates*

The South Logan Water Association's Water Office & Southern Bypass Extension Project is estimated to have a total cost of \$1,065,000. The project cost consists of construction, non-construction and contingency costs, which are \$796,600, \$186,500 and \$81,900 respectively. The project is anticipated to be funded in part by a \$265,000 grant and \$800,000 loan from Rural Development

6.0 PROPOSED PROJECT

6.1 Project Design

6.1.1 *Water Supply*

The Logan Todd Regional Water Commission's plant will serve the proposed project, and no immediate new demand will be added to their system as a result of the project. Based upon 2018 figures from LTRWC, the water treatment plant is producing nearly 4,000,000 gallons per day, which is approximately 40% of the design capacity. Therefore, sufficient capacity exists to continue service to their original customers plus the City of Springfield, which will also come online in 2020 with an added minimum demand of 2,300,000 gallons per day

6.1.2 *Storage*

The proposed project will not include any additions to or modifications of the Association's water storage facilities. Adequate storage volume exists at their Russellville, Mortimer and Schoch sites to serve the project.

6.1.3 *Distribution Layout*

The waterline construction of the South Logan Water Association extension project will be contained to a three mile section generally following the Russellville Southern Bypass in central Logan

County. The line portion of the project involves extension of water service with approximately 16,000 LF of 8" treated water line, and PVC piping will be utilized.

The proposed line extension and preliminary office locations are illustrated in Exhibit 1.

6.1.4 *Regulatory Compliance*

The proposed project has been submitted to the Kentucky State Clearinghouse for their comments. The clearinghouse comments are included in Appendix A. The clearinghouse review of the proposal indicates there are no identifiable conflicts with any state or local plan, goal, or objective. Furthermore, no notices have been received and none are expected to suggest that the water system is in or near a noncompliance status.

6.1.5 *Hydraulic Calculations*

For preliminary planning purposes, the computer hydraulic simulator, KYPIPE 2000, has been used to construct a system wide model to determine the hydraulic characteristics of the South Logan water system as it currently exists. The model includes all of the existing lines from the water supply connection with Logan Todd, plus the proposed line upgrades and other features of the project. The modeling indicates all four of the waterlines may be constructed as proposed.

6.2 Cost Estimate

The proposed itemized cost estimate of the South Logan Water Association's Water Office & Russellville Southern Bypass Extension Project is shown in Table 3.

Table 3
Project Cost Estimate

Construction - Russellville Southern Bypass Extension				
Item	Quantity	Units	Unit Price	Total
8-inch Class 200 PVC Water Line	16,000	LF	\$ 12.00	\$ 192,000
Final Cleanup	15,750	LF	\$ 2.00	\$ 31,500
16" Cased Road Bore	200	LF	\$ 125.00	\$ 25,000
16" Cased Open Cut, Road Crossing	40	LF	\$ 100.00	\$ 4,000
10"x8" Tapping Sleeve & Valve (near US 79)	1	EA	\$ 4,000.00	\$ 4,000
8"x8" Tapping Sleeve & Valve (@ US 431)	2	EA	\$ 3,800.00	\$ 7,600
6"x6" Tapping Sleeve & Valve (@ KY 96)	2	EA	\$ 3,500.00	\$ 7,000
8" Gate Valve and box	4	EA	\$ 1,500.00	\$ 6,000
Hydrant & 6" Valve	7	EA	\$ 3,500.00	\$ 24,500
	Subtotal - Line Construction			\$ 301,600
Construction - New Water Office (Site TBD)				
Water Office - ~3,000 SF	3,000	SF	\$ 150.00	\$ 450,000
Site Work	1	LS	\$ 45,000.00	\$ 45,000
	Subtotal - Office Construction			\$ 495,000
	TOTAL - All Construction			\$ 796,600
Non-Construction Items				
Administrative Expenses				\$ 1,000
Legal Costs				\$ 15,000
Land & ROW				\$ 20,000
Environmental, Special Studies & Permits				\$ 20,000
Preliminary Engineering				\$ 10,000
Architectural, Electrical, Plumbing, Mech, Civil Design - Water Office Phase				\$ 35,000
Design Engineering - Waterline Phase				\$ 23,800
Construction Phase Engineering Services - Waterline Phase				\$ 10,200
Construction Inspection - Waterline Phase				\$ 26,500
Construction Phase Financing Cost				\$ 25,000
SUBTOTAL - Non-Construction				\$ 186,500
Contingency ~10%				\$ 81,900
TOTAL ESTIMATED PROJECT COST				\$ 1,065,000
Preliminary Project Funding				
USDA Rural Development Grant				\$ 265,000
USDA Rural Development Loan				\$ 800,000
TOTAL ESTIMATED PROJECT COST				\$ 1,065,000

Additionally, a detailed cost estimate of the alternative work items are shown in Table 4. These work items are included for review in the event extra funds, including contingency, are available after bidding the primary scope of work.

Table 4
Alternative Work Items: Cost Estimate

Construction			
Road	Quantity	Units	Estimated Cost
KY Highway 96 Replacement/Upgrade	1	LS	\$ 146,000
Smith Grove Road Replacement/Upgrade	1	LS	\$ 102,600
Bores Road Waterline Extension	1	LS	\$ 64,000
Conn Road Replacement/Upgrade	1	LS	\$ 123,100
Tillett Lane Waterline Extension	1	LS	\$ 21,300
Kenny Stratton Road Waterline Extension	1	LS	\$ 28,300
Beauchamp Road Waterline Extension	1	LS	\$ 35,400
Clay Dockins Road Waterline Extension	1	LS	\$ 49,500
Lawrence Road Waterline Extension	1	LS	\$ 24,800
TOTAL - Construction (All Alternate Roads)			\$ 595,000

6.3 Annual Operating Budget

The proposed annual operating budget for the South Logan Water Association's Water Office & Russellville Southern Bypass Extension Project is shown in Table 5.

Table 5
Proposed Operating Budget

Operating Income	Existing ⁽¹⁾	Extension Only	Future
Water Sales	\$1,190,265.00	\$0.00 ⁽²⁾	\$1,249,778.25 ⁽⁸⁾
Late Charges	\$20,146.00	\$0.00 ⁽²⁾	\$20,146.00
Other Charges	\$16,398.00	\$0.00 ⁽²⁾	\$16,398.00
Total Operating Income	\$1,226,809.00	\$0.00	\$1,286,322.25
Operating and Maintenance Expense			
Purchased Water	\$559,568.00	\$0.00 ⁽²⁾	\$559,568.00 ⁽²⁾
Management	\$176,412.00	\$5,290.00 ⁽³⁾	\$181,702.00
Transmission & O&M Expense	\$91,055.00	\$2,730.00 ⁽³⁾	\$93,785.00
Insurance	\$28,631.00	\$860.00 ⁽³⁾	\$29,491.00
Utilities	\$12,382.00	\$370.00 ⁽³⁾	\$12,752.00
Professional & Contracted Fees	\$8,370.00	\$250.00 ⁽³⁾	\$8,620.00
Office Supplies & Collection Expense	\$41,461.00	\$1,240.00 ⁽³⁾	\$42,701.00
Miscellaneous Expense	\$3,323.00	\$100.00 ⁽³⁾	\$3,423.00
Total Operating Expenses	\$921,202.00	\$10,840.00	\$932,042.00
Net Operating Income	\$305,607.00	(\$10,840.00)	\$354,280.25
Non-Operating Income (Expense)			
Interest Income	\$1,335.00	\$0.00	\$1,335.00
Other	(\$2,423.00)	\$0.00	(\$2,423.00)
RD/FmHA Interest (Bonds pre-2019)	(\$92,571.00)	\$0.00	(\$89,754.00) ⁽⁵⁾
RD/FmHA Principal (Bonds pre-2019)	(\$57,983.00)	\$0.00	(\$60,964.00) ⁽⁵⁾
RUS Interest (2019 Project)	\$0.00 ⁽⁴⁾	(\$30,000.00)	(\$30,000.00) ⁽⁴⁾
RUS Principal (2019 Project)	\$0.00 ⁽⁴⁾	(\$7,700.00)	(\$7,700.00) ⁽⁴⁾
Total Non-Operating Income	(\$151,642.00)	(\$37,700.00)	(\$189,506.00)
Net for Coverage & Depreciation	\$153,965.00	(\$48,540.00)	\$164,774.25
10% Debt Service Coverage	(\$15,055.40) ⁽⁶⁾	(\$3,770.00)	(\$18,841.80)
Subtotal	\$138,909.60	(\$52,310.00)	\$145,932.45
Short-Lived Assets	(\$6,031.00)	\$0.00	(\$6,031.00)
Net for Depreciation ⁽⁶⁾	\$132,878.60	(\$52,310.00)	\$139,901.45

