Public Safety Committee
11:00am, Monday, April 6, 2026
City Hall Council Chambers
1207 Palm Boulevard, Isle of Palms, SC

Public Comment:
Citizens who wish to speak during the meeting must email their first and last name, address and topic to Nicole DeNeane, City Clerk, at nicoled@iop.net no later than 3:00 p.m. the day before the meeting. Citizens may also provide written public comment here: https://www.iop.net/public-comment-form

Agenda

1. **Call to order and acknowledgement that the press and the public have been duly notified of the meeting in accordance with the Freedom of Information Act.**

2. **Citizen's Comments –** All comments have a time limit of three (3) minutes

3. **Approval of previous meeting's minutes –** March 3, 2026 (p2)

4. **Old Business**
    a. Discussion and consideration of AI Traffic Signal Software RFP 2026.03 (p13)
    b. Discussion of Mt. Pleasant's concerns with Connector redesign (p14)
    c. Consideration of stamped asphalt crosswalks installations for Palm Blvd. at 43rd and 46 Avenues – Asphalt Concepts, $17,820 (unbudgeted) (p7)
    d. Discussion of Public Safety-related matrix recommendations (p8)

5. **New Business**
    a. Discussion with Jennifer Bihl about Connector/ Palm intersection (p11)
    b. Discussion and consideration of entering into mutual aid agreement with the College of Charleston Department of Public Safety
    c. Discussion and consideration of partnering with the Charleston County EMS to house an ambulance and staff at Fire Station 1
    d. Discussion of e-bikes on Waterway Boulevard multi-use path

6. **Miscellaneous Business –** Next meeting date: May 5, 2026 at 11am.

7. **Adjournment**

Public Safety Committee Meeting
11:00am, Tuesday, March 3, 2026
1207 Palm Boulevard, Isle of Palms, SC and
broadcasted live on YouTube: https://www.youtube.com/user/cityofisleofpalms

MINUTES

1. **Call to Order**

Present: Council members Bogosian and Cohen

Absent: Council Member Carroll

Staff Present: Administrator Kerr, Deputy Administrator Kuester, Director Hamilton, Chief Oliverius, Chief Cornett

2. **Citizen's Comments** -- none

3. **Approval of Previous Meeting Minutes – February 3, 2026**

MOTION: Council Member Cohen made a motion to approve the minutes of the February 3, 2026 meeting. Council Member Bogosian seconded the motion. The motion passed unanimously.

4. **Old Business**

A. **Discussion of Mt. Pleasant's concerns with Connector redesign**

Referencing the letter in the meeting packet, Administrator Kerr said the primary reason for Mt. Pleasant's non-support of the redesign of the IOP Connector is related to their bike lanes not aligning with the Council's preferred design option.

Council members Bogosian and Cohen believe this is an issue that can be overcome with further discussion. Council Member Bogosian asked staff to suggest dates and times for a future meeting between the Public Safety Committee and Mt. Pleasant's Transportation Committee.

B. **Discussion on AI Traffic Signal Software**

Council members Bogosian and Cohen agree the RFP is ready to be posted.

C. **Update on painting of crosswalks at 43rd and 46th avenues**

Administrator Kerr said no further work has been done on the crosswalks, and it will be on the April meeting agenda.

DRAFT

D. **Discussion of Public Safety-related matrix recommendations**

Administrator Kerr has asked Chiefs Cornett and Oliverius to select their "top 5" matrix recommendations to bring to the Committee for discussion. Council Member Bogosian would like the matrix to be updated so that completed items are marked accordingly.

5. **New Business**

A. **Review of FY27 Operational Budgets for Police and Fire Departments**

Director Hamilton said this version of the FY27 Operational Budgets for both Police and Fire include payroll increases suggested by Evergreen in addition to the COLA and merit increases slated for 1/1/2027. The 18% increase in the Police Department payroll includes two new officers. Chief Cornett said the overtime amount will be different if two officers are added, and Council Member Bogosian asked that it be reflected in the budget.

Director Hamilton said a 13% increase is expected for Dominion Energy costs.

Chief Cornett shared his justification for the staff increase and explained how the two new officers would be incorporated into the staff: "So, one of the justifications would be that we have had a significant increase in people that come to our island over the last 20 years. Yet, we have not added a law enforcement position in 20 years. With that, we are working our folks consistently to make sure that we meet the demand of the increase in population and even during our non-peak season, we see a significant increase in people that are visiting our island compared to the number of full-time residents. And then the other part is to maintain our folks and to maintain good quality employees, we ensure that they get training, and we also want them to take that time off so that we are not burning them out. What happens though is when they are taking that time off that we want them to take their vacation leave, their sick leave, or they are taking that training, we are having to fill that with other people, and we are then burning those people out for it. And so the real purpose is to minimize that burnout so that we can retain officers for a longer period of time. Nationally, we see that law enforcement officers are leaving agencies and even the job, in general, because of burnout, because of overwork. And so we are trying to minimize those numbers for that. What we will do is we will assign them to Special Services, the same place that we have K9 and traffic officers, because we currently use them to supplement officers during our busy peak time. We look at when we get the most calls for service and when we do the most incident reports, and so we will use them to cover when somebody is in training or when they are on leave."

Director Hamilton said the $17,000 change in IT expenses in the Fire Department is related to software subscriptions. She also noted increased maintenance costs for Fire Station 2.

Chief Oliverius said they intend to go through two more grant cycles in an attempt to get a grant for the rescue boat. If they are still not successful, they will ask City Council to consider funding an outright purchase of the boat.

