

Submitted By: Public Utilities Department
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Project Classification: Economic Prosperity
Project Focus: Basic Facilities & Infrastructure
Project Type: Public Utilities - Water System Improvement

Previously Submitted and Rejected: No
Continuation Project: No

Project Total Cost: \$ 10,537,000

Total Operating Cost: \$ -

Project Description: Project includes installation of large diameter interconnections between water main transmission lines that will improve reliability of water transmission and fire protection. The West Athens Transmission Line (WATL) supplies water from the drinking water treatment plant to the storage tank on Atlanta Hwy. This seven mile pipeline currently has no other large diameter interconnections to the water supply at the drinking water treatment plant. Providing interconnections to the transmission grid improves reliability by giving more than one route for the water supply to reach the customers. Fire protection is improved for the same reason. Interconnections are anticipated behind the Transit Facility on Pound Street, along Prince Avenue, and along Oglethorpe Avenue. Additional interconnections will be considered for upgrades to the water pipe size in Atlanta Highway and a new large diameter pipe line from 5 points down Milledge to Macon Hwy and then to Timothy Road.

Project Mission Statement/Goals & Objectives: The purpose of this project is to improve the dependability of the water transmission system for ensuring adequate water pressure, producing a constant water supply for fire protection, and giving the customers the reliability of uninterrupted supply. Improving the dependability of the water transmission system aligns with the ACCGOV Strategic Commitment to a Safe and Prepared Community and its focus on preventative, versus reactive, approaches to the public's safety.

A critical component of the water transmission and distribution system's hydraulic integrity is the reliability of supply, which refers to the ability of the system to maintain the desirable flow rate and system pressure even when components are out of service (e.g., facility outage, pipe break) and is normally accomplished by providing redundancy in the system. Examples include looping of the pipe network (interconnections) and the development of backup sources to ensure multiple delivery points to all areas.

Projected Useful Life of Project: The projected useful life of the project is 80 years. Some of the

pipe size upgrades in Atlanta Hwy will replace cast iron pipe that was installed more than 75 years ago.

To meet the Project Goals & Objectives, when should this project be completed? The project should be phased into multiple design and construction projects starting with the shortest interconnection. Future phases will be prioritized based on the length of the pipe system, the disruption caused by construction, and the cost and available resources. Phase 1 should be completed in 2019. Future phases will be conceptually designed and become part of the Service Delivery Plan for Public Utilities. Additional phases should be constructed within three to eight years. PUD's on-call water line construction firms could be used for these projects.

The Leadership in Energy and Environmental Design (LEED) Green Building System compliance: N/A

How will this project help meet the Public Safety, Basic Facilities/Infrastructure, and/or Quality of Life needs in Athens-Clarke County? Reliability of water transmission and distribution systems is necessary to minimize outages and low pressure events that can lead to substantial negative water quality, fire safety, and/or health consequences. Reliability is provided by building redundancy into the system in the form of looping interconnections and backup sources. Sufficient interconnections between the large diameter transmission mains are necessary to carry water to any location from more than one direction when a high flow rate is required (e.g., a fire flow demand) or when a pipe source is out of service. Maintaining adequate pressure reduces the need and scope for mandatory boil water notices required when a pipe breaks or there is a system failure.

How is this Project recommended/included in any approved ACCGOV Land Use Plan, Master Plan, Study, Service Delivery Plan, Envision Athens, etc.? Not Applicable

Triple Bottom Line Impacts

Positive Benefits for the Prosperity of Athens-Clarke County: The improved reliability of interconnections reduces the dependency on a single source large diameter water main for the area of west Athens-Clarke County. Should the WATL break, the system will be able to maintain adequate water pressure for fire protection and public health. A failure of the WATL could directly impact water service to over 9000 parcels in west Athens-Clarke County and reduce adequate safe water pressure to more than three quarters of the County. With this project, the area of mandatory boil water notices will be reduced as an interconnected water system will have more pathways to supply the water demand.

Detrimental Impacts to the Prosperity of Athens-Clarke County: There is an opportunity cost associated with making the decision to spend limited resources on the phases of this project. By going after the low hanging fruit first and making the shortest interconnection there will be improvement. Future more expensive phases will be added to the next Service Delivery Plan. These projects will compete with other worthy projects within PUD for prioritization for funding.

Positive Benefits for our Citizens and Visitors: The benefit is sustaining adequate water pressure to avoid or reduce the scope of mandatory boil water notices in the event of a pipe break. Added isolation valves will shorten the time needed to make a repair to a pipe break. Also adequate fire protection will be improved.