Notes:

1. Based on the December 31, 2018 Audit & PSC Report
2. No new customers or added demand resulting from project.
3. Based on 3% nominal increase due to anticipated annual cost increases.
4. Estimated Project Debt Service: Based on a **\$800,000 RUS loan** at 3.375% and 38 payments
5. Debt Service per Amortization Schedules. 2020 Figures used for Future.
6. The Depreciation Expense was **\$159,836** per the 2018 Audit.
7. New Depreciation Expense estimated at \$21,300 based on \$1.065M project & 50 year straight line depreciation.
8. Approximate 5% rate increase applied to current rates to provide equivalent Net for Depreciation

Based on the projections and assumptions outlined above, the commitment of a \$265,000 Rural Development Grant and added revenues from the increased water rates (+5%) are expected to produce an equivalent to the present Net for Depreciation. Without securing the referenced grants, it is estimated that an additional 1% increase to the proposed water rates would be required to offset the increase in debt service and maintain the equivalent fund for depreciation.

Table 5 illustrates the project's rate schedule with the requested RUS Grant, and Table 6 shows the necessary rate schedule if the project is undertaken without the requested RUS Grant and funded entirely with RUS loan and other monies.

Table 6
Project Rate Schedule with RUS Grant

Meter Size <u>5/8x3/4 Inch</u> :				
First	<u>2,000</u>	Gallons @	<u>\$ 25.08</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.95</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.66</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 8.37</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 8.09</u>	per 1,000 Gallons
Meter Size <u>1-Inch</u> :				
First	<u>2,000</u>	Gallons @	<u>\$ 46.10</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.95</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.66</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 8.37</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 8.09</u>	per 1,000 Gallons
Meter Size <u>1 1/2-Inch</u> :				
First	<u>2,000</u>	Gallons @	<u>\$ 64.97</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.95</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.66</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 8.37</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 8.09</u>	per 1,000 Gallons
Meter Size <u>2-Inch</u> :				
First	<u>2,000</u>	Gallons @	<u>\$ 99.13</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.95</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.66</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 8.37</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 8.09</u>	per 1,000 Gallons
Meter Size <u>3-Inch</u> :				
First	<u>2,000</u>	Gallons @	<u>\$ 132.84</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.95</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.66</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 8.37</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 8.09</u>	per 1,000 Gallons

Meter Size 4-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 171.37</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.95</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.66</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 8.37</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 8.09</u>	per 1,000 Gallons

Table 7
Project Rate Schedule without RUS Grant

Meter Size 5/8x3/4 Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 25.32</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 9.03</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.75</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 8.45</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 8.16</u>	per 1,000 Gallons

Meter Size 1-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 46.53</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 9.03</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.75</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 8.45</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 8.16</u>	per 1,000 Gallons

Meter Size 1 1/2-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 65.59</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 9.03</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.75</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 8.45</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 8.16</u>	per 1,000 Gallons

Meter Size 2-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 100.07</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 9.03</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.75</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 8.45</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 8.16</u>	per 1,000 Gallons

Meter Size 3-Inch :

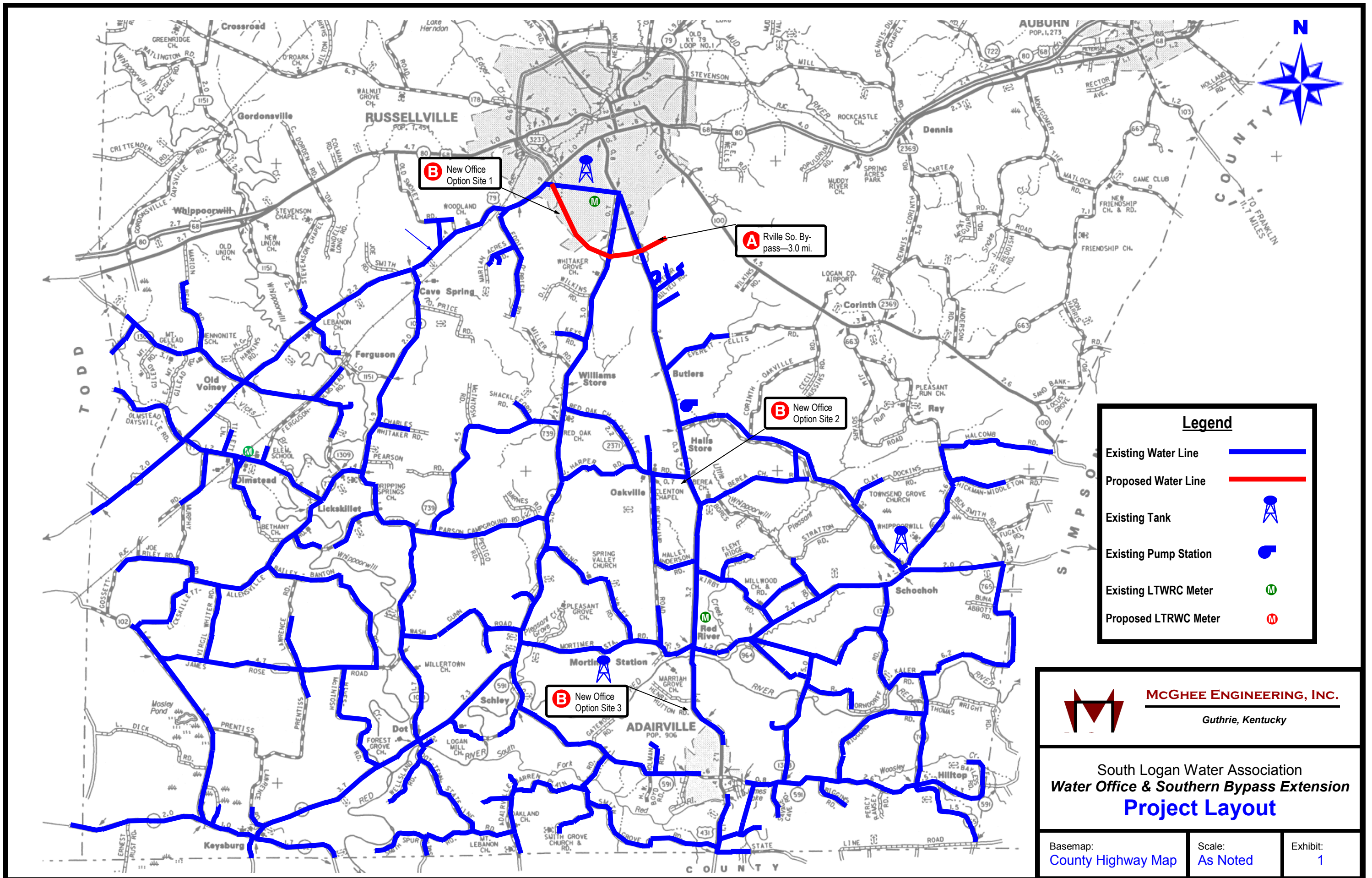
First	<u>2,000</u>	Gallons @	<u>\$ 134.10</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 9.03</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.75</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 8.45</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 8.16</u>	per 1,000 Gallons

Meter Size <u>4-Inch</u> :				
First	<u>2,000</u>	Gallons @	<u>\$ 173.00</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 9.03</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.75</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 8.45</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 8.16</u>	per 1,000 Gallons

7.0 RECOMMENDED SOLUTION

In order to address the problems and needs of the water system, the South Logan Water Association should do the following:

- Develop Bidding Documents and Technical Specifications (Contract 1) for over three miles of waterline extension to provide full water service along the Russellville Southern Bypass corridor plus improve the Association's hydraulic capacity to serve future growth.
- Develop Bidding Documents and Technical Specifications (Contract 2) for construction of a new water office and site development; all providing ADA compliant facilities and space for current and future administrative/operational needs.
- Continue the application process for \$265,000 in grant and \$800,000 in loan from Rural Development.
- Complete environmental/archeological investigations, as warranted, to ensure the project components will not impact eligible historic properties or threaten endangered species
- Initiate discussion among the Association's Board of Directors concerning public awareness and implementation of raising water rates to fund the project if grant funds are unavailable or limited.