Douglas Kerr

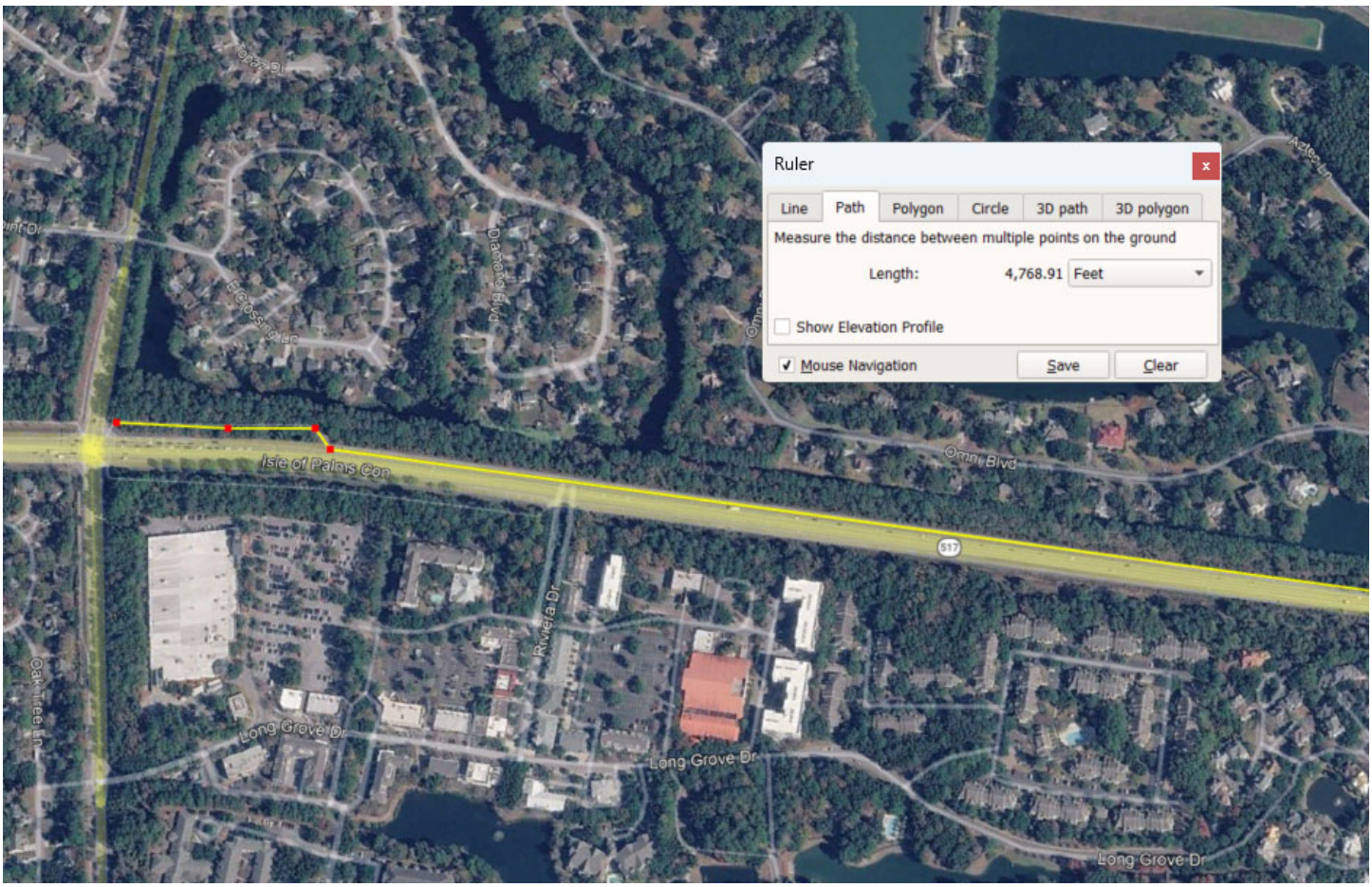
From: James Aton <JAton@tompsc.com>
Sent: Tuesday, March 3, 2026 12:14 PM
To: Douglas Kerr; Brad Morrison
Cc: Kevin Cornett; Kraig Thompson; Sean Kuester
Subject: RE: [EXTERNAL] Re: Traffic Preemption Meeting

Douglass,

I watched the Public Safety Committee discussion on the bike lanes. You may or may not have been involved in the original discussions with SCDOT to fill the 270ft gap on the IOP side. SCDOT would not entertain making that improvement at the time but it may be something that they would entertain now. There is always the County's CTC and TST annual allocation if your officials would support that. The point I was trying to make in our last discussions was that by removing the bike lanes on the north side (outbound from the island) of the connector the Town would essentially loose 4,700ft of existing shared use path (8ft) infrastructure.

IOP Side

Mt Pleasant Side



James Aton, PE, PTOE, RSP1
Deputy Director
100 Ann Edwards Lane
Mount Pleasant, SC 29464
Office (843) 856-3080 **ext.** 4002

From: Douglas Kerr <dkerr@iop.net>
Sent: Friday, February 27, 2026 2:32 PM
To: James Aton <JAton@tompsc.com>; Brad Morrison <BMorrison@tompsc.com>
Cc: Kevin Cornett <kcornett@iop.net>; Kraig Thompson <kthompson@iop.net>; Sean Kuester <skuester@iop.net>
Subject: RE: [EXTERNAL] Re: Traffic Preemption Meeting

This is perfect- thank you James.

Thanks, Douglas

Douglas Kerr
City Administrator
City of Isle of Palms
P.O. Drawer 508

Isle of Palms, SC 29451
(p) 843-886-6428
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To submit service requests or sign up for city text alerts:
Text **"Hello"** to **(877) 607-6467**
Connect with IOP!

*** WARNING *** All e-mail correspondence to and from this address may be subject to public disclosure under the South Carolina Freedom of Information Act (FOIA).

From: James Aton <JAton@tompsc.com>
Sent: Monday, February 23, 2026 7:40 AM
To: Douglas Kerr <dkerr@iop.net>; Brad Morrison <BMorrison@tompsc.com>
Cc: Kevin Cornett <kcornett@iop.net>; Kraig Thompson <kthompson@iop.net>; Sean Kuester <skuester@iop.net>
Subject: RE: [EXTERNAL] Re: Traffic Preemption Meeting

Douglass,

You are correct that the topic of the Isle of Palms Connector was discussed and our Transportation Committee elected to recommend no changes to the striping. Additionally, the Town has pursued the striping of bike lanes on the section between the bridge and Rifle Range Rd with SCDOT's approval with intentions of expanding through the to the Sweetgrass Basket Pkwy/Hungryneck Blvd intersection. There are currently shared use paths on both sides of the Isle of Palms Connecter between Rifle Range Rd and the bridge providing bi-direction access so by removing the striping on the bridge it would required modification on to provide connectivity or risk create a 'dead-end' for one of the shared use paths and a mid-block crossing would not be recommended on this type of roadway. It may help your new elected officials to understand that even though the bridge is striped for bike and pedestrian lanes there is no vertical impediment preventing vehicles from utilizing it in the event of an emergency. It can be utilized as a shoulder for vehicles to pull over into to allow emergency vehicles to pass or used by emergency vehicles to bypass. Happy to jump on a call if needed.

James Aton, PE, PTOE, RSP1
Deputy Director
100 Ann Edwards Lane
Mount Pleasant, SC 29464
Office (843) 856-3080 **ext.** 4002

From: Douglas Kerr <dkerr@iop.net>
Sent: Friday, February 20, 2026 5:01 PM
To: James Aton <JAton@tompsc.com>; Brad Morrison <BMorrison@tompsc.com>
Cc: Kevin Cornett <kcornett@iop.net>; Kraig Thompson <kthompson@iop.net>; Sean Kuester <skuester@iop.net>
Subject: RE: [EXTERNAL] Re: Traffic Preemption Meeting

James and Brad- happy Friday and I hope you are both well.

ASPHALT CONCEPTS
PO Box 2503
Mt. Pleasant, SC 29465

February 12, 2026

City Of Isle Of Palms
Attn: Robert Asero
Via Email

Re: Traffic Patterns XD Crosswalks at 43rd and 46th Avenue

Robert, per our discussions please find the pricing breakout to install (2) Traffic Patterns XD crosswalks at areas chosen by you.

The following is confirmation of pricing for installation of Traffic Patterns XD Crosswalks and 12" white thermoplastic transverse lines. We will match the color (Brick Red Color) and brick pattern of the existing crosswalks on Palm Blvd.

Traffic Patterns XD and accompanying white thermo = $20.00 per square foot
Traffic control to be handled by IOP Staff

43rd avenue = 278 square feet
46th avenue= 478 square feet
Total= 756 square feet @ $20.00 per = $15,120

In addition to the above, the following is confirmation for refurbishing of existing thermoplastic at 41st as requested.

(3) 24" wide thermoplastic Stop Bars to match existing
(2) Right turn thermoplastic turn arrows

Lump sum price for thermo work at 41st Ave= $2,700.00

Grand total = $17,820.00

Please let us know if you have any questions and we look forward to working with you.

