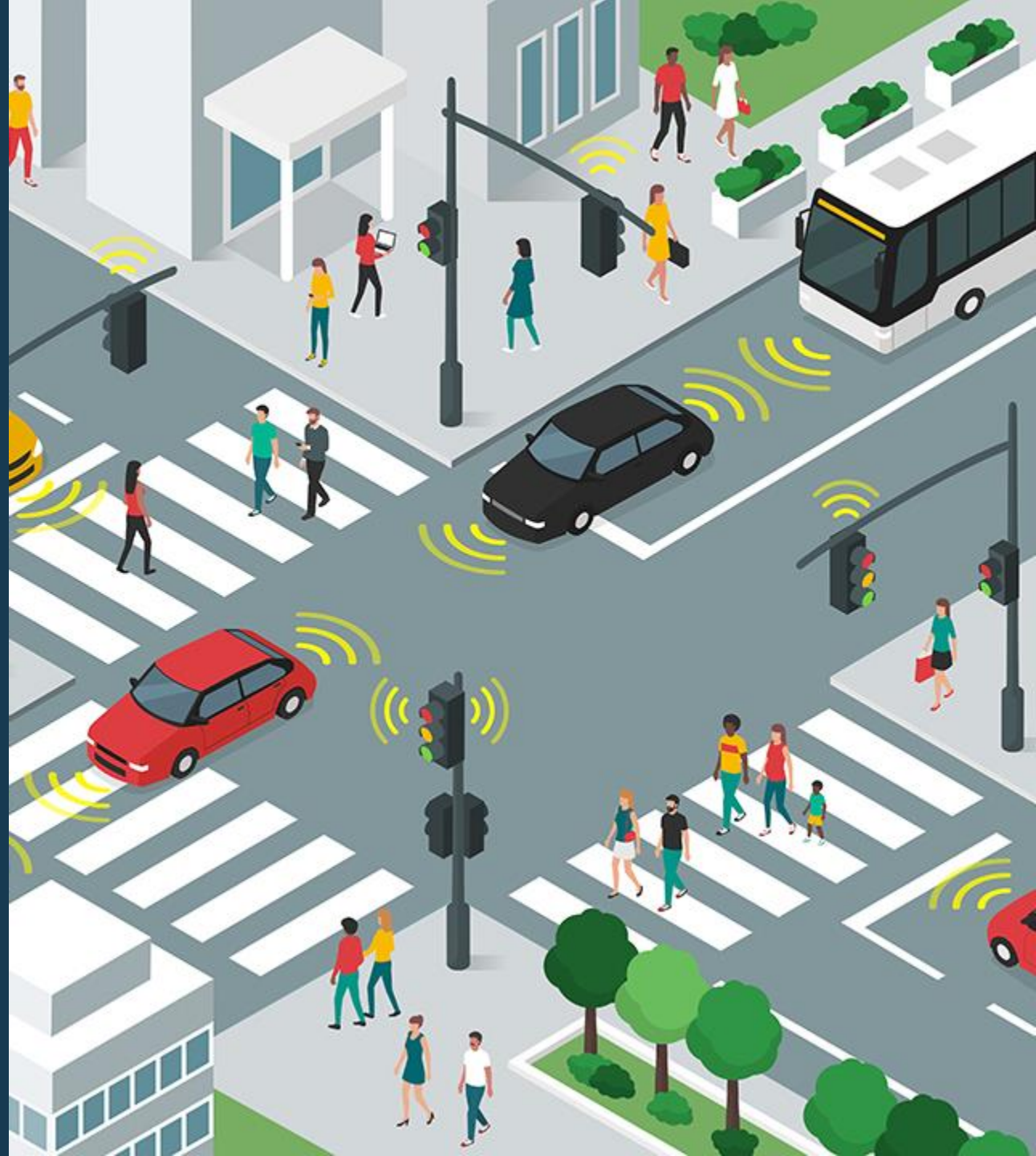
TSPLOST 2026
PROJECT SUBMISSION

TRANSPORTATION AND PUBLIC WORKS DEPARTMENT

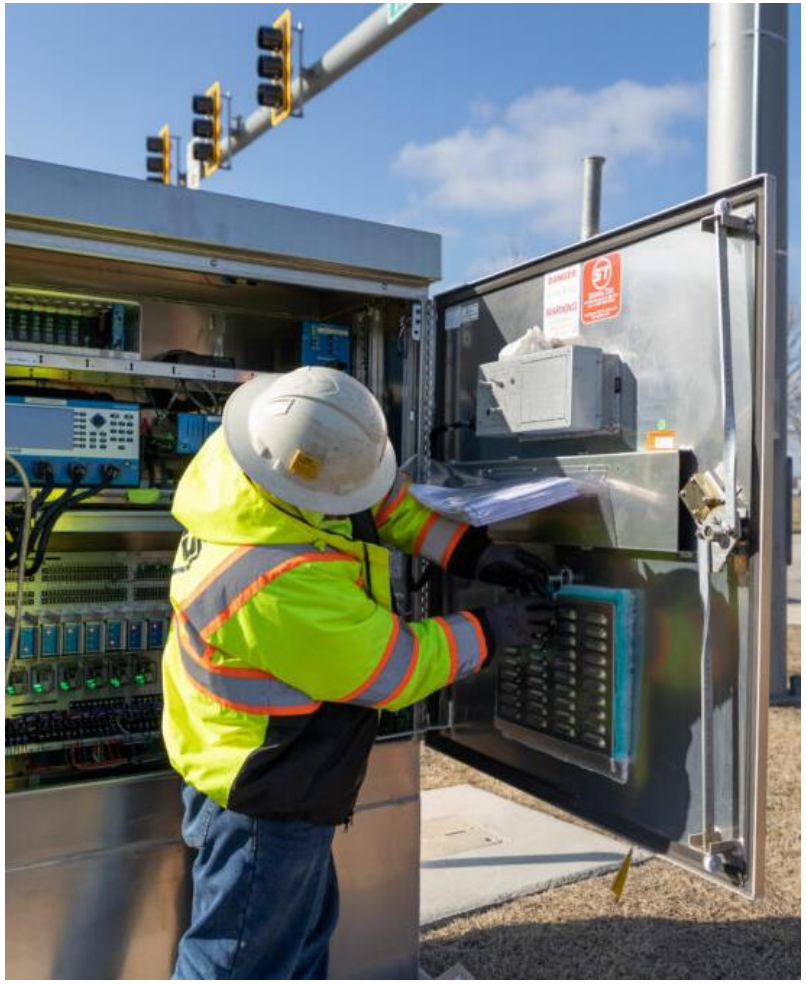
SMART CITY TRANSPORTATION TECHNOLOGY PROJECT



SMART CITY TRANSPORTATION TECHNOLOGY PROJECT

Project Description:

- The Smart City Technology project aims to revolutionize Athens-Clarke County's transportation network by implementing cutting-edge technologies to enhance safety, efficiency, and sustainability.
- This comprehensive initiative will prepare our infrastructure for the future of transportation, while addressing current traffic management challenges.



Project Justification:

- ACC’s current traffic management system relies on outdated, static signal timing plans that do not dynamically respond to real-time traffic conditions.
- These enhancements align with community goals of sustainability, accessibility, and equitable transportation options, contributing to a modern and efficient transportation network.

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Summary of need:

- ACC's traffic signals operate on time-of-day plans based on expected traffic patterns. These plans require periodic updates and cannot adapt to unexpected or fluctuating conditions.
- Without connectivity, a technician must visit each site to diagnose and remediate signal issues or monitor traffic conditions for temporary revisions that change with intersection volume.
- By not leveraging smart technology, capacity improvements and safety features will continuously diminish as roadway users increase
- Athens-Clarke County is projected to add 30,000 residents by 2045. It is important to prepare and invest in our transportation network for our growing community.