B New Office Option Site 1

A Rville So. Bypass—3.0 mi.

B New Office Option Site 2

B New Office Option Site 3

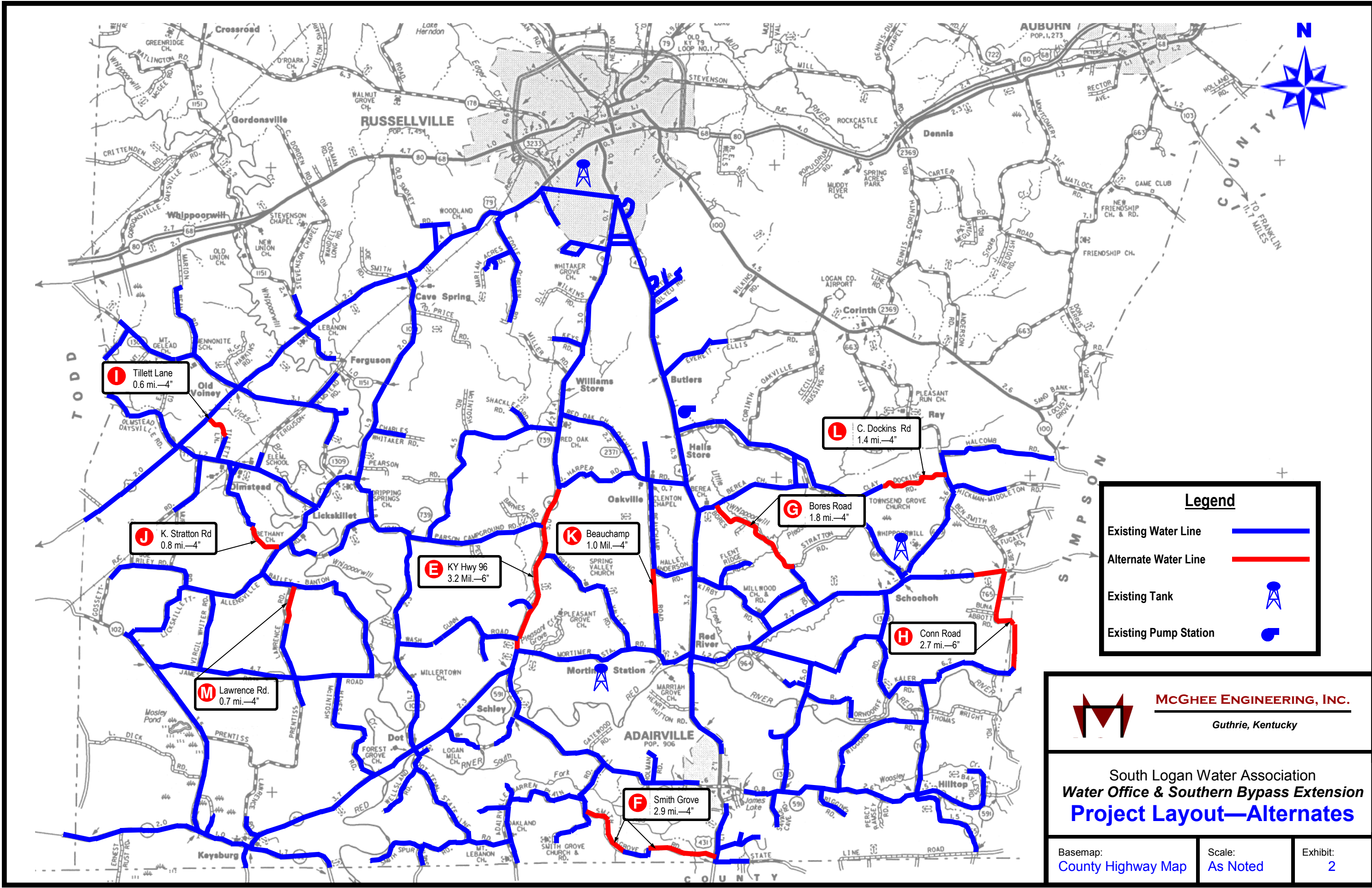
Legend

- Existing Water Line
- Proposed Water Line
- Existing Tank
- Existing Pump Station
- Existing LTWRC Meter
- Proposed LTRWC Meter

MCGHEE ENGINEERING, INC.
Guthrie, Kentucky

South Logan Water Association
Water Office & Southern Bypass Extension
Project Layout

Basemap: County Highway Map	Scale: As Noted	Exhibit: 1
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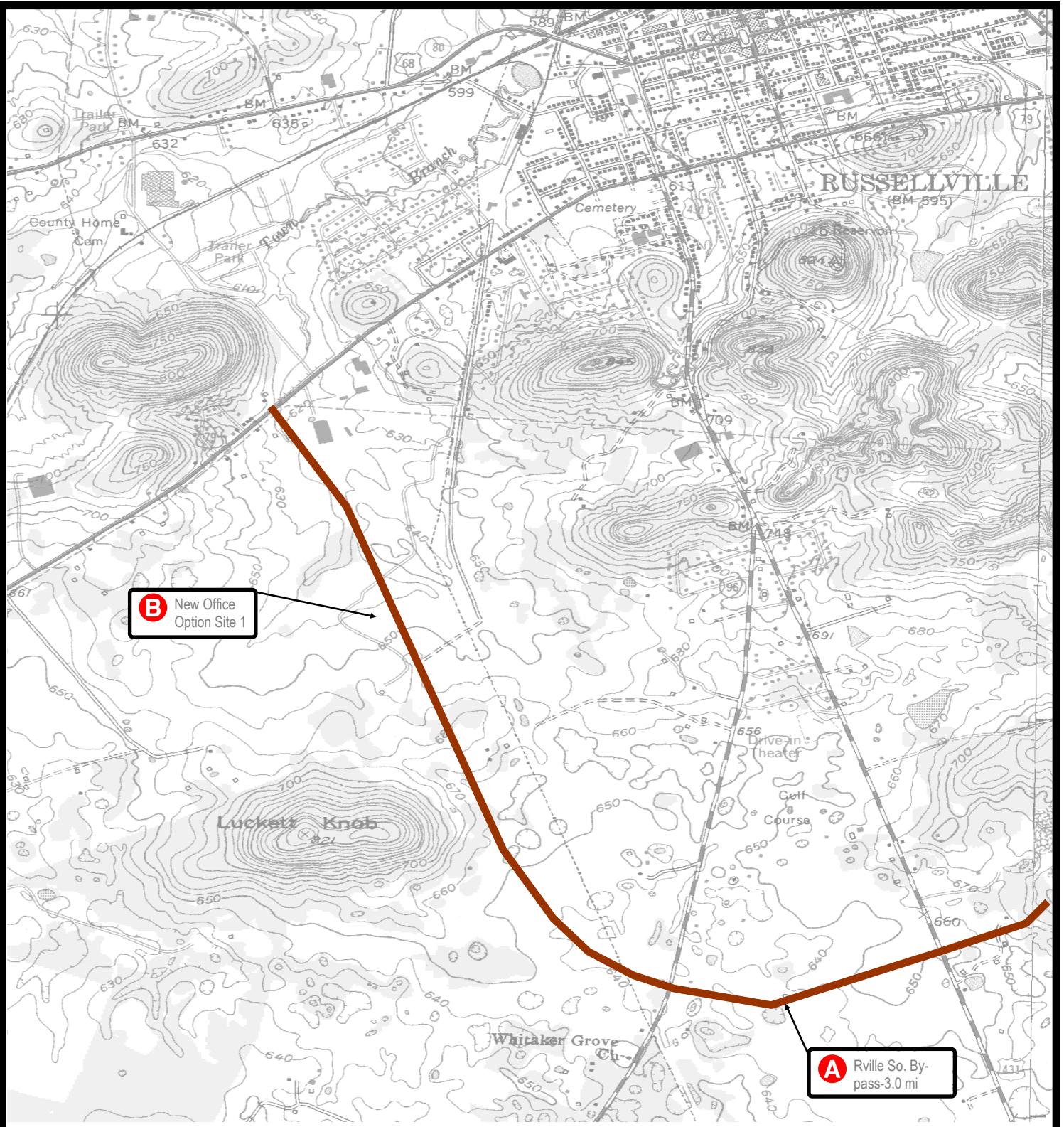
Legend

