

Submitted By: Transportation & Public Works
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Project Type: Streets/Roads/Bridges related projects - Transportation & Public Works Department

General Program Goal: Economic Prosperity

Previously Submitted and Rejected: No

Continuation Project: Yes – SPLOST 2020, Project 35

Project Total Cost: \$ 13,266,000

Total Annual Operating Cost: \$ 1,000

Abbreviated - Project Description: This project provides funding to for the replacement of 34 stormwater pipe networks that have reached the end of useful life or are in danger collapse and emergency repairs for other stormwater piping.

Project Location/Address: Multiple

Is the Site currently owned by the Unified Government of Athens-Clarke County? Yes

Is the Site within State Highway Rights-of-Way? No

Does this Project require the acquisition of any land rights, whether existing sites, new site, easements, or Rights-of-Way? Unsure

Project/Program Description: The Live Stream Pipe Replacement Program funds the replacement of failing stormwater pipes that have reached end of usable life and are in danger of catastrophic collapse. The associated project costs are estimated from the Live Stream Pipe Replacement Program approved by M&C in September 2020. The project includes replacement of the 34 systems identified in the Live Stream Pipe Replacement Program with critical or worst conditions and any other emergencies that arise during the TSPLOST duration.

Project Mission Statement/Selection Criteria: The purpose of this project is to provide adequate program funding to maintain and increase economic prosperity and social well-being by providing safe, sustainable, and long lasting replacement of aging stormwater culverts that support transportation, and access to workforce and housing, while maintaining a conscious effort to utilize low impact and best management practices' designs that sustain the environment by enhancing natural area quality and promoting clean water and habitat preservation.

Identified and approved project concepts includes 22 locations rated Poor, 23 locations rated Critical, and 10 locations rated Failed with estimated cost of \$26,500,000, meanwhile the available budget was little over \$3,476,000.

The Evaluation and Scoring procedure is repeated annually on existing and newly discovered structures, and scored according with the following scale:

Score	Condition/State
S = 1	Good (G)

1 < S ≤ 3 Poor (P)
3 < S ≤ 4 Critical (C)
4 < S ≤ 5 Failed (F)

How is this Project recommended/included in any approved ACCGov Land Use Plan, Master Plan, Corridor Study, or Service Delivery Plan? On September 1, 2020, the Mayor and Commission (M&C) adopted the Live Stream Pipe Preplacement Program Priorities and approved 55 projects concepts to move into preliminary design phase, supported mainly by the SPLOST 2011 Excess funds in addition to carry forward from a) Stormwater utility and, b) SPLOST 2011 Project #27, Areawide Stormwater Improvement funds.

How is this Project included in the Madison Athens-Clarke County Oconee Regional Transportation Study (MACORTS) long-range Transportation Improvement Plan (TIP)? N/A

PROJECT JUSTIFICATION

How will the Project meet one or more of the Selection Criteria?

Promotes the Goal of improving Equitability of capital improvements throughout the Community:

Stormwater routine inspections are performed every 2-3 years by TPW staff. Systems found to be in poor or worst conditions (that may have reached the end of service life) are monitored, inspected, and tracked every 6 to 12 months to capture progression of failures and to prevent loss of life and/or property. Currently, there are 34 culvert locations with critical or worse conditions across ACC. Any of said systems may reach complete failure and will require costly emergency replacement procedures under roadway closure. Proactive approach to rehab will be possible once adequate funding is secured and will be implemented based on site conditions.

Protects the community's existing Transportation Infrastructure Investments: With adequate funding, ACC will be able to prolong the life expectancy of existing aging infrastructure through established rehabilitation methods, or by replacement with culvert and pipe materials that have 100 year life expectancy. A culvert failure often threatens the traveling public's safety\life in addition to loss of property and public infrastructure. For some culverts located on dead-end roadways, a culvert collapse will result in catastrophic disconnect to public and emergency services and puts lives at risk in addition to the negative social impact.