Sincerely,

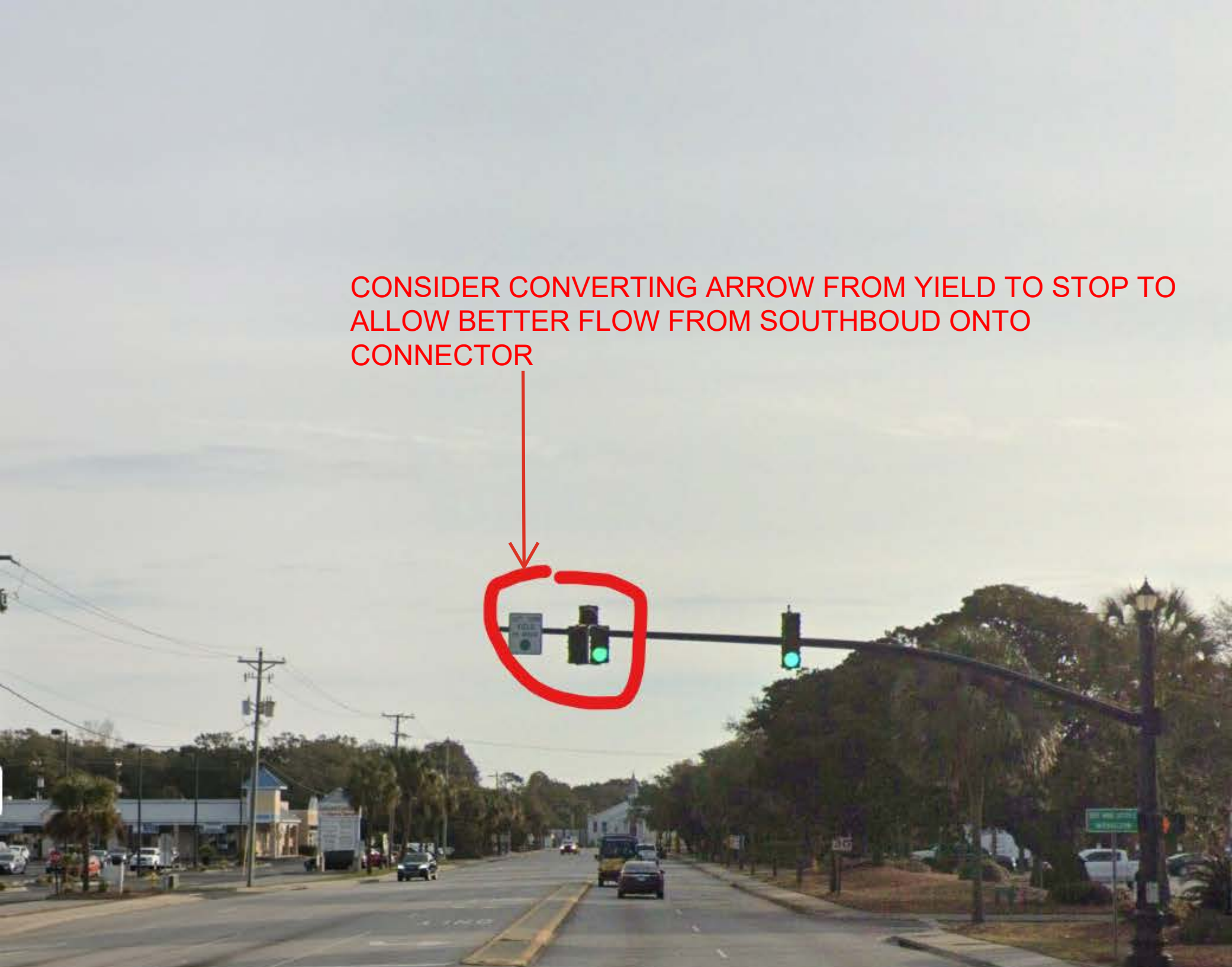
Bryan Gawrych
Asphalt Concepts
843-303-0120 (cell)

Source	Category/Focus Area	Assigned Committee	Initiative	Timeline	Type of Recom	Budg	Initiative2	Rec #	Recommendation3
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Exploratory	$	Communications	1	Explore creating an electronic means (text or web-based form) of contacting police and generating incident reports for non-emergency issues, which includes acknowledgement of receipt and notification of next steps.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Actionable		Communications	2	Identify and promote an electronic process for residents, property owners, and businesses to proactively provide background information about their property and special needs of individuals living there to assist Public Safety personnel when they respond to an emergency.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Actionable		Facilities Management	3	Monitor safety conditions and rule compliance at the public dock daily, confirming the presence of a life-saving ring, and evaluating the condition of dock surfaces and railings.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Actionable	$	Communications	4	Frequently incorporate safety-related information in messages from multiple city communication channels; place particular emphasis on increasing use of Sunnie for real-time communication. Suggested topics include but are not limited to, paramedics on the island, importance of reporting non-emergency situations, emergency preparedness, Coffee with a Cop, emergency/incident notification (e.g. Connector closed due to accident, avoid an area due to fire, etc.), and personal property safety (locking doors, etc.).
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Actionable		Golf Cart Code Enforcement	5	Work with golf cart rental companies to develop a communication piece for distribution to each renter, a placard/sticker to be posted in each cart, and/or a pledge to be signed by all renters that emphasizes state and local laws.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Exploratory		Golf Cart Code Enforcement	6	Consider passing an ordinance adding a requirement for golf cart and LSV owners/users to read and agree to a golf cart/LSV safety pledge emphasizing state and local laws.
Community Enrichment Plan	Public Safety	Public Safety Committee		Medium	Actionable		Traffic Enforcement	7	Advocating to appropriate state agencies, ex. South Carolina Department of Transportation ("SCDOT"), to reinstall speed limit signs removed from Waterway Boulevard, Palm Boulevard, and any other interior streets that experience frequent speed limit violations.
Community Enrichment Plan	Public Safety	Public Safety Committee		Medium	Actionable		Traffic Enforcement	8	Request permission from SCDOT to install permanent speed monitoring/reporting mechanism near Waterway Boulevard & 29th Avenue to collect real-time data, informing the need for more frequent traffic enforcement.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Actionable		Parking Management	9	Identify locations on the island with the most repetitive parking violations that impact safety and evaluate the need for signage.
Community Enrichment Plan	Public Safety	Public Safety Committee		Medium	Exploratory		Forecasting	10	Given the increased activity, assess the costs, risks, impacts to public beach access, and benefits of taking more aggressive measures, such as depredation on public property; seek appropriate state agency, ex. Department of Natural Resources ("DNR") and state support, if it is determined to be necessary to protect the public's safety.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Actionable		Wildlife Stewardship	11	Adapt existing Coyote Management Plan to add color-coded threat levels defining triggers for moving between levels AND actions that the city will take at each level.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Actionable	$	Wildlife Stewardship	12	Establish a notification process that would communicate: 1) color-coded threat levels and 2) den locations or reported sighting/incidents so appropriate precautionary measures may be taken. Notify property owners of their right to set traps and depredate coyotes on their private property, per DNR guidelines.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Actionable		Communications	13	Notifications should occur via multiple communication channels to include text.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Actionable		Communications	14	Consistently add temporary warning signs to beach paths where coyotes are active.
Community Enrichment Plan	Public Safety	Public Safety Committee		Medium	Exploratory	$$	Talent Management	15	Explore ways to increase police officer and beach safety officer staffing during peak summer hours.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Actionable		Talent Management	16	Recruit from areas that have high demand in winter months.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Actionable	$$	Talent Management	17	Recruit semi-retired officers.
Community Enrichment Plan	Public Safety	Public Safety Committee		Medium	Actionable	$$$	Public Safety Enhancements	18	Create a beach safety lane, where necessary, by maintaining a corridor from the dune for emergency access.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Actionable	$	Communications	19	Restore, update and improve signage for dune protection, coyotes and beach rules.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Aspirational		Communications	20	Increase public media messages regarding all safety matters.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Actionable		e-Bike Policy	21	Restrict e-bike usage with speed limitations on beach accesses.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Actionable		e-Bike Policy	22	Extend restriction of e-bikes to April 1st through September 14th
Community Enrichment Plan	Public Safety	Public Safety Committee		Medium	Aspirational		Firearms Policy	23	Collaborate with other beach communities to request state officials to ban firearms from the beach.
Community Enrichment Plan	Public Safety	Public Safety Committee		Long	Aspirational		Firearms Policy	24	Get community/resident support to change state laws to designate the beach as a no firearms zone.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Actionable		Litter Management	25	Require registration of any Hobie Cat and volleyball nets that might be left on the beach (similar to Myrtle Beach and Hilton Head).
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Maintenance		Parking Management	27	Maintain 4' off pavement chalk line on Palm Boulevard more than just weekends.