- Existing Water Line —
- Alternate Water Line —
- Existing Tank
- Existing Pump Station

MCGHEE ENGINEERING, INC.
Guthrie, Kentucky

South Logan Water Association
Water Office & Southern Bypass Extension
Project Layout—Alternates

Basemap: County Highway Map	Scale: As Noted	Exhibit: 2
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B New Office
Option Site 1

A Russville So. Bypass-3.0 mi



LEGEND

- Proposed 8" Waterline
- Proposed 6" Waterline
- Proposed 4" Waterline



MCGHEE ENGINEERING, INC.

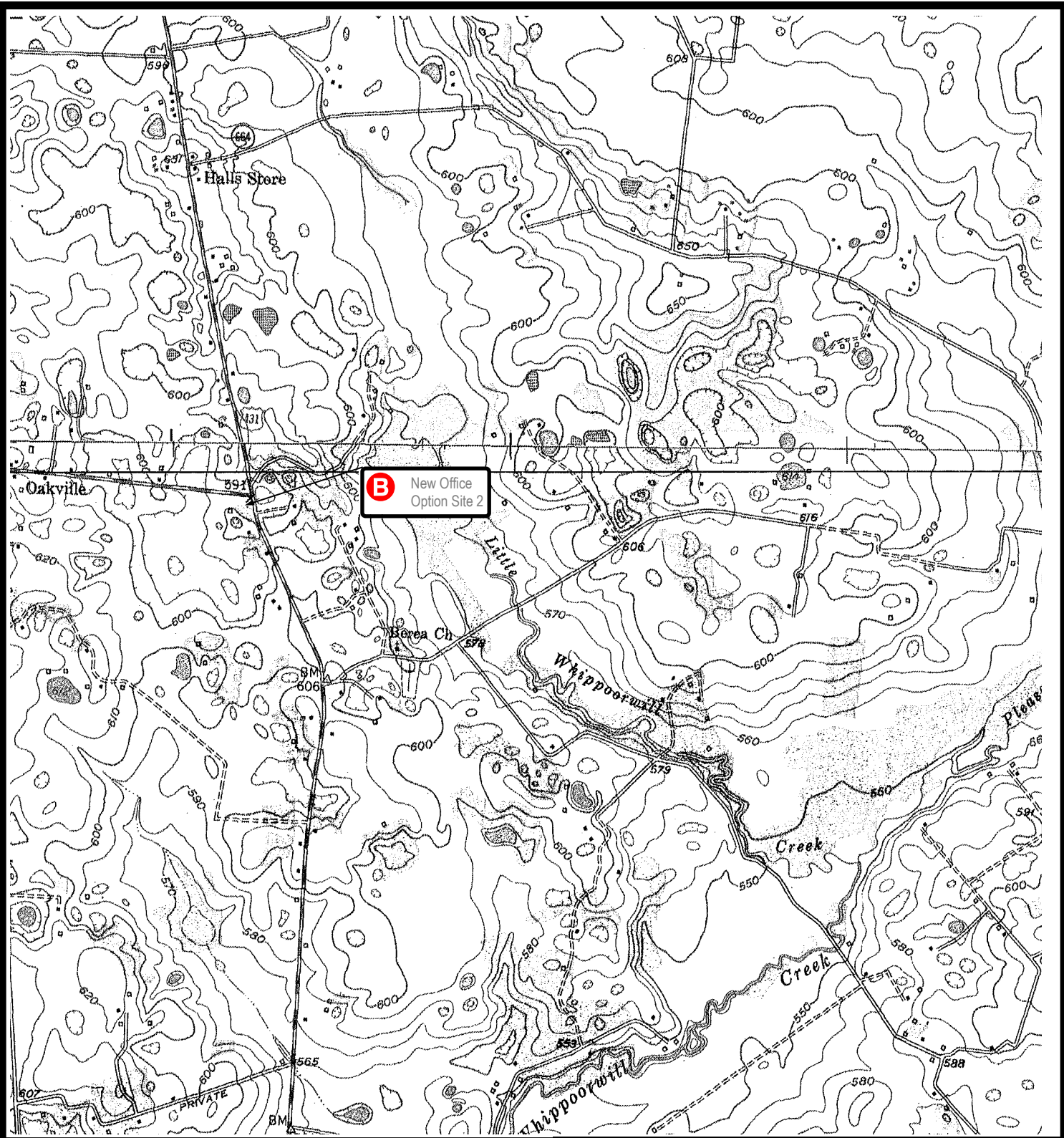
Guthrie, Kentucky

South Logan Water Association
**Water Office & Southern Bypass Extension
Waterline & Office Site—Option 1**

Basemap:
"Russellville" 7.5' Quad

Scale:
1"=2,000'

Exhibit:
3



Scale in Miles

LEGEND

- Proposed 8" Waterline
- Proposed 6" Waterline
- Proposed 4" Waterline



MCGHEE ENGINEERING, INC.