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Key Project Elements:

1. **Fiber Optic Network Expansion** (45 miles of fiber to support traffic management systems and is the major foundation of the other project elements)
2. **Adaptive Traffic Signals** (AI-powered signals adjusting in real-time to traffic conditions such as increased or reduced traffic volumes during special events such as Classic Center Arena events, UGA football games, ACC school breaks, etc.)
3. **Connected Vehicle Infrastructure** (Technology allowing vehicles to communicate with traffic signals for safer and more efficient travel)
4. **Advanced Pedestrian & Bike Detection** (Deploy state-of-the-art sensors for improved detection of vehicles, pedestrians, and bicycles at intersections and mid-block crossings, enhancing safety for all road users.)
5. **Emergency & Transit Priority Systems** (Allowing emergency vehicles and buses to move more efficiently through intersections and along corridors)

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Key Project Elements Continued:

6. **Real-Time Traffic Information** (Digital signs and mobile integration to inform drivers of traffic conditions)
7. **Environmental Monitoring** (Sensors to track air quality and traffic-related pollution)
8. **Smart Pedestrian Crossings** (Smart pedestrian crossing systems with automated detection and responsive signaling to enhance pedestrian safety in key areas.)
9. **Data Analytics and Management** (Establish a central traffic management system to process and analyze data from various sources, enabling data-driven decision-making and predictive maintenance.)
10. **Cybersecurity Measures** (Implement cybersecurity protocols to protect the smart city infrastructure from potential threats and ensure data privacy.)

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Budget:

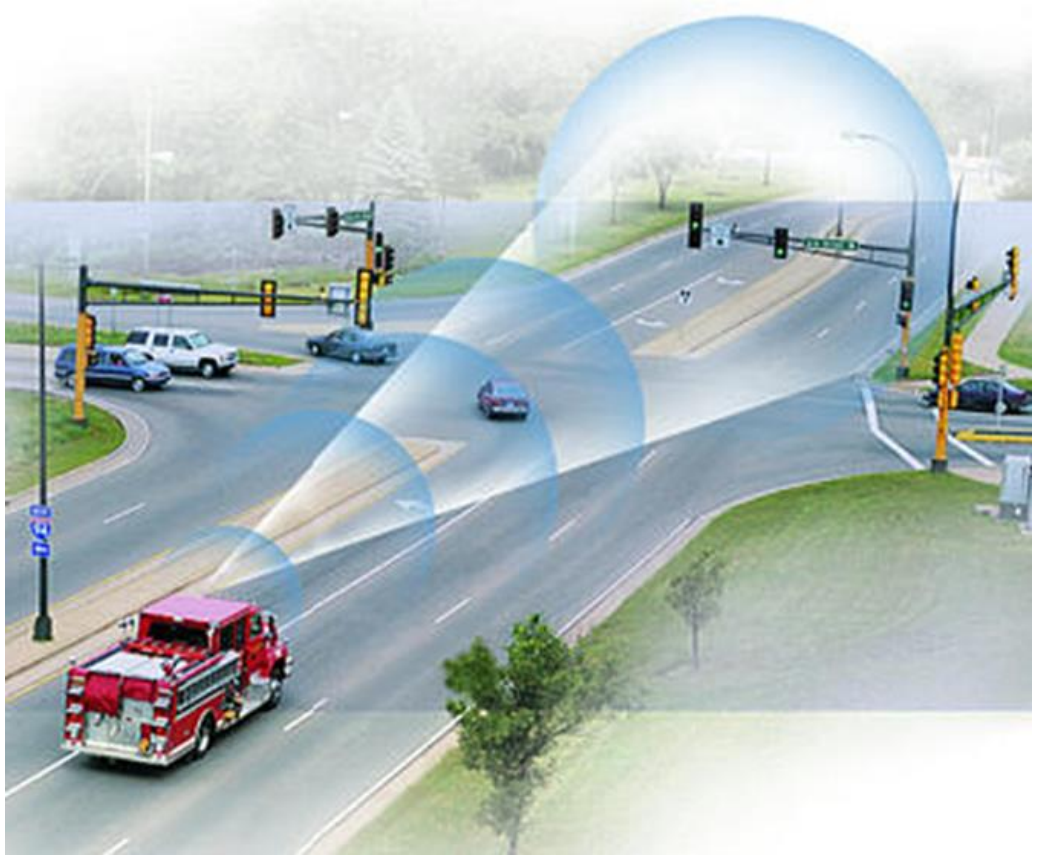
- **Fiber optic cable installation** (45 miles): $3,560,000
- **Traffic signal upgrades** (100 intersections): $1,500,000
- **Advanced detection systems:** $500,000
- **V2I communication devices:** $300,000
- **Variable message signs:** $200,000
- **Central management system hardware:** $120,000