Community Enrichment Plan	Public Safety	Public Safety Committee		Long	Actionable	$$$	Forecasting	28	Request new, more accurate renderings of Palm Boulevard including existing driveways, beach paths, mailboxes and drainage ditches prioritizing safety of residents and beachgoers. Engage the Berkeley Charleston Dorchester Council of Governments (BCDCOG) to study and supply technical data to improve pedestrian safety.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Actionable		Traffic Enforcement	30	Increase enforcement of speed limit along Palm Boulevard 21st-41st in the off season.
Community Enrichment Plan	Public Safety	Public Safety Committee		Medium	Actionable	$	Public Safety Enhancements	32	Program intersection at IOP connector and Palm Boulevard that emphasizes the pedestrian right of way with use of lead pedestrian intervals (all-way stop) and raised materials that designate pedestrian space.
Community Enrichment Plan	Public Safety	Public Safety Committee		Medium	Actionable	$$	Forecasting	33	Request updated traffic study to help direct makeover of Palm Boulevard that focuses on pedestrian safety along with traffic and seasonal adjustments.
Community Enrichment Plan	Public Safety	Public Safety Committee		Medium	Actionable		Cycling Enhancements	37	Encourage bikers in the direction of the existing bike lane from 14th Avenue to Breach Inlet with improved signage and education of local bike groups to avoid the areas of Palm 21-41st Avenues where there is more parking and traffic.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Actionable	$	Cycling Enhancements	39	Install bike repair/air station at the public safety building and recreation center.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Exploratory	$$	Talent Management	40	Consider hiring independent consultants to assess performance and departmental needs periodically.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Actionable	$$	Talent Management	41	Combat attrition by performing an annual review of compensation packages and adjusting to make and keep IOP public safety positions competitive.. Match or exceed those of comparable roles..
Community Enrichment Plan	Public Safety	Public Safety Committee		Long	Exploratory	$$$	Talent Management	42	Consider post-retirement health care options for public safety personnel, possibly with the assistance of state/county organizations.
Community Enrichment Plan	Public Safety	Public Safety Committee		Medium	Actionable	$$	Talent Management	43	Provide training budgets that meet the ever-changing needs of the Police and Fire Departments.
Community Enrichment Plan	Public Safety	Public Safety Committee		Medium	Exploratory		Talent Management	44	Modify the court schedule to have less impact on work shift schedules. Investigate virtual options.
Community Enrichment Plan	Public Safety	Public Safety Committee		Long	Exploratory	$$$	Talent Management	45	Explore ways to compensate for the lack of affordable local housing. Look at cost of living increases, housing allowances, and/or incentives for IOP property owners to rent to public safety personnel. Explore using city-owned property to provide housing alternatives for city employees. Assess/survey if this would be desirable to city staff to determine if the market for this exists.
Community Enrichment Plan	Public Safety	Public Safety Committee		Long	Exploratory	$$$	Public Safety Enhancements	46	Evaluate partnerships with Wild Dunes Resort and Wild Dunes Community Association to establish a staffed and equipped public safety building inside of Wild Dunes reducing response times, providing much-needed training space, and providing respite for police officers following traumatic experiences or waiting between court appearances and the start of their shift.
Community Enrichment Plan	Public Safety	Public Safety Committee		Medium	Actionable	$$$	Talent Management	47	Hire seasonal, part-time police officers, recruiting retired police officers when possible; one such position to serve as a transport officer.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Actionable		Revenue & Funding	48	Require local businesses hosting events to pay for additional police support to avoid having to pull scheduled patrol officers away from patrolling the rest of the island.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Exploratory		Public Safety Enhancements	49	Conduct annual review of equipment needs to include considerations for things like a high-water vehicle for the Fire Department and more diverse patrolling options for the Police Department (bicycles, motorcycles or all-terrain vehicles, etc.). Explore resource sharing.
Community Enrichment Plan	Public Safety	Public Safety Committee		Medium	Exploratory	$$$	Public Safety Enhancements	50	Consider how to best acquire an accelerant and explosive detection canine for large events, which may include a mutual aid agreement and/or shared use with other jurisdictions.
Community Enrichment Plan	Public Safety	Public Safety Committee		Medium	Exploratory		Public Safety Enhancements	51	Ask the Police Department to present a plan for a formalized drone program utilizing licensed volunteers to supplement the police force. Ensure the plan clearly defines public spaces where drone use can help monitor activity and identify when this type of surveillance is needed (i.e., proactive vs. reactive monitoring, special events, seasonal, emergencies only, etc.).
Community Enrichment Plan	Quality of Life	Public Safety Committee		Medium	Exploratory		Environmental Sustainability	75	Identify communities to learn and evaluate what they have done for noise/light ordinances to see what IOP could explore.
Community Enrichment Plan	Public Safety	Public Safety Committee		Medium	Actionable		Communications	76	Track noise and light complaints across geographical grids to evaluate levels of complaints for targeted mitigation efforts.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Aspirational		STR Excellence	77	Recognize that complaint data may not include Wild Dunes Community Association Security, Wild Dunes Resort Security or other island entity data. Work towards consistent data capture.
Community Enrichment Plan	Quality of Life	Public Safety Committee		Medium	Actionable	$	STR Excellence	79	Create a 'Good Neighbor' program to incentivize and recognize those properties that exemplify desirable rentals.
Community Enrichment Plan	Quality of Life	Public Safety Committee		Medium	Actionable		STR Excellence	80	Develop metrics of predetermined thresholds of STR complaints to become a 'trigger' for review of total number of licenses.
Community Enrichment Plan	Quality of Life	Public Safety Committee		Short	Actionable		STR Excellence	83	Additional communications to residents and visitors regarding noise and light ordinances, best practices, and process for proper notifications if concerns exist.