Reduces Pavement Maintenance deficit: Culvert Replacement Projects will include pavement replacement within project limits and is projected to reduce needed maintenance on roadways due to failing and deteriorating stormwater culverts.

Promotes Health and Safety: Adequately funding culvert and Live Stream Pipe Replacement program enhances ACC's ability to proactively plan, design, and complete rehabilitation and replacement projects while incorporating Low-impact Development and Stormwater Best Management Practices into the design and construction of each system. In addition, adequate funding will enable ACC to proactively plan and execute culvert replacement ahead of breaking point and complete failure, preserving life and property and avoiding impact and interruption of public utilities and services.

Triple Bottom Line Impacts

Positive Benefits for the Economic Prosperity of Athens-Clarke County: Strategic planning and execution of stormwater culvert maintenance and replacement reduces negative economic impact through mitigating unintended consequences such as costly replacement, longer interruption due to utility relocations & interruptions, longer roadway closures, inability to mitigate weather resulting in a larger threat to natural resources and water quality.

Detrimental Impacts to the Economic Prosperity of Athens-Clarke County: N/A

Positive Benefits for the Social Well-Being of our Residents and visitors: Having adequate funding will allow ACCGov to utilize Low-impact Development and Best Management Practices and designs that improve flood resiliency and water quality. The end product when adequately funded, designed, and built, provides enhanced water quality and ecosystems with healthy and vital community. In addition, green infrastructure designs will provide a critical element for long-term educational opportunities to residents and visitors.

Detrimental Impacts for the Social Well-Being of our Residents and visitors: N/A

Positive Impacts on the Environment: Having adequate funding will allow ACCGov to utilize Low-impact Development and Best Management Practices and green infrastructure designs that improves flood resiliency, enhances water quality, and improves aquatic organisms passage, stream habitat, and ecosystem function. In addition, using ecologically-based approach to designing road-stream crossings that mimic natural channel structure, sediment characteristics, water velocity, and depths in high gradient streams is only possible through adequate funding to the Culvert & Live Stream Pipe Replacement Program.

*Staff Recommendation: To more comprehensively reflect ecosystem services and where possible, design culverts and pipes to accommodate terrestrial wildlife passage as well as aquatic. Include native plant restoration as part of approach and property adjacent to culverts and pipes (See plant guides at <https://www.accgov.com/9173/Native-Plants>)

Detrimental Impacts on the Environment: N/A

Positive/Negative Impacts on ACCGov Departments, Agencies, or other Organizations, if not covered in one of the above questions: Abrupt failure to culverts is impactful to departmental resources and to emergency responders in ACCGov. Recent major culvert failures, fortunately, were caught early and before the roadway had washed away, impacting major utilities and putting the public at risk. We can't always depend on luck to avoid catastrophic failure, and therefore, proactive approach for inspection, replacement and rehabilitation of stormwater systems located within public roadways is a must and will only be possible through adequate funding.

Project Costs

Detailed project capital budget costs (to be funded from TSPIOST 2023 only):

Project Costs (round to thousand)	Amount
1. Land Acquisition / ROW / Easement:	\$ 498,000
2. Design Fees: (Min.12% of New Const.; 14% of reno,; 16% for LEED proj.)	\$ 1,574,000
3. Miscellaneous Fees: (Min. Minimum of 3% of Construction Costs – used for permitting, etc. Utilize minimum of 10% if land acquisition if necessary.)	\$ 239,000
4. Construction:	\$ 7,981,000
5. Construction Contingency: (10% of the Construction line item)	\$ 798,000
6. Acquisition of Capital Equipment:	\$ -
7. Testing:	\$ 239,000
8. Project Management: (4% of the total budget line items above)	\$ 444,000
9. Project Contingency: (10% of the total budget line items above)	\$ 1,153,000
10. Public Art: Calculated at 1% of the Construction line item.	\$ 80,000
11. Other 1:	\$
12. Other 2:	\$
Project Subtotal:	\$ 13,006,000
14. Program Management (2% of Project Subtotal):	\$ 260,000
TSPIOST 2023 Project Total:	\$ 13,266,000

Attachments:

[Attachment 1 - Cost Estimate Full Request](#)

[Attachment 2 - Cost Estimate Reduced Request](#)

Operating Cost

Total Annual Net Operating Costs when Project is complete:

Only identify additional or net operating costs to be paid by ACCGov as a result of this Project. Identify the additional or net costs needed, above ACCGov's current operating budget, to operate the requested project; as well as any additional Project related revenues that would be generated. Provide budget costs for each identified category below.

