TSPLOST 2026 Project Submission

Transportation & Public Works Department (T&PW)

February 24, 2025

Traffic Signal Replacement Program

Traffic Signal Replacement Program

Summary of need:

- Many older signals do not meet minimum height restrictions, impairing visibility and creating safety issues
- Many older signals are built using utility joint-use poles that are nearing end of life span
- Wiring in older signals, exposed to elements is more likely to be brittle – more likely to expose technicians to electrocution and malfunction in poor weather
- Newer signals include safety elements including LED indications, reflective back-plates, flashing yellow arrow operation and compliant pedestrian features with audible buttons
- Signal heads exposed to the elements malfunction: access doors break and the plastic gets brittle. Typical lifespan of a signal head is 8-years. (Operating budget provides equivalent funding for one signal head per signal per year)
- Project request is to rebuild 7 traffic signals per year

Project Request:

- Project Costs (Annual): $1.52 million
- Project Costs (Total – 5 year): $7.6 million
- Program/Project Management: $265,000
- Public Art: $51,000
- Total Request: $7.78 million

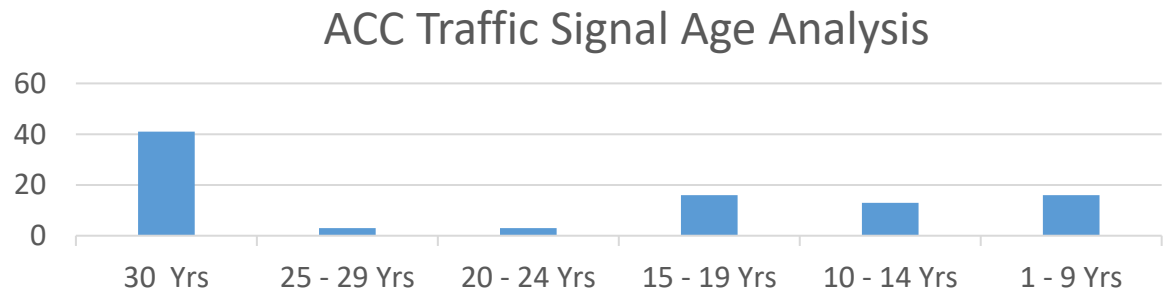
Traffic Signal Replacement Program

Project Description:

- Rebuild aging traffic signals including poles, controller equipment, signal heads, signal wire, and supporting infrastructure
- Install warranted, MUTCD approved traffic signals as determined by an engineering traffic study

Project Justification:

- Athens-Clarke County maintains 177 signals: 91 owned by ACCGov, 6 by UGA, and 80 by GDOT.
- The average age of ACC-owned traffic signals is 24 years, 32 traffic signals are more than 30-years old. National Standard lifespan of the infrastructure for a traffic signal is 13 years
- With more age, traffic signals continue to malfunction more often, create safety hazards for technicians, and are more expensive to maintain



Traffic Signal Replacement Program: Rebuild 7 Traffic Signals

- TSPLOST 2023 request of $13 million was to rebuild 10 traffic signals. Funding allocated resulted with only a rebuild of 4 traffic signals.
- MLK Pkwy @ Ruth St/College Ave
- Baldwin St @ Jackson St
- Hawthorne Ave @ Old West Broad
- Hawthorne Ave @ Old Epps Bridge

The project will continue with traffic signals which have the lowest ranking matrix score

Also listed are currently Warranted Traffic Signal locations without funding available

- Tallassee Road at SR10 Outer Loop Ramp
- Commerce Road / US 441 at SR 10 Outer Loop Ramp
- Hwy 29 at Harve Mathis Rd

Traffic Signal Replacement Program

Budget Impacts:

- More effective use of General Fund Operating Budgets
- General Fund Capital, Signal Replacement (c0094) savings:
  - FY19: $100,000
  - FY20: $200,000
  - FY21: $200,000
  - FY22: $75,000

Community Impact:

- Improved reliability and operations of traffic signals with reduced delay for all roadway users
- Enhanced safety through reflective backplates, flashing yellow arrow, pedestrian signals, crosswalks, and correct heights for sight alignment
- Minimize the impacts of malfunctioning traffic signals for pedestrians, bicycles, transit and all vehicles

Traffic Signal Replacement Program

Impacts of Not Funding:

- Functional obsolescence of traffic signals as technology continues to change (40% of traffic signal equipment exceeds 30-years)
- Structural failure of traffic signal poles
- Increased frequency of signal malfunctions
- Increased spending on overtime to manage after-hours failures
- Inability to signalize intersections that justify traffic signal installation
- Safety and Liability issues with infrastructure and operations with inability to raise the height of the signal heads to meet requirements
- By 2026 there will be another 20 intersections within the 20-25 year age range, an additional $7 million in equipment just for these locations
- Material and installation costs have increased just over $1 million since the project was last submitted for the 2023 TSPLOST

Equity Considerations

- Rebuilding the outdated traffic signals will reduce the capital funding that currently will never reach the goal of sustainability due to the number of intersections past the recommended life span of 13 years. Updating the signals will allow the equitable funding through capital to maintain the rebuilds needed and reduce maintenance to improve the overall community through roadway efficiency.
- The rebuild priority list is based on the quantity of non-standard equipment within the intersection along with the maintenance history. A rating matrix system for TSPLOST 2023 was approved by ACC Mayor and Commission to evaluate each intersection. The priority ranks each intersection with safety issues along with age and infrastructure condition.

M&C Strategic Commitments for Sustainable Transportation

- This project strongly supports 8 sections of the project selection goal criteria
- Updated traffic signals offer the ability to use **smart connected technology** and interact with alternative transportation by adapting to the demand of roadway users
- Reduction in travel time results in less time spent on the roadway. Traffic signals with updated equipment, including connected technology and detection systems, increase efficiency for all roadway users
- Pedestrian detection with updated intersections will reduce the wait times for walking access even during high vehicle volumes by adaptive timing and operational detection equipment. Updated traffic signals also standardize additional pedestrian safety features including ped signals, electronic button activation systems and advanced ADA accessibility. Updated technology reduces delay and improves service for pedestrians and bicycles. For example, recent advances in pedestrian button stations now allow for a “no touch” feature including audible signal for ADA benefits. Bicycles are included in the advanced detection to an adaptive/increase on the clearance (yellow/red) times so that cyclists are clear of the intersection

Questions