Community Enrichment Plan	Quality of Life	Public Safety Committee		Short	Actionable		STR Excellence	84	Educate more of the positives of the STRs and publish data tracking to residents.
Community Enrichment Plan	Quality of Life	Public Safety Committee		Short	Actionable		STR Excellence	85	Collaborate with the STR companies to update required signage with quick access to policies/regulations/fines as well as to update on local efforts, i.e., QR Code
Community Enrichment Plan	Quality of Life	Public Safety Committee		Short	Actionable		STR Excellence	86	Educate public of rental companies' consortium success.
Community Enrichment Plan	Public Safety	Public Safety Committee		Short	Actionable		Public Safety Enhancements	94	Require acknowledgement of city's beach rules as part of the online parking checkout process.
Community Enrichment Plan	Seasonal Impacts (Traffic and Parking)	Public Safety Committee		Short	Exploratory		Improved Traffic Flow	168	Revisit the Palm Boulevard streetscape proposal.
Community Enrichment Plan	Seasonal Impacts (Traffic and Parking)	Public Safety Committee		Short	Actionable		Improved Traffic Flow	176	Manage traffic on the Isle of Palms Connector during specific time periods within the course of the year with seasonal police personnel for traffic management.
Community Enrichment Plan	Seasonal Impacts (Traffic and Parking)	Public Safety Committee		Long	Exploratory		Improved Traffic Flow	177	Investigate the possibility of re-striping the Isle of Palms Connector to accommodate:•Two lanes of traffic exiting the island •Dedicated Bike lane on one side •A pedestrian lane that is compliant with SCDOT standards; any additions to the bridge structure should preserve the views that exist today.
Community Enrichment Plan	Seasonal Impacts (Traffic and Parking)	Public Safety Committee		Short	Actionable		Improved Traffic Flow	178	Ensure traffic lights at Palm and Rifle Range are timed correctly during high volume times/days.
Community Enrichment Plan	Seasonal Impacts (Traffic and Parking)	Public Safety Committee		Short	Maintenance		Improved Traffic Flow	179	Continue to build relationships with surrounding municipalities and state leaders to effectively manage parking and traffic challenges.
Community Enrichment Plan	Seasonal Impacts (Traffic and Parking)	Public Safety Committee		Short	Actionable	$$	Improved Traffic Flow	184	Continue working with a traffic engineer consultant to devise solutions to manage traffic efficiently, minimize congestion, and support funding and implementation of priority recommendations.
Comprehensive Plan	Public Safety	Public Safety Committee		Short	Exploratory		Public Safety Enhancements	214	The City should continue to monitor the Emergency Medical Services serving the island
Comprehensive Plan	Public Safety	Public Safety Committee		Long	Actionable	$$$	Recreational Offerings	215	Recreational opportunities for residents should be expanded or added, including additional safe walking or biking areas on the island
Comprehensive Plan	Seasonal Impacts (Traffic and Parking)	Public Safety Committee		Short	Actionable		Forecasting	218	The City should continuously monitor and keep records of the effect of seasonal visitors on the quality of life of the permanent residents; this should include, but not be limited to the issues of parking, noise, trash, and general livability.
Comprehensive Plan	Public Safety	Public Safety Committee		Short	Maintenance		Public Safety Enhancements	242	The City should continue to work with County officials to ensure optimum EMS services on the island and maintain basic medical emergency services through the Fire Department
Comprehensive Plan	Public Safety	Public Safety Committee		Short	Actionable		Communications	243	Develop and implement a method of distribution for the Disaster Preparedness Plan
Comprehensive Plan	Public Safety	Public Safety Committee		Long	Actionable		Infrastructure Improvements	246	Develop a plan to improve alternate modes of transportation on the island including bikeways and sidewalks with an emphasis on installing sidewalks and improving pedestrian safety
Comprehensive Plan	Public Safety	Public Safety Committee		Short	Actionable		Forecasting	257	Periodically review and update the Baseline Facilities Assessment of the Marina complex to ensure the conditions of the facilities are monitored for safety, physical condition, and utility
Comprehensive Plan	Public Safety	Public Safety Committee		Medium	Actionable	$$$	Improved Traffic Flow	271	Include funding in the 2023-2024 budget to initiate a comprehensive traffic study for the island to improve traffic flow and reduce congestion. This study should done in close collaboration with the SCDOT staff to ensure the solutions that are developed can be implemented within their network
Comprehensive Plan	Public Safety	Public Safety Committee		Short	Actionable		Improved Traffic Flow	272	Evaluate the lane configuration of the Isle of Palms Connector to identify more efficient and safer alternatives
Comprehensive Plan	Public Safety	Public Safety Committee		Short	Actionable		Improved Traffic Flow	273	Evaluate the intersection of the Isle of Palms Connector and Palm Boulevard to determine in an alternative design and/or phasing could increase operational efficiency
Comprehensive Plan	Public Safety	Public Safety Committee		Short	Actionable		Improved Traffic Flow	274	Evaluate the Charleston County Park and municipal parking lots traffic routing, payment, and ticketing to identify more efficient methods for ingress and egress
Comprehensive Plan	Public Safety	Public Safety Committee		Short	Actionable		Parking Management	275	Evaluate providing real-time beach parking space availability data to the public to improve efficiency for ingress and egress for beach visitors
Comprehensive Plan	Public Safety	Public Safety Committee		Short	Actionable		Traffic Enforcement	276	Continually assess stop sign locations on the island to determine proper and legal placement
Comprehensive Plan	Public Safety	Public Safety Committee		Short	Actionable		Traffic Enforcement	277	Ensure an adequate number of speed limit signs on all streets to encourage compliance and improve safety
Comprehensive Plan	Public Safety	Public Safety Committee		Medium	Actionable		Improved Traffic Flow	278	Develop a plan to improve alternate modes of transportation on the island including bikeways, golf carts and low speed vehicle facilities and sidewalks while improving pedestrian safety
Comprehensive Plan	Public Safety	Public Safety Committee		Short	Actionable		Traffic Enforcement	279	Encourage appropriate measures including signs, traffic restrictions and parking restrictions
Comprehensive Plan	Public Safety	Public Safety Committee		Short	Actionable		Improved Traffic Flow	280	Encourage appropriate measures to collect accurate traffic counts including the installation of new hardware at the key points of ingress and egress of the island
Comprehensive Plan	Public Safety	Public Safety Committee		Short	Actionable		Improved Traffic Flow	281	Identify problem areas and appropriate funding sources
Comprehensive Plan	Public Safety	Public Safety Committee		Long	Actionable	$$$	Infrastructure Improvements	282	Expand the system of bike lanes and walking paths

CONSIDER CONVERTING ARROW FROM YIELD TO STOP TO ALLOW BETTER FLOW FROM SOUTHBOUD ONTO CONNECTOR



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The Refuge
Fine Dining
Carolina One Real Estate:
Brigitte McElroy Realtor
Island Liquors
Liquor store
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Nail salon
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RHYTHM ENGINEERING

PROPOSAL

RFP 2026-03

AI Controlled Traffic Signal System

SUBMITTED TO:

City of Isle of Palms, South Carolina
C/o Douglas Kerr, City Administrator
1207 Palm Boulevard, Isle of Palms, SC 29451

March 27, 2026

SUBMITTED BY:

Rhythm Engineering Ltd. | 14019 W 95th St, Lenexa, KS 66215 | www.rhythmtraffic.com | reggie@rhythmtraffic.com

Cover Letter

March 27, 2026

Mr. Douglas Kerr, City Administrator
City of Isle of Palms
1207 Palm Boulevard
Isle of Palms, South Carolina 29451

RE: RFP 2026-03 – AI Controlled Traffic Signal System

Dear Mr. Kerr,

Rhythm Engineering is pleased to submit this proposal in response to RFP 2026-03 for an AI Controlled Traffic Signal System at the Palm Boulevard / 14th Avenue intersection in Isle of Palms. We understand the challenges your community faces: seasonal traffic surges that frustrate residents and visitors, and congestion that slows emergency response when it matters most.