Operating Costs (round to thousand)	Estimated Impact for Annual Operating Expenditures
TOTAL PROJECTED REVENUES FROM PROJECT	
PROJECTED EXPENDITURES	
1. Personnel Costs: from Appendix A	
2. Annual Utilities:	
• Natural Gas:	
• Electrical:	
• Water:	
• Sewer:	
• Phone:	
• Solid Waste Collection:	
• Other:	
3. Operating Supplies:	
4. Equipment Maintenance:	
5. Facility Maintenance:	
6. Other: Public Art Maintenance	1,000
7. Other:	
8. Other:	
TOTAL EXPENDITURES	
NET OPERATING COSTS OF PROJECT:	\$ 1,000

Project Financing

Is the proposed Project to receive funding from source(s) other than TSPLOST 2023? Yes

Total Capital Financing for Project:

If the proposed Project is to receive funding other than TSPLOST 2023, 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. TSPLOST 2023 ¹ :	\$ 13,266,000
OTHER SOURCES	
2. ACCGov General Fund:	\$
3. ACCGov Enterprise Fund:	\$ 1,100,000
4. State Grant:	\$
5. Federal Grant:	\$
6. Previous SPLOST:	\$ 275,000
7. Other (describe): SPLOST 2020	\$ 500,000
8. Other (describe): SPLOST 2011 "Excess" funds	\$ 2,000,000
TOTAL SOURCES:	\$ 17,141,000

¹ If any additional sources of funding other than TSPLOST 2023 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 TSPLOST 2023 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 Live Stream Pipe Replacement Program is currently funded by SPLOST 2011 Project #27, Areawide Stormwater Improvements in the amount of \$275,000, SPLOST 2011 Excess Funds (approved 8/4/2021) in the amount of \$2,000,000, SPLOST 2020 Project #35 in the amount of \$500,000, and by the stormwater utility enterprise excess funds (carry forward) estimated at \$220,000 annually (\$1,100,000 FY23-FY27).

Preliminary engineering is underway on a number of failing culverts with diameter of 6 feet or higher, and many smaller diameter culverts are in line to be replaced by in-house resources.

Top 15 worst culverts cost for replacement is estimated at \$6.8 million, which exceeds available funding of \$3,875,000. Therefore, and while preliminary engineering is performed on a larger number than ACC can construct, it gives staff the ability to move into emergency replacement in case of a complete collapse\failure. With adequate level of funding, staff can proactively plan failed pipes and consider rehabilitation options for culverts with poor and critical conditions.

Unified Government of Athens-Clarke County

Transportation & Public Works Department

Conceptual Cost Estimate

Date: Tuesday, July 27, 2021

Project: Live Stream Pipe Replacement - Alt#1

Project Description: The Culvert & Live Stream Pipe Replacement Program funds the replacement of failing stormwater pipes that have reached end of usable life and are in danger of catastrophic collapse. The associated project costs are estimated from the Live Stream Pipe Replacement Program approved by M&C in September 2020. The project includes replacement of the 34 systems identified in the Live Stream Pipe Replacement Program with critical or worst conditions and any other emergencies that arise during the TSPLIST 2023.