Project Costs (round to thousand)	Amount
1. Land Acquisition / ROW / Easement:	$0
2. Design Fees: (Minimum of 12% of Construction costs for new construction)	$742,000
3. Miscellaneous Fees: (Minimum of 3% of Construction costs – used for permitting, etc. Utilize minimum of 10% if land acquisition is necessary)	$185,000
4. Construction: (Provide a detailed cost estimate of this component)	$6,180,000
5. Construction Contingency: (Calculate at 10% of the Construction line item. If additional Construction Contingency is needed, use one of the "Other" below)	$618,000
6. Acquisition of Capital Equipment:	$1,200,000
7. Testing: (Minimum of 3% of construction costs for project whose construction component if over $1 million and 5% for those whose construction component between $1 million and $500,000 and 10% of construction costs for projects less than $500,000.	$185,000
8. Project Management: (Calculate at 4% of total budget line items above)	$365,000
9. Project Contingency: (Calculate at 10% of the total budget line items above. If additional Project Contingency is needed, use one of the "Other" below)	$947,000
10. Public Art: (Calculate at 1% of the Construction line item)	$62,000
11. Other (describe): Cybersecurity Implementation	$300,000
12. Other (describe): Software Licensing and Integration	$200,000
Project Subtotal:	$10,984,000
14. Program Management (Calculate at 2% of Project Subtotal):	$220,000
TSPLOST 2026 Project Total:	$11,204,000

SMART CITY TRANSPORTATION TECHNOLOGY PROJECT

Community Impact:

- Reduction in traffic congestion and emissions
- Opportunities for state and federal funding for smart transportation initiatives
- Enhances accessibility and reliability for transit users, cyclists, and pedestrians.
- Improves access to the workplace
- Improves safety for all residents through incident reduction and emergency response times
- Avoid higher future costs due to delayed modernization of infrastructure and delayed resolution to incidents and signal malfunctions.



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Impacts of Not Funding:

- Increased traffic congestion leading to longer commutes and higher emissions
- Continued safety risks at intersections for pedestrians, cyclists, and drivers
- Missed opportunities for state and federal funding for smart transportation initiatives
- Higher future costs due to delayed modernization of infrastructure and delayed resolution to incidents and signal malfunctions
- Growing challenges in adapting to the increasing presence of autonomous and connected vehicles on our roads
- Higher costs and dedicated staff time for contracted and in-house traffic studies

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Equity Considerations:

- Ensures all communities benefit from improved transportation technology, not just high-traffic areas.
- Enhances accessibility and reliability for transit users, cyclists, and pedestrians.
- Reduces transportation disparities by optimizing safety and efficiency across all neighborhoods.
- Provides reliable transportation improvements in historically underserved areas.
- Improves access to the workplace
- Improves safety for all residents through incident reduction and emergency response times

SMART CITY TRANSPORTATION TECHNOLOGY PROJECT

M&C Strategic Commitments:

- ❑ **Goal Area 1; Section D:** Drive community transformation with a focus on creating spaces that are respectful and welcoming
- ❑ **Goal Area 1; Section E:** Support & Promote healthy lifestyle: moving, eating, forming healthy relationships, physical and psychological care
- ☑ **Goal Area 5; Section A:** Improve, expand, and maintain sidewalks, shared-use paths, and bike facilities to provide greater opportunities for residents to use active transportation safely
- ❑ **Goal Area 5; Section B:** Pursue inter-city travel options to connect Athens with other cities
- ☑ **Goal Area 5; Section C:** Expand multi-modal Transit access to reduce auto dependency and provide greater mobility for Athens residents
- ☑ **Goal Area 5; Section D:** Create more usable and aesthetically pleasing corridor connections between residential and commercial areas
- ☑ **Goal Area 5; Section E:** Enhance safety for all modes of transportation
- ☑ **Goal Area 6; Section A:** Develop well-planned new infrastructure according to future land use values and framework
- ☑ **Goal Area 6; Section B:** Ensure equitable access to infrastructure to enhance safety and identity
- ☑ **Goal Area 6; Section C:** Provides adequate funding for maintenance of existing and newly constructed infrastructure
- ☑ **Goal Area 6; Section D:** Follow through on commitment to 100% Clean and Renewable Energy resolution
- ☑ **Goal Area 6; Section E:** Address ecosystem health, infrastructure sustainability, and resilience

Thank you

ATHENS-CLARKE COUNTY