In|Sync is the only real-time adaptive traffic signal system on the market today, deployed at over 3,200 intersections in 160 cities across 33 states. Validated by over three dozen independent studies, In|Sync has demonstrated an average 57% reduction in delay, 60% reduction in vehicle stops, and up to 23% reduction in crashes. The system integrates with existing infrastructure with no controller replacements required and includes built-in pedestrian optimization and emergency vehicle preemption.

In|Sync currently controls all 51 signalized intersections in the Town of Mt. Pleasant, your immediate neighbor across the connector. That deployment began in 2011, was independently validated by HDR Engineering (58% reduction in stops, 56% reduction in delay, 23% reduction in travel time), and expanded from 7 intersections to the entire town based on those results. We also operate In|Sync in Aiken (16 years running) and Lexington, SC, totaling over 115 intersections across South Carolina and the adjacent region. We understand Lowcountry coastal traffic and are confident In|Sync will deliver measurable results for Isle of Palms.

Rhythm Engineering has been advancing traffic management technology since 2005, led by Reggie Chandra, Ph.D., PE, a licensed Professional Engineer in seven states with over 31 years of experience in traffic signal engineering. We look forward to partnering with Isle of Palms.

Respectfully submitted,

Reggie Chandra, Ph.D., PE
Founder and CEO, Rhythm Engineering
reggie@rhythmtraffic.com | 913-674-9846

1. Firm Qualifications

Rhythm Engineering empowers traffic engineers to collect road-user data, optimize signal timing, reduce congestion, and enhance road safety through cost-effective, innovative AI solutions. Founded in 2005 and headquartered in Lenexa, Kansas, Rhythm Engineering has consistently driven advancements in the traffic management sector.

1.1 Company Overview

Company Name	Rhythm Engineering
Headquarters	14019 W 95th Street, Lenexa, KS 66215
Founded	2005
Website	www.rhythmtraffic.com
Employees	21
Certifications	PE Licenses in 7 States
In|Sync Deployments	3,200+ intersections in 160 cities across 33 states
Patents Held	5 patents in traffic signal optimization

1.2 Qualifications

- **Professional Engineering Licensure:** Our CEO, Reggie Chandra, Ph.D., PE, holds active Professional Engineer licenses in Arizona, Colorado, Florida, Kansas, Missouri, Nevada, and Texas.
- **Deployment Experience:** In|Sync is deployed at over 3,200 intersections in 160 cities across 33 states, with over 115 in South Carolina alone.

Industry Recognition: Inc. 500 Fastest-Growing Companies in the U.S. (2011, 2012); Best ITS Implementation Project, ITS Arizona (2022); Road and Bridge Safety Improvement Award, PennDOT (2012); Kansas Governor's Energy Efficiency Recognition Award (2010).

2. Key Project Personnel

Rhythm Engineering will assign the following team members to this project. Each brings specific expertise relevant to the planning, deployment, and ongoing support of the In|Sync system at Isle of Palms.

2.1 Reggie Chandra, Ph.D., PE — Project Principal

Dr. Chandra is the founder and CEO of Rhythm Engineering with over 31 years of experience as a traffic signal engineer. He has personally optimized or supervised the optimization of more than 2,500 traffic signals. Dr. Chandra holds a Master's degree in Traffic Engineering from the University of Florida and a Ph.D. in Organizational Leadership from Regent University. He is a licensed Professional Engineer in seven states and holds five patents in traffic engineering and signal optimization. He led the research and development of the In|Sync adaptive signal control system and will serve as Project Principal, providing executive oversight and technical direction for the Isle of Palms deployment.

2.2 James Bley — Director of Product Development

James leads Rhythm's multidisciplinary engineering team overseeing all In|Sync hardware and software development. M.S. in Computer Engineering from the University of Kansas (4.0 GPA), with Rhythm since 2008. He will lead system design and configuration for the Isle of Palms intersection.

2.3 Richard Cole — General Manager / Project Manager

Richard leads Rhythm's U.S. operations team with over 12 years of operations leadership experience. B.A. in Telecommunications from Oklahoma Baptist University. He will serve as the day-to-day Project Manager, coordinating timelines, installation logistics, and City communications.

2.4 Brody Boothe — Field Services Manager

Brody manages all In|Sync field deployments and oversees Rhythm's Quality Management System. Background includes network administration and nuclear operations with the U.S. Navy (Secret clearance). He will coordinate directly with the local installation contractor and provide on-site supervision.

2.5 Benjamin Thomas — Hardware Support Manager

Benjamin leads hardware support, troubleshooting, and training across thousands of In|Sync intersections. B.S. in Computer Science and Electrical Engineering from UMKC. Created Rhythm's guided self-support tools on RhythmU. He will lead post-installation training for Isle of Palms staff.

3. Similar Project Experience and References

Rhythm Engineering has deployed In|Sync at over 3,200 intersections nationwide. The following projects are particularly relevant to the City of Isle of Palms due to geographic proximity, similar traffic patterns, or comparable deployment scope.

3.1 Mt. Pleasant, South Carolina (2011 to Present)

Validating Firm: HDR Engineering | **Contact:** Brad Morrison, Director of Transportation (843-856-3080)

In|Sync controls all 51 signalized intersections in the Town of Mt. Pleasant, South Carolina, Isle of Palms' immediate neighbor across the connector. This is not a pilot or a limited trial. Mt. Pleasant entrusted its entire signal network to In|Sync, and the system has been in continuous operation for over 15 years.

The deployment began in 2011 with 7 intersections on the US-17 corridor, a 6-lane divided highway carrying 35,500 to 43,000 vehicles per day. The study corridor runs from Hungryneck Boulevard directly to the Isle of Palms Connector (SC-517/SC-703), the same road that feeds traffic onto Palm Boulevard. HDR Engineering conducted an independent before-and-after validation study with over 110 travel runs:

Performance Metric	Result
Reduction in Vehicle Stops	58%
Reduction in Delay	56%
Reduction in Travel Time	23%
Increase in Average Speed	25%

Based on these results, Mt. Pleasant expanded the deployment from 7 to 51 intersections, covering every signalized intersection in the town. That expansion is the strongest endorsement a municipality can give: after seeing the data, they chose In|Sync for every signal they own. The traffic that arrives at the Palm Boulevard intersection in Isle of Palms has already been optimized by In|Sync on US-17 in Mt. Pleasant.