LSPR 2020	Eval. Score	System Condition	Street name/address	Adjacent feature/road/stream	Project Status	Conceptual cost estimate	Design cost	Construction Cost	ROW Cost	Class
1	4.80	Fail	Voyles Rd (1270)	Trail Creek	conceptual	\$556,250	\$101,250	\$445,000	\$10,000	Collector
2	4.60	Fail	Lavender Rd	Roberts Rd.	conceptual	\$650,000	\$55,250	\$584,750	\$10,000	Collector
3	4.40	Fail	Olympic Dr	Transmission R/W	conceptual	\$700,000	\$60,000	\$565,000	\$75,000	Collector
4	4.40	Fail	Cleveland Ave	College Ave.	conceptual	\$633,250	\$121,250	\$462,000	\$50,000	N/A
5	4.40	Fail	Charlie Bolton Rd (1143)		preliminary	\$565,000	\$40,000	\$475,000	\$50,000	Collector
6	4.40	Fail	Olympic Dr	SW of Hancock Ind. Way	conceptual	\$381,250	\$76,250	\$295,000	\$10,000	Collector
7	4.40	Fail	Roberts Rd	Lavender Rd.	n/a	\$625,000	\$60,000	\$550,000	\$15,000	Local
8	4.30	Fail	W Huntington Rd (270)	270 W Huntington Rd	preliminary	\$85,000	\$12,000	\$68,000	\$5,000	Local
9	4.20	Fail	Millstone Circle (345)	345 Millstone Dr	n/a	\$150,000	\$20,000	\$125,000	\$5,000	Local
10	4.20	Fail	Woodhaven Dr.	Hillsborough Dr.	n/a	\$355,000	\$40,000	\$307,500	\$7,500	Local
11	4.00	Critical	Crystal Creek Dr (185)	Dead End	preliminary	\$275,000	\$55,000	\$195,000	\$25,000	Local
12	4.00	Critical	Charlie Bolton Rd (1450)		preliminary	\$112,500	\$22,500	\$80,000	\$10,000	Collector
13	4.00	Critical	Old Epps Bridge Rd (385)	385 Old Epps Bridge Rd	n/a	\$165,000	\$25,000	\$135,000	\$5,000	Arterial
14	3.80	Critical	Seagraves Dr (191)	Dead End	preliminary	\$400,000	\$80,000	\$310,000	\$10,000	Local
15	3.80	Critical	Lavender Rd	Abelia Way.	preliminary	\$112,500	\$22,500	\$80,000	\$10,000	Collector
16	3.60	Critical	Doe Run (160)	Dead End	conceptual	\$275,000	\$55,000	\$210,000	\$10,000	Local
17	3.60	Critical	Cleveland Ave (132)	Inert Landfill	conceptual	\$693,750	\$138,750	\$545,000	\$10,000	Collector

18	3.60	Critical	Baxter St (1088-1080)	Athens Neurology R/W	conceptual	\$756,250	\$151,250	\$595,000	\$10,000	Arterial
19	3.60	Critical	Lombardy Dr (282)	Dead End	conceptual	\$162,500	\$32,500	\$120,000	\$10,000	Local
20	3.60	Critical	Olympic Dr (1350)	Trail Creek	conceptual	\$918,750	\$183,750	\$685,000	\$50,000	Collector
21	3.60	Critical	Beaver Ridge Dr (115)	Dead End	final design	\$275,000	\$55,000	\$210,000	\$10,000	Local
22	3.60	Critical	Jones Rd (111)	111 Jones Rd	n/a	\$50,000	\$10,000	\$35,000	\$5,000	Local
23	3.60	Critical	Millstone Circle (270)	270 Millstone Drive	n/a	\$120,000	\$15,000	\$90,000	\$15,000	Local
24	3.60	Critical	Minor St. (275)	Hills Chapel St.	n/a	\$650,000	\$70,000	\$555,000	\$25,000	Local
25	3.60	Critical	Rhodes Dr (282)	282 Rhodes Drive	n/a	\$180,000	\$20,000	\$145,000	\$15,000	Local
26	3.60	Critical	Riverbottom Circle (101)		n/a	\$180,000	\$20,000	\$145,000	\$15,000	Local
27	3.60	Critical	Walton Creek Rd (205)	Thornhill	n/a	\$75,000	\$10,000	\$60,000	\$5,000	Local
28	3.40	Critical	Winterville Rd (1958)	E of Hancock Rd.	conceptual	\$112,500	\$22,500	\$80,000	\$10,000	Arterial
29	3.40	Critical	Charm site College Ave	1005 College Ave.	conceptual	\$856,250	\$171,250	\$660,000	\$25,000	Collector
30	3.40	Critical	Cedar Sholas Dr (1325)	SE of Cedar Shoals HS.	conceptual	\$758,750	\$133,750	\$575,000	\$50,000	Collector
31	3.40	Critical	Idylwood Dr (255)	Idylwood Drive 255	n/a	\$400,000	\$35,000	\$340,000	\$25,000	Local
32	3.40	Critical	Idylwood Dr (330)	Idylwood Drive 330	n/a	\$550,000	\$70,000	\$450,000	\$30,000	Local
33	3.20	Critical	Athena Dr	Trail Creek	conceptual	\$918,750	\$183,750	\$660,000	\$75,000	Collector
34	3.20	Critical	Nowhere Rd (286)		n/a	\$180,000	\$15,000	\$140,000	\$25,000	Collector