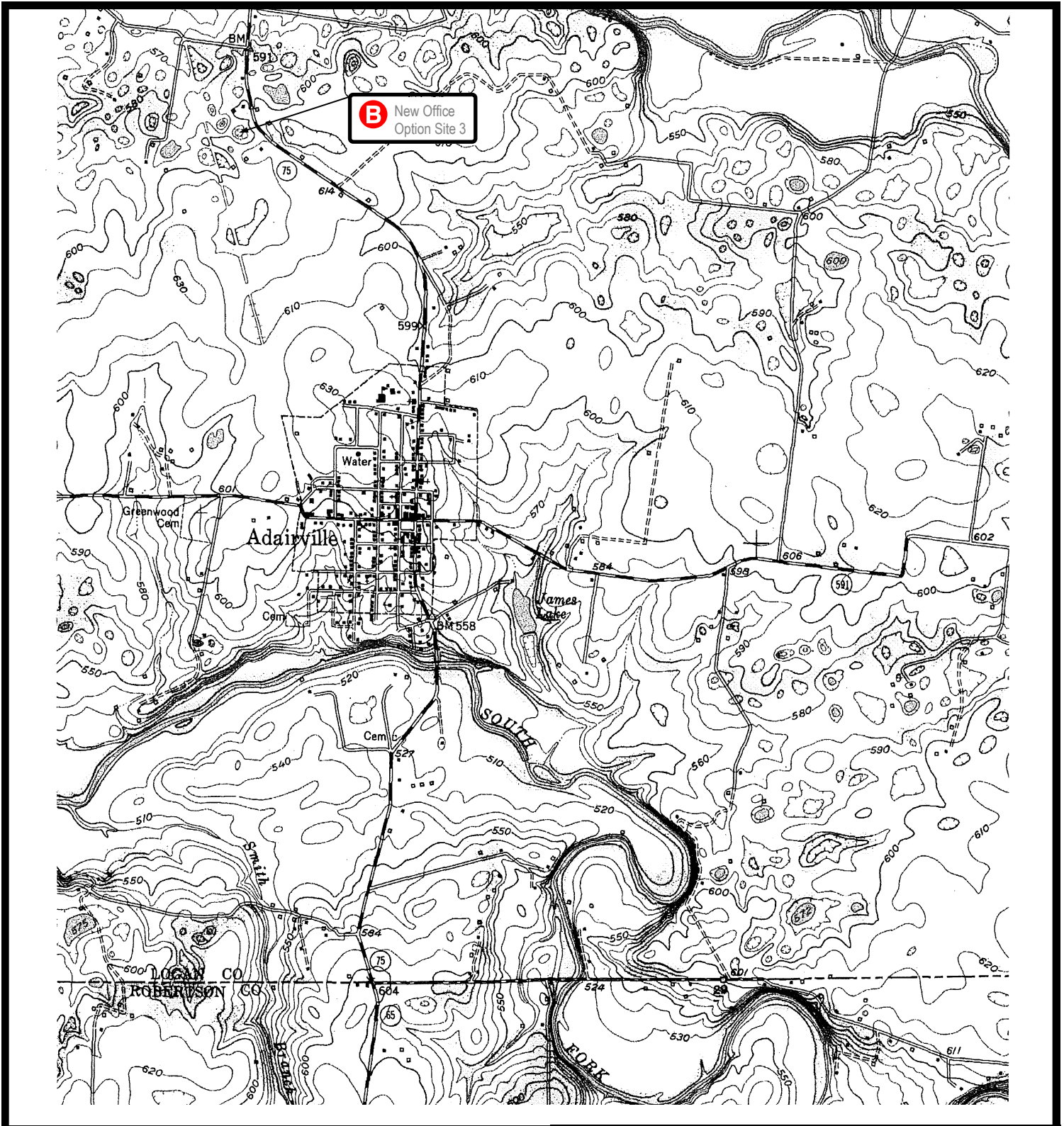
Guthrie, Kentucky

South Logan Water Association
Water Office & Southern Bypass Extension
New Office Site—Option 2

Basemap:
 "Adairville" & "Dennis" 7.5' Quad

Scale:
 1"=2,000'

Exhibit:
 4



LEGEND

-  Proposed 8" Waterline
-  Proposed 6" Waterline
-  Proposed 4" Waterline



McGHEE ENGINEERING, INC.

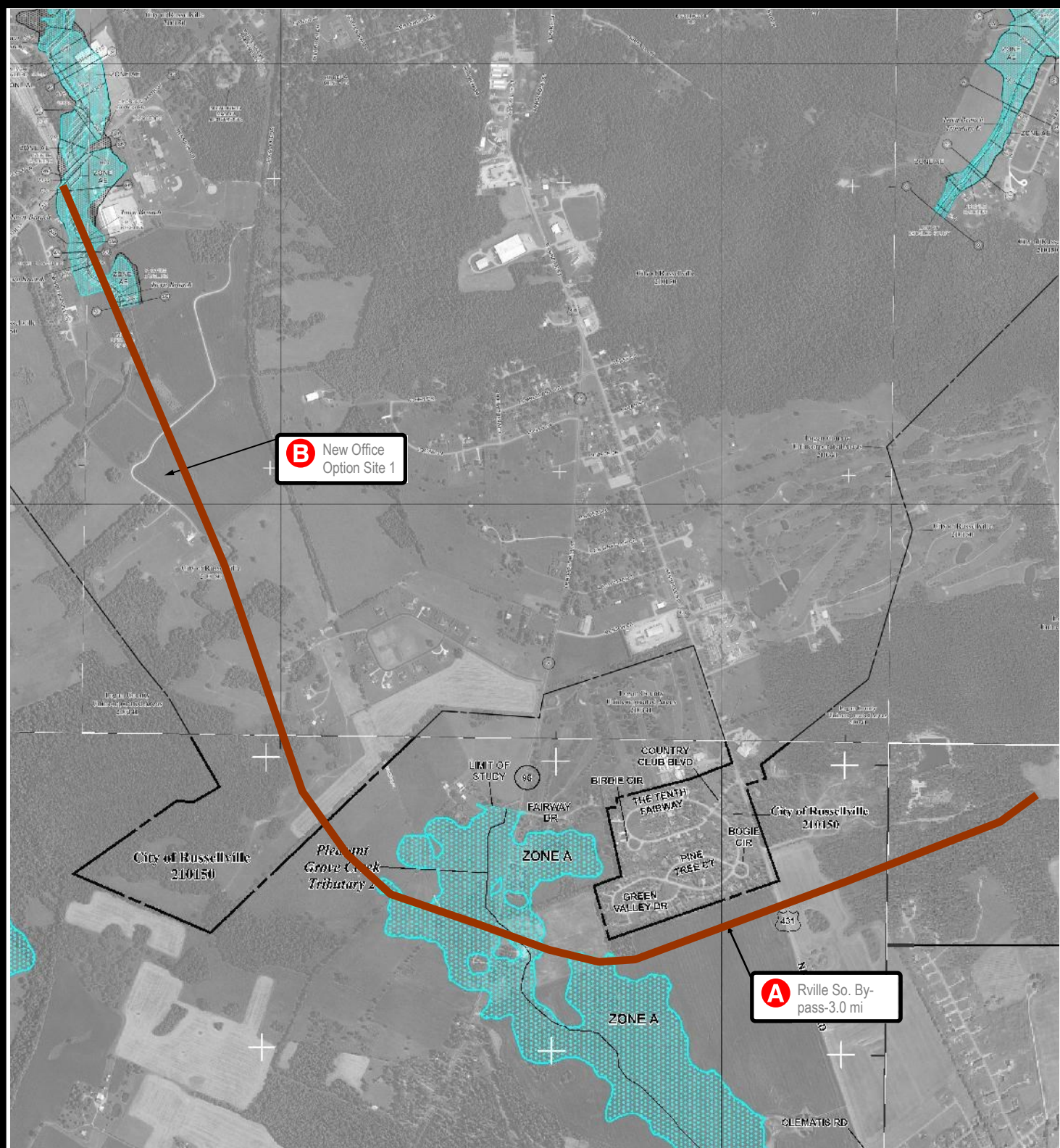
Guthrie, Kentucky

South Logan Water Association
Water Office & Southern Bypass Extension
New Office Site—Option 3

Basemap:
 "Adairville" 7.5' Quad

Scale:
 1"=2,000'

Exhibit:
 5



LEGEND

- Proposed 8" Waterline
- Proposed 6" Waterline
- Proposed 4" Waterline



MCGHEE ENGINEERING, INC.