Detrimental Impacts for our Citizens and Visitors: Construction of a major large diameter water pipe for the future phases will disrupt traffic as these projects will be in major traffic pathways. Future phases will be considered in Prince Avenue, Oglethorpe Avenue, and Atlanta Highway. All of the connections are either within or cross a GDOT right of way. Two of the projects will cross the Middle Oconee River on existing bridges.

Environmental Benefits, including but not limited to Positive impacts on existing Infrastructure/Systems: A part of the interconnection project will be installation of isolation valves in the existing WATL. These isolation valves will allow the Water and Sewer Department more access during an emergency break to isolate the break and make repairs. This limits the time needed to shut off the water flowing out of the break and reduces the impact this free flowing water will have on erosion and sediment transport to the environment.

Detrimental Impacts for the Environment, including but not limited to Negative impacts on existing Infrastructure/Systems: Construction may cross the Middle Oconee River at Atlanta Highway and Macon Highway. The remainder of construction should be within ACCGOV or GDOT right of way. Best management practice for containing soil erosion will be required for all construction on this project.

Positive/Negative Impacts on ACCGOV Departments, Agencies, or other Organizations, if not covered in one of the above questions: Response time to water main breaks will be reduced. The scope and magnitude of mandatory boil water notices will be reduced. Water delivery for fire protection will be improved during a transmission line break.

Project Costs

Detailed project capital budget costs (to be funded from SPLOST 2020 only):

Project Costs (round to thousand)	Amount
1. Land Acquisition / ROW / Easement:	\$ 100,000
2. Design Fees: (Min.12% of New Const.; 14% of reno,; 16% for LEED proj.)	\$ 840,000
3. Miscellaneous Fees: (Min. Minimum of 3% of Construction Costs – used for permitting, etc. Utilize minimum of 10% if land acquisition if necessary.	\$ 30,000
4. Fixtures, Furniture, and Equipment (for a facility): A detailed estimate is preferred – but dependent upon the specific project, utilize at a minimum \$15 to \$20 per square foot.	\$ -
5. Construction:	\$ 7,000,000
6. Construction Contingency: (10% of the Construction line item)	\$ 700,000
7. Acquisition of Capital Equipment:	\$ -
8. Testing:	\$ 210,000
9. Project Management: (4% of the total budget line items above)	\$ 356,000
10. Project Contingency: (10% of the total budget line items above)	\$ 924,000
11. Public Art: Calculated at 1% of the Construction line item.	\$ 70,000
12. Other 1:	\$ -
13. Other 2:	\$ -
Project Subtotal:	\$ 10,230,000
14. Program Management (3% of Project Subtotal):	\$ 307,000
SPLOST 2020 Project Total:	\$ 10,537,000

Operating Cost

Total Annual Net Operating Costs when Project is complete:

No change in operating cost.

Project Financing

Is the proposed Project to receive funding from source(s) other than SPLOST 2020? Yes

If yes, please fill in information below.

Total Capital Financing for Project:

If the proposed Project is to receive funding other than SPLOST 2020, provide a listing of amounts from each of the categories listed below. Please round all dollar amounts to the nearest \$1,000.

Project Sources (round to thousand)	Amount
1. SPLOST 2020 ¹ :	\$ 10,537,000
OTHER SOURCES	
2. ACCGOV General Fund:	\$ -
3. ACCGOV Enterprise Fund:	\$ 1,200,000
4. State Grant:	\$ -
5. Federal Grant:	\$ -
6. Previous SPLOST:	\$ -
7. Other (describe):	\$ -
8. Other (describe):	\$ -
TOTAL SOURCES:	\$ 11,737,000

¹ If any additional sources of funding other than SPLOST 2020 are indicated above, please provide information related to the source here. Be specific and be prepared to provide all necessary written approvals. (For example: Roadway projects that have approval for Federal Aid and will utilize SPLOST 2020 funding for matching funds, you would need to provide specific written approval by GDOT)

Describe the current commitments for the other sources funding this project: The Mayor and Commission voted on October 9, 2018 to approve the transfer of \$1,200,000 from the Sewer Replacement and Rehabilitation Carry forward to a new budget for Transmission Grid Improvement. The item was approved on the consent agenda on November 6, 2018.

Project Site

Will the proposed Project require any land, whether existing sites, new site, easements, or Rights of Way? Yes

Will the Project require Rights-of-Way or Easement acquisition? Easement Acquisition will be required. Amount unknown until design is done. Majority of work can be done in existing easements and/or rights of way.