Totals	\$ 13,878,250	\$ 2,183,500	\$ 10,977,250	\$ 717,500
Construction Contingency (10%) ----->			\$ 1,097,725	
Testing (3%) ----->			\$ 329,318	
Grand Total	\$ 15,305,293	\$ 2,183,500	\$ 12,404,293	\$ 717,500
Available Funding (FY23-FY27)	\$ (3,875,000)	\$ (552,819)	\$ (3,140,524)	\$ (181,657)
Total Program Deficit	\$ 11,430,293	\$ 1,630,681	\$ 9,263,769	\$ 535,843

	Conceptual cost estimate	Design cost	Construction Cost	ROW Cost

Deficit Am mound for Construction with ROW, Design, and Cons. Contingency & Testing	\$ 11,430,293	\$ 1,630,681	\$ 9,263,769	\$ 535,843
Construction	----->		\$ 8,197,925	
Construction Contingency (10%)	----->		\$ 819,793	
Testing (3%)	----->		\$ 246,051	
Project Management 4% of total budget items	\$ 457,212			
Project Contingency 10% of all budget items	\$ 1,188,750			
Public Art 1% (Construction Line Item)	\$ 81,979			
TSPL0ST 2023 Project Total	\$ 13,158,234			

TSPL0ST 2023 Section 3 - Project Cost - Rounded to \$1,000

Land Acquisition / ROW / Easement (Item #1)	\$ 536,000
Design Fees (Item #2)	\$ 1,631,000
Construction (Item #4)	\$ 8,198,000
Construction Contingency (Item #5)	\$ 820,000
Testing (Item #7)	\$ 246,000
Project Management (Item #8)	\$ 457,000
Project Contingency (Item #9)	\$ 1,189,000
Public Art (Item #10)	\$ 82,000
TSPL0ST 2023 Project Total	\$ 13,159,000

Estimate Prepared By:

Rani Katreeb, P.E.

ACCGov\TPW\Engineering Administrator

Unified Government of Athens-Clarke County

Transportation & Public Works Department

Conceptual Cost Estimate

Date: Tuesday, July 27, 2021

Project: Live Stream Pipe Replacement - Alt#2 (address the most critical infrastructure)

Project Description: The Culvert & Live Stream Pipe Replacement Program funds the replacement of failing stormwater pipes that have reached end of usable life and are in danger of catastrophic collapse. The associated project costs are estimated from the Live Stream Pipe Replacement Program approved by M&C in September 2020. The project includes replacement of the 15 most critical systems identified in the Live Stream Pipe Replacement Program and any other emergencies that arise during the TSPLOST 2023.