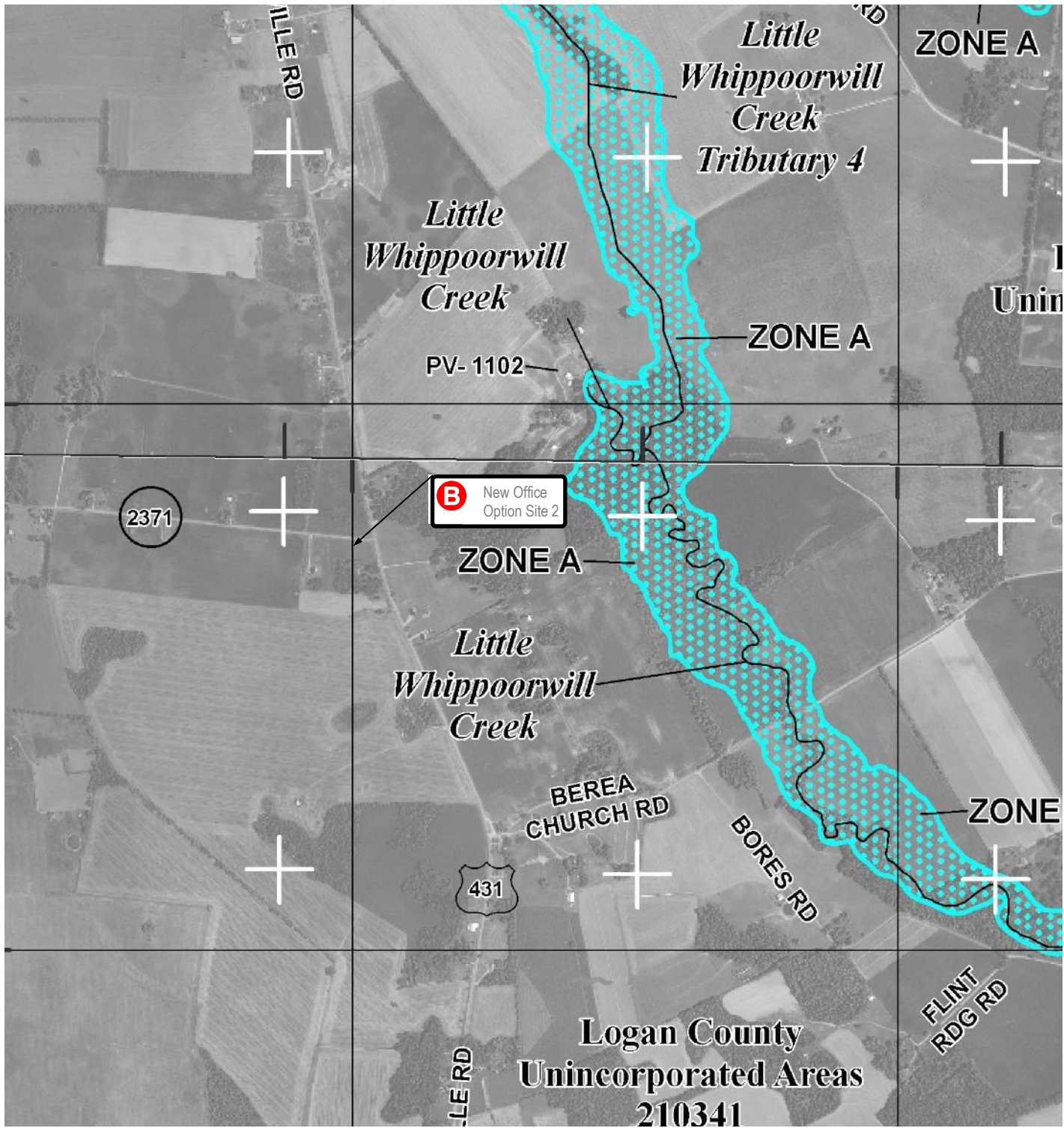
Guthrie, Kentucky

South Logan Water Association
Water Office & Southern Bypass Extension
Flood Zone Vicinity Map—Russellville


FEMA Flood Map:
Multi Panel 21141C

Scale:
None

Exhibit:
6



LEGEND

-  Proposed 8" Waterline
-  Proposed 6" Waterline
-  Proposed 4" Waterline



MCGHEE ENGINEERING, INC.

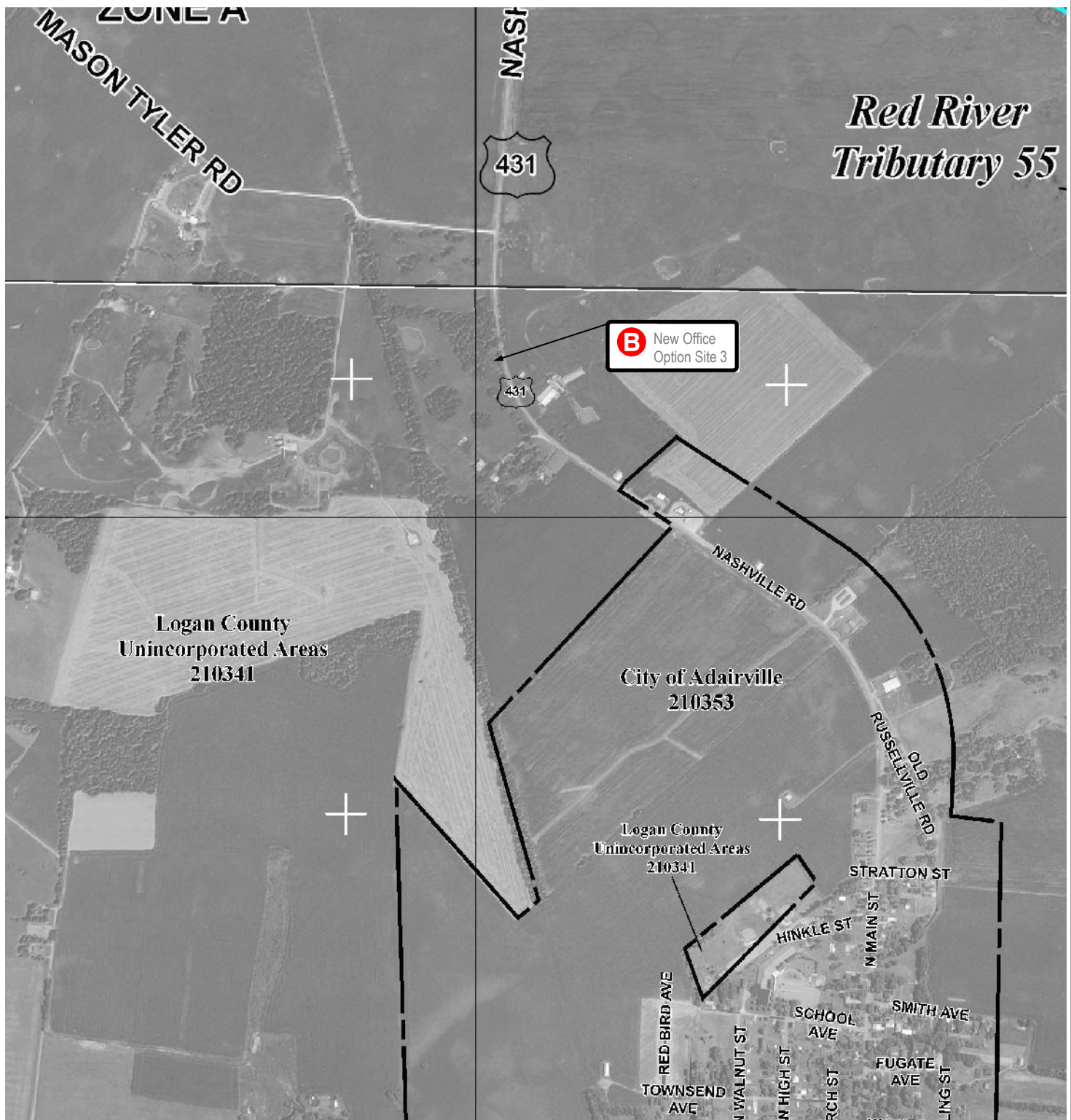
Guthrie, Kentucky

South Logan Water Association
Water Office & Southern Bypass Extension
Flood Zone Vicinity Map—Oakville

FEMA Flood Map:
 Panel 21141C0300/0400

Scale:
 None

Exhibit:
 7



LEGEND

-  Proposed 8" Waterline
-  Proposed 6" Waterline
-  Proposed 4" Waterline



McGHEE ENGINEERING, INC.