3.2 Aiken, South Carolina (2010 to Present)

Contracting Agency: SCDOT | **Contact:** Brad Laird, Traffic Systems Manager (803-979-2944)

In|Sync has controlled 17 signalized intersections on Whiskey Road in Aiken, SC since 2010, making it 16 years of continuous operation. The corridor carries 38,600 AADT and serves a mix of retail, tourism, and residential commuter traffic. Deployed through an SCDOT contract and maintained by the City of Aiken, this project demonstrates In|Sync's proven longevity and track record within the same SCDOT regulatory framework that governs Isle of Palms signal operations.

3.3 Columbia County, Georgia (2012)

Just across the Savannah River from Aiken, Columbia County deployed In|Sync and produced some of the strongest independently validated results in our portfolio:

Performance Metric	Result
Reduction in Vehicle Stops	71%
Reduction in Delay	72%
Reduction in Travel Time	29%
Reduction in Fuel Consumption	15%
Reduction in Emissions	20%
Increase in Average Speed	54%
Estimated Annual Savings	$2.9 million

3.4 Additional Relevant Deployments

- **Lexington, SC:** 47 intersections on Hwy 378 and SC-6, phased expansion beginning 2015.
- **City of Miami Beach, FL:** 16 intersections where 71st Street dumps traffic into the City of Miami Beach across a bridge, 2026 (ongoing project)

Combined, Rhythm Engineering operates In|Sync at over 115 intersections across South Carolina and the adjacent region. No other adaptive signal vendor has this depth of deployment in the state or this level of familiarity with SCDOT standards, Lowcountry traffic patterns, and coastal community dynamics.

References for all projects are available upon request.

4. Methodology and Approach

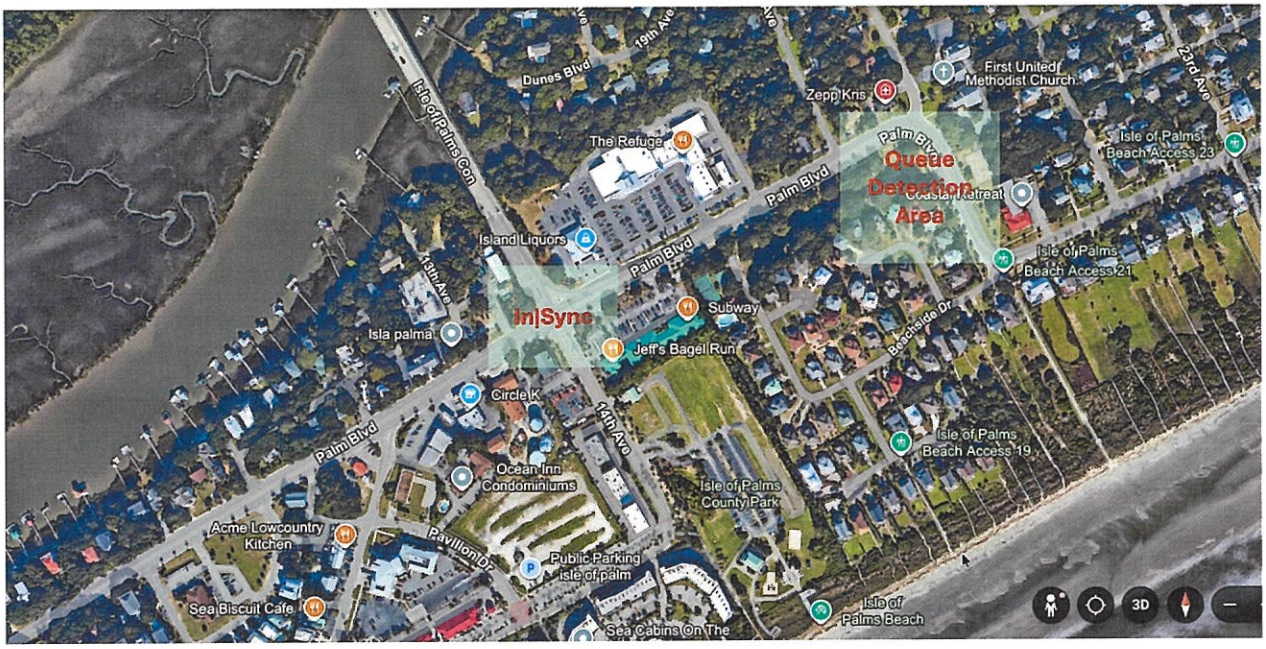

Figure 1. Project Location

In Figure 1, the highlighted rectangles show the proposed location of the In|Sync system and the Cyclops Queue Detection System.

Our approach to the Palm Boulevard / 14th Avenue intersection follows a structured, phased methodology designed to assess existing conditions, deploy a tailored In|Sync configuration, and validate performance through measurable outcomes. The system will address all mandatory requirements outlined in RFP 2026-03.

4.1 System Design and Planning

Before any equipment is installed, Rhythm Engineering will conduct a field inventory of the existing signal controller, cabinet, detectors, and phasing; analyze traffic patterns for both typical and peak beach-season conditions; work with City staff to identify specific congestion points, queuing issues, pedestrian conflicts, and emergency response bottlenecks; and deliver a site-specific system design package with detection zone placement, camera locations, and integration requirements.

4.2 The In|Sync Solution: How It Works

In|Sync is a next-generation adaptive traffic control system that uses AI-powered video detection to optimize signal timing in real time. Unlike conventional systems that rely on pre-programmed timing plans, In|Sync converts signal operations from analog to digital and makes decisions every second based on actual demand. The system operates through three integrated

modules: (1) Digital Signal Operations that eliminate fixed cycle lengths and never waste green time on empty approaches; (2) a patented Local Optimization algorithm that computes green durations in real time based on actual queue lengths; and (3) Global Optimization that coordinates progression between signals, providing a built-in upgrade path should the City add signalized intersections in the future.

4.3 AI Capabilities

Real-Time Traffic Optimization: In|Sync processes detection data every second and adjusts signal timing based on actual demand. There is no reliance on historical timing plans or time-of-day schedules. This is critical for Isle of Palms where volumes shift dramatically between off-season weekdays and peak beach-season weekends.

Predictive Analytics and Data Collection: In|Sync continuously collects performance data including vehicle counts, stop delay, green split utilization, and level of service (graded A-F). Data is stored for 30 days on the local processor and accessible through the In|Traffic web interface at no additional cost.

Emergency Vehicle Prioritization: In|Sync integrates with standard EVP equipment. When an EVP call is received, the system immediately serves the preemption and returns to optimized operations without transition delays. The digital architecture eliminates the "recovery" period after preemption, directly supporting faster emergency response for Isle of Palms first responders.

Pedestrian Safety Enhancements: In|Sync incorporates pedestrian phase requests into its optimization algorithm, serving pedestrian phases efficiently while minimizing impact on vehicle progression. Pedestrian movement is never neglected, even during peak traffic. Phases are served based on actual demand rather than fixed timing, reducing unnecessary vehicle delay while maintaining full pedestrian protection.

4.4 Hardware and Software

The In|Sync system requires the following hardware components per intersection:

Component	Description
In|Sync Processor	BlueFin processor unit. Rack-mountable (330s) or shelf-mountable (NEMA). Operates from -40°F to 165°F. Processes detection data and runs the AI optimization algorithm locally at the intersection.
Detection Cameras	Up to 4 IP-based video detection cameras per intersection. Ethernet-centric with automatic night/day mode shifting. Standard and thermal (any-weather) options available.
Equipment Panel	Power and Ethernet connectivity hub. Provides power to cameras and handles communication between detection units and the processor.