LSPR 2020	Eval. Score	System Condition	Street name/address	Adjacent feature/road/stream	Project Status	Conceptual cost estimate	Design cost	Construction Cost	ROW Cost	Class
1	4.80	Fail	Voyles Rd (1270)	Trail Creek	conceptual	\$556,250	\$101,250	\$445,000	\$10,000	Collector
2	4.60	Fail	Lavender Rd	Roberts Rd.	conceptual	\$650,000	\$55,250	\$584,750	\$10,000	Collector
3	4.40	Fail	Olympic Dr	Transmission R/W	conceptual	\$700,000	\$60,000	\$565,000	\$75,000	Collector
4	4.40	Fail	Cleveland Ave	College Ave.	conceptual	\$633,250	\$121,250	\$462,000	\$50,000	N/A
5	4.40	Fail	Charlie Bolton Rd (1143)		preliminary	\$565,000	\$40,000	\$475,000	\$50,000	Collector
6	4.40	Fail	Olympic Dr	SW of Hancock Ind. Way	conceptual	\$381,250	\$76,250	\$295,000	\$10,000	Collector
7	4.40	Fail	Roberts Rd	Lavender Rd.	n/a	\$625,000	\$60,000	\$550,000	\$15,000	Local
8	4.30	Fail	W Huntington Rd (270)	270 W Huntington Rd	preliminary	\$85,000	\$12,000	\$68,000	\$5,000	Local
9	4.20	Fail	Millstone Circle (345)	345 Millstone Dr	n/a	\$150,000	\$20,000	\$125,000	\$5,000	Local
10	4.20	Fail	Woodhaven Dr.	Hillsborough Dr.	n/a	\$355,000	\$40,000	\$307,500	\$7,500	Local
11	4.00	Critical	Crystal Creek Dr (185)	Dead End	preliminary	\$275,000	\$55,000	\$195,000	\$25,000	Local
12	4.00	Critical	Charlie Bolton Rd (1450)		preliminary	\$112,500	\$22,500	\$80,000	\$10,000	Collector
13	4.00	Critical	Old Epps Bridge Rd (385)	385 Old Epps Bridge Rd	n/a	\$165,000	\$25,000	\$135,000	\$5,000	Arterial
14	3.80	Critical	Seagraves Dr (191)	Dead End	preliminary	\$400,000	\$80,000	\$310,000	\$10,000	Local
15	3.80	Critical	Lavender Rd	Abelia Way.	preliminary	\$112,500	\$22,500	\$80,000	\$10,000	Collector

Totals \$ 5,765,750 \$ 791,000 \$ 4,677,250 \$ 297,500

Construction Contingency (10%) -----> \$ 467,725

Testing (3%) -----> \$ 140,318

Grand Total \$ 6,373,793 \$ 791,000 \$ 5,285,293 \$ 297,500

Available Funding (FY23-FY27) \$ (3,875,000) \$ (480,895) \$ (3,213,237) \$ (180,868)

Total Program Deficit \$ 2,498,793 \$ 310,105 \$ 2,072,055 \$ 116,632

	Conceptual cost estimate	Design cost	Construction Cost	ROW Cost	
Deficit Am mound for Construction with ROW, Design, and Cons. Contingency & Testing	\$ 2,498,793	\$ 310,105	\$ 2,072,055	\$ 116,632	
Construction	----->		\$ 1,832,975		
Construction Contingency (10%)	----->		\$ 183,298		
Testing (3%)	----->		\$ 55,783		
Project Management 4% of total budget items	\$ 99,952				
Project Contingency 10% of all budget items	\$ 259,874				
Public Art 1% (Construction Line Item)	\$ 18,330				
TSPILOST 2023 Project Total	\$ 2,876,948				
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TSPILOST 2023 Section 3 - Project Cost - Rounded to \$1,000					
Land Acquisition / ROW / Easement (Item #1)	\$ 117,000				
Design Fees (Item #2)	\$ 310,000				
Construction (Item #4)	\$ 1,833,000				
Construction Contingency (Item #5)	\$ 183,000				
Testing (Item #7)	\$ 56,000				
Project Management (Item #8)	\$ 100,000				
Project Contingency (Item #9)	\$ 260,000				
Public Art (Item #10)	\$ 18,000				
TSPILOST 2023 Project Total	\$ 2,877,000				

Estimate Prepared By:

Rani Katreeb, P.E.

ACCGov\TPW\Engineering Administrator