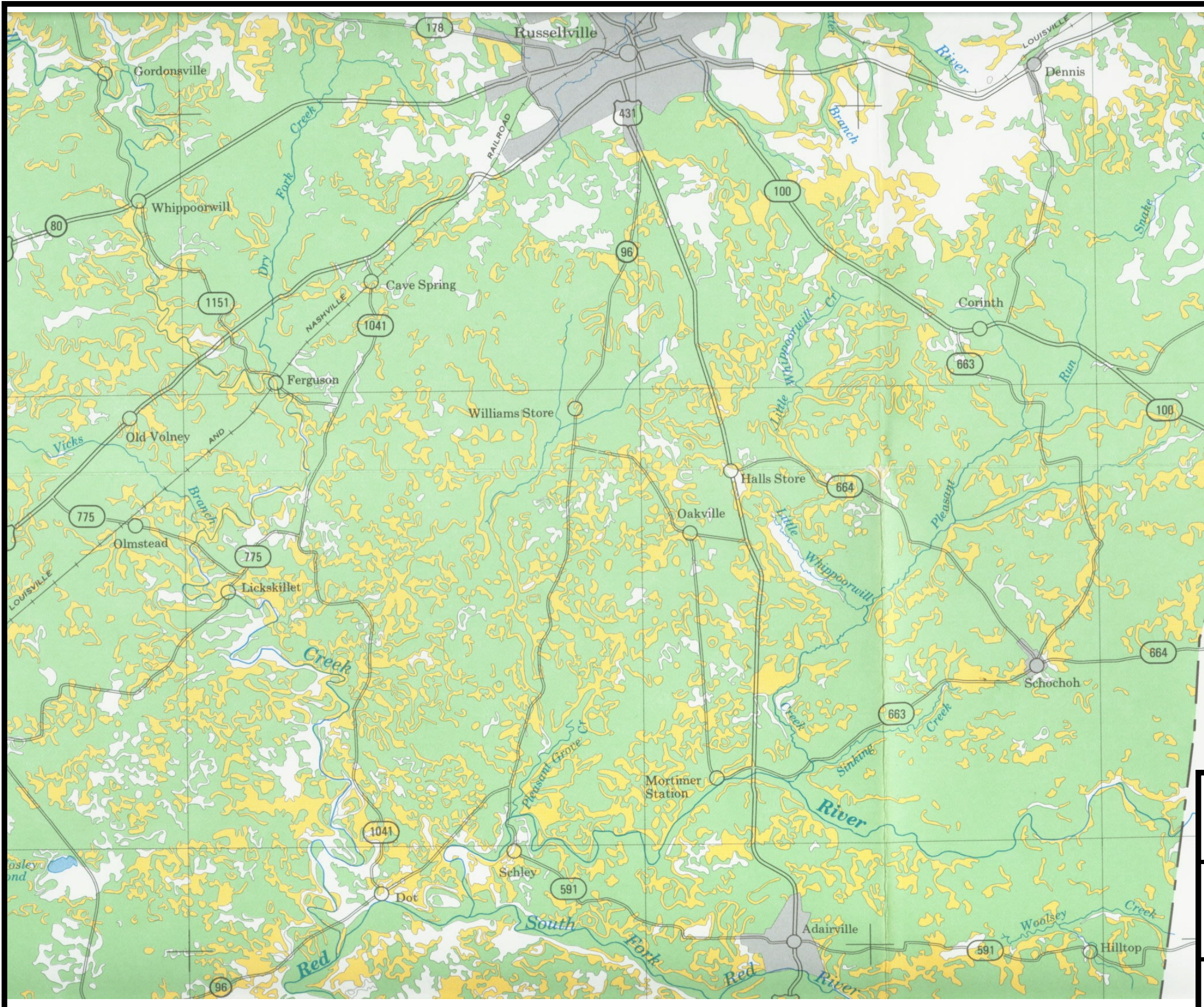
Guthrie, Kentucky

South Logan Water Association
**Water Office & Southern Bypass Extension
 Flood Zone Vicinity Map—Adairville**


FEMA Flood Map:
 Panel 21141C0390/0400

Scale:
 None

Exhibit:
 8



LEGEND

	Prime farmland Total acres - 194,000
	Unique farmland, other than prime Total acres - none reported
	Additional farmland of statewide importance Total acres - 53,000
	Additional farmland of local importance Total acres - none reported
	Other land
	Water areas
	Approximate limits of urban growth



McGHEE ENGINEERING, INC.

Guthrie, Kentucky

South Logan Water Association
 Water Office & Southern Bypass Extension
Important Farmlands
South Logan Area

Basemap:
 USDA: Logan County

Scale:
 As Noted

Exhibit:
 9

Appendix A

Kentucky State Clearinghouse Comments – Dated 04-11-19



MATTHEW G. BEVIN
GOVERNOR

**DEPARTMENT FOR LOCAL GOVERNMENT
OFFICE OF THE GOVERNOR**

1024 CAPITAL CENTER DRIVE, SUITE 340
FRANKFORT, KENTUCKY 40601-8204
PHONE (502) 573-2382 FAX (502) 573-2939
TOLL FREE (800) 346-5606/ TDD:711
WWW.kydlgweb.ky.gov

SANDRA K. DUNAHOO
COMMISSIONER

April 11, 2019

Mrs. Rebecca Ferguson
South Logan Water Association
114 South Main Street
Adairville, KY 42202

RE: Water Office & Southern Bypass Extension
WX21141059
SAI# KY201903180237
CFDA# 10.760

Dear Mrs. Ferguson:

The Kentucky State e-Clearinghouse is the official designated Single Point of Contact (SPOC) for the Commonwealth pursuant to Presidential Executive Order 12372, and supported by Kentucky Statutes KRS 45.03. The primary function of the SPOC is to streamline the review aforementioned process for the applicant and the funding agency. This process helps in vocalizing the statutory and regulatory requirements. Information in the form of comments, if any, will be attached to this correspondence.

This proposal has been reviewed by the appropriate state agencies in the e-Clearinghouse for conflicts with state or local plans, goals and objectives. After receiving this letter, you should make it available to the funding agency and continue with the funding agencies application process. This e-clearinghouse SPOC letter signifies only that the project has followed the state reviewing requirements, and is neither a commitment of funds from this agency or any other state or federal agency. Please remember if any federal reviews are required the applicant must follow through with those federal agencies.

The results of this review are valid for one year from the date of this letter. If the project is not submitted to the funding agency or not approved within one year after the completion of this review, the applicant can request an extension by email to Lee.Nalley@ky.gov. If the project changes in any way after the review, the applicant must reapply through the eclearinghouse for a new review. There are no exceptions.

If you have any questions regarding this letter or the review process please contact the e-Clearinghouse office at 502-573-2382, ext. 274.

Sincerely,

A handwritten signature in blue ink that reads "Lee Nalley".

Lee Nalley, SPOC
Kentucky State Clearinghouse

Attachment

Barren River Area Development District

Dajana Crockett

No duplications or conflicts. Complies with CEDS Water/Wastewater Goal 1: Provide adequate infrastructure to accommodate and facilitate development within the BRADD. Conforms with water plan WX21141059.

Department for Environmental Protection

Louanna Aldridge

Joel Murphy - Endorse with Comments The proposed project is subject to Division of Water (DOW) jurisdiction because the following are or appear to be involved: water lines and appurtenances. Prior approval must be obtained from the DOW before construction can begin. The applicant must cite the State Application Identifier (SAI #KY201903180237) when submitting plans and specifications.

The proposed 16,000 linear feet waterline provides water service and fire protection along the soon to be completed Southern Bypass in Russellville (South Logan Water portion only). The new corridor will link South Logan's distribution lines presently on US Highway 431 South and US Highway 79 South. Although no new customers are proposed at this time, development inquiries have already been received by the Association for both residential and commercial candidates. Additionally, the project also includes funding for the construction of a new water office (estimated 3,000 square feet) for South Logan Water Association in Adairville. Site selection is currently under negotiation.

There are no objections to the proposed project. Plans and specifications along with hydraulic analysis of the proposed project must be submitted to the DOW's Water Infrastructure Branch by a registered professional engineer in Kentucky. The applicant must receive a written approval from the DOW prior to the beginning of the construction. Questions should be directed to Abbas Pourghasemi, Engineering Section, (502) 782-7041, Abbas.Pourghasemi@ky.gov.

During the last Sanitary Survey (March 2019) no deficiencies were found. As of the writing of this the capacity had not been accessed. During the 2016 survey managerial capacity was lacking but has been addressed. The system purchases from Logan-Todd Regional and has no contract limits. Water loss is estimated at 14.5%. There does not appear to be any capacity related issues. Questions should be directed to Jason Lambert, Municipal Planning Section, (502) 782-7001, Jason.Lambert2@ky.gov.

Best management practices should be utilized to reduce runoff from project construction activities into nearby waters. Questions should be directed to Andrea Fredenburg, Water Quality Branch, (502) 782-6950, Andrea.Fredenburg@ky.gov.

This proposed project is not within a designated Source Water Protection Area. Questions should be directed to Chloe Brantley, Water Supply Section, (502) 782-6898, Chloe.Brantley@ky.gov.

Endorse. Questions should be directed to Daniel Fraley, Field Operations Branch, (606) 783-8655, Daniel.Fraley@ky.gov.

The proposed work is endorsed by the Groundwater Section of the Watershed Management Branch. However, the proposed work is located in an area with a high potential for karst development where groundwater is susceptible to direct contamination from surface activities. It is our recommendation that the proposed work be made aware of the requirements of 401 KAR 5:037 and the need to develop a Groundwater Protection Plan (GPP) for the protection of groundwater resources within that area. Questions should be directed to Kurtis Spears, Groundwater Section, (502) 782-7119, Kurtis.Spears@ky.gov or David Jackson, Groundwater Section, (502) 782-6986, DavidA.Jackson@ky.gov.

This proposed project does not require a Kentucky DOW Application for Permit to Construct Across or Along a Stream. Questions should be directed to Ron Dutta, Floodplain Management Section, (502) 782-6941, Ramendra.Dutta@ky.gov.

The Division of Enforcement does not object to the project proposed by the applicant. Questions should be directed to Tim Harrod, Division of Enforcement, (502) 782-6858, Timothy.Harrod@ky.gov.

If the construction area disturbed is equal to or greater than 1 acre, the applicant will need to apply for a Kentucky Pollutant Discharge Elimination System (KPDES) storm water discharge permit.

Utility line projects that cross a stream will require a Section 404 permit from the US Army Corps of Engineers and a 401 Water Quality Certification from DOW.

The Kentucky Division of Water supports the goals of EPA's Sustainable Infrastructure Initiative. This Initiative seeks to promote sustainable practices that will help to reduce the potential gap between funding needs and spending at the local and national level. The Sustainable Infrastructure Initiative will guide our efforts in changing how Kentucky views, values, manages, and invests in its water infrastructure. This website, www.epa.gov/waterinfrastructure/, contains information that will help you ensure your facility and operations are consistent with and can benefit from the aims of the Sustainable Infrastructure Initiative.

Division of Enforcement

Tim Harrod

The Division of Enforcement does not object to the project proposed by the applicant.

Tim Harrod, Enforcement Specialist
Division of Enforcement
Timothy.Harrod@ky.gov

Division of Water

Andrea Fredenburg

Best management practices should be utilized to reduce runoff from project construction activities into nearby waters.

Division of Water

Abba Pourghasemi

No objections to the proposed project. Plans and specifications along with hydraulic analysis of the proposed project must be submitted to the Division of Water's Water Infrastructure Branch by a registered professional engineer in Kentucky. Must receive a written approval from the Division of Water prior to the beginning of the construction.

DOW

Daniel Fraley
Endorse

Fish and Wildlife

Dan Stoelb

To minimize impacts to the aquatic environment the Kentucky Dept. of Fish & Wildlife Resources recommends that erosion control measures be developed and implemented prior to construction to reduce siltation into waterways located within the project area. Such erosion control measures may include, but are not limited to silt fences, staked straw bales, brush barriers, sediment basins, and diversion ditches. Erosion control measures will need to be installed prior to construction and should be inspected and repaired regularly as needed. Please contact Dan Stoelb @ 502-892-4453 or Daniel.Stoelb@ky.gov if you have further questions or require additional information.

Housing Building and Construction

Carlos Spicer

For the proposed new water office: A complete set of construction drawings shall be submitted to the Department of Housing Buildings and Construction, Division of Building Code Enforcement for review and approval, prior to the start of any construction. For more information, you can call 502 573-0373 to speak to one of our technical advisors, or you can visit our website at <http://dhbc.ky.gov>, select 'forms', then 'building codes', to view our plan Application Submittal Guide.

Kentucky Division of Water

Chloe Brantley

This proposed project is not within a designated Source Water Protection Area. Questions should be directed to Chloe Brantley at 502-782-6898 or Chloe.Brantley@ky.gov

This proposed project does not require a Kentucky Division of Water Application for Permit to Construct Across or Along a Stream. Questions should be directed to Ron Dutta at 502-782-6941 or Ramendra.Dutta@ky.gov

Kentucky Infrastructure Authority

Dustin Horn

Don Schierer

This project was reviewed in the WRIS Portal by KIA staff.

Kentucky Transportation Cabinet

Joseph Plunk

KYTC requires that utility companies make every effort to locate on private easement before requesting to locate on highway right of way. Keep in mind that the right of way acquired for the southern bypass was to accommodate an ultimate four-lane divided highway. Work performed on KY Transportation Cabinet right-of-way will require an approved Encroachment Permit through this office before beginning work.

KY Heritage Council

Yvonne Sherrick

To receive a review from the KY Heritage Council/State Historical Preservation Office (SHPO) you must follow the instructions located on their website at <http://www.heritage.ky.gov/siteprotect/> . There you will find the required documents for the Section 106 Review and Compliance for 36 CFR Part 800. This Section 106 submission process to SHPO will assist applicants and agencies in providing the appropriate level of information to receive comments from SHPO. If you have any questions please contact Yvonne Sherrick, Administrative Specialist III, (502) 564-7005, Ext. 113, yvonne.sherrick@ky.gov.

Please note: If your project is funded through Transportation Alternative (TAP), Transportation Enhancements (TE), Congestion, Mitigation, Air Quality (CMAQ), or Safe Routes to School (SRTS) you will need to send this information to Michael Jones, Historic Preservation Program Administrator with the Kentucky Transportation Cabinet via email MichaelR.Jones2@ky.gov or hard copy to Michael Jones, Office of Local Programs, KY Transportation Cabinet, 200 Mero Street Frankfort, KY 40622. Do not send materials directly to SHPO if your project involves funding from these four sources as it will cause delays in the review process. Michael Jones will consult directly with the SHPO on projects with these funding sources to complete the Section 106 review.

KY. Division of Water

Kurtis Spears

The proposed work is endorsed by the Groundwater Section of the Watershed Management Branch. However, the proposed work is located in an area with a high potential for karst development where groundwater is susceptible to direct contamination from surface activities. It is our recommendation that the proposed work be made aware of the requirements of 401 KAR 5:037 and the need to develop a Groundwater Protection Plan (GPP) for the protection of groundwater resources within that area. Questions should be directed to Kurtis Spears (502-782-7119) or Section Supervisor David Jackson (502-782-6986).

Water

Jason Lambert

During the last Sanitary Survey (3/2019) no deficiencies were found. As of the writing of this the capacity had not been accessed. During the 2016 survey managerial capacity was lacking but has been addressed.

The system purchases from Logan-Todd Regional and has no contract limits. Water loss is estimated at 14.5%.

There does not appear to be any capacity related issues.