Controller Connection	C1 Y-Cable, ABC Y-Cable, or SDLC Intercept Module depending on existing controller type. Seamlessly overlays existing controller hardware.
In|Traffic and WebUI Software	Web-based interface for system configuration, monitoring, and performance analytics. Accessible via any standard web browser. No additional workstation or central server required.

Integration and Compliance: In|Sync overlays the existing controller, running it in "free" mode and managing phase calls through the In|Sync processor. No controller replacement, cabinet upgrade, or fiber connectivity is required. The conflict monitor cannot be overridden, maintaining all existing safety protections. The system integrates with SCDOT-approved equipment and all standard NEMA and Type 170/2070 controllers.

4.5 Maintenance and Support

Rhythm Engineering provides remote technical support with scheduled sessions for system review and issue resolution, remote software updates as they become available, and continuous health monitoring of camera status, detection accuracy, and communication integrity. The system includes built-in failure mitigation: if cameras are compromised, it falls back to historical data; total system failure reverts to the controller's pre-programmed backup, always maintaining safety. Hardware issues are handled through our RMA process (RMA@rhythmtraffic.com, 913-674-9846). City staff also receive access to RhythmU, our online training platform with guided self-support tools.

4.6 Information and Training

Rhythm Engineering will conduct the following briefings and training sessions:

- **City Leadership Briefing:** System capabilities, operational limitations, expected performance outcomes, and lifecycle requirements, including hardware refresh timelines.
- **Public Safety Staff Training:** Hands-on training covering manual override procedures, emergency preemption operation, system status interpretation, and basic troubleshooting. Includes classroom and field demonstration.
- **Maintenance Staff Training:** Technical training on In|Sync hardware, camera adjustment, processor access, and the In|Traffic web interface for monitoring system health and performance.

5. Timeline and Deliverables

Rhythm Engineering proposes a 90- to 120-day deployment timeline from contract execution to full operational status. The timeline accounts for assessment, procurement, installation coordination, system activation, optimization, and training.

Phase	Activity	Duration	Milestone
1	Site Assessment and System Design	Weeks 1-3	Design package delivered
2	Equipment Procurement and Configuration	Weeks 3-6	Hardware shipped to site
3	Installation (local contractor, Rhythm supervision)	Weeks 6-9	Hardware installed
4	System Activation and Initial Optimization	Weeks 9-12	System live and collecting data
5	Performance Validation and Fine-Tuning	Weeks 12-15	Before/after comparison report
6	Training and Final Handoff	Weeks 14-16	Training completed, project close-out

Key Deliverables:

- Site assessment report and system design package
- In|Sync hardware and software, configured for the Isle of Palms intersection
- Installation supervision and commissioning
- System activation with real-time performance monitoring
- City leadership briefing and Public Safety staff training
- Maintenance staff training and RhythmU access credentials

6. Detailed Budget and Cost Breakdown

The following table provides a detailed breakdown of costs for supplying the Cyclops Queue Detection System and the In|Sync AI Controlled Traffic Signal System deployment at the City of Isle of Palms. Pricing is structured as one-time capital costs and recurring annual costs. The cost proposal covers the supply of the hardware and the engineering work for deployment. City needs to hire a licensed contractor approved by SCDOT to install all hardware.

Line Item	Type	Cost
ONE-TIME COSTS		
Supply In|Sync System (BlueFin) with up to four cameras	One-Time	$53,000
Supply Controller Connection Module and cabinet connectors	One-Time	$4,000
Supply Cabling and Mounting Hardware	One-Time	$3,750
Site Assessment and System Design (Out of pocket expenses are included)	One-Time	$16,950
Installation Coordination and Supervision (Out of pocket expenses are included)	One-Time	$9,000

System Commissioning and Optimization (Out of pocket expenses are included)	One-Time	$9,500
Training (Leadership Briefing + Staff Training)	One-Time	Included
Shipping and Handling	One-Time	$450
Supply Cyclops AI Camera + GPU Processor	One-Time	$26,000
Supply NEMA Enclosure + Mounting Hardware	One-Time	$3,000
Supply two Cellular Modems (Cyclops and In|Sync)	One-Time	$1,750
Cyclops Installation support and Configuration	One-Time	Included
Subtotal One-Time Costs		**$127,400**
RECURRING ANNUAL COSTS		
In|Sync Software License (Annual)	Annual	Included in Remote Technical Support
Remote Technical Support	Annual	$2000/yr
Extended Hardware Warranty (Year 3+) (Optional)	Annual	$3,500/yr (Optional)
Cellular Data Plans (2 modems), data restricted.	Annual	$1,440/yr
Cyclops Annual Software License	Annual	$250/yr
Subtotal Annual Recurring Costs		**$3,690/yr**

Warranty Notes: Standard In|Sync purchase includes a two-year hardware warranty and one-year software warranty at no additional cost. An extended hardware warranty is available beyond Year 2 at the annual rate listed above. Warranty exclusions apply to acts of God, third-party installation errors, improper maintenance, vandalism, and accidents.

Installation Costs: The costs above reflect Rhythm Engineering's scope as the technology and solution provider. Physical installation labor will be performed by a qualified local signal contractor in coordination with Rhythm's Field Services team. Installation contractor costs are not included in this budget and will depend on the City's selected contractor.

7. Proprietary Issues, Data Ownership, and Cybersecurity

7.1 Data Ownership

The City of Isle of Palms retains full ownership of all data collected by the In|Sync system. This includes vehicle count data, level-of-service metrics, green split data, stop delay measurements, and all performance analytics generated by the system. All data is processed and stored locally on the In|Sync processor at the intersection, behind the City's network firewall. No data leaves the City's infrastructure or is stored on any external or cloud server. Rhythm Engineering does not claim any ownership interest in data collected at City-owned intersections. Data may be exported from the In|Traffic web interface in standard formats at any time.

7.2 Video Retention

In|Sync does not record, store, or transmit video streams. The system's detection cameras process video imagery in real time at the intersection to identify vehicle presence and queue lengths. The processed detection data (vehicle counts and presence information) is stored locally on the In|Sync processor for up to 30 days. No images or video footage are retained, transmitted off-site, or made available for review. This architecture eliminates video storage and retention concerns entirely.

7.3 Privacy

Because In|Sync does not record or store video, there are no privacy concerns related to vehicle identification, license plate capture, or facial recognition. The system detects vehicle presence as occupancy in defined detection zones. It does not differentiate between individual vehicles or record any personally identifiable information. The system's detection approach is comparable to standard in-pavement loop detectors but uses video-based detection zones instead of physical loops.

7.4 Cybersecurity

All In|Sync data is processed and stored locally at the intersection, behind the City's firewall. No traffic data, detection data, or performance analytics are transmitted to or stored on any cloud infrastructure. The In|Sync processor operates entirely on-site and does not require a persistent internet connection for signal control. Network connectivity (minimum 2 Mbps down / 1 Mbps up) is used only for remote monitoring, software updates, and data access through the In|Traffic web interface. The system uses password protection with multiple credential levels, and all remote access is authenticated and logged. The processor is a dedicated, purpose-built device that does not run general-purpose OS services. The conflict monitor cannot be overridden by In|Sync, maintaining physical safety protections independent of any cybersecurity scenario.

7.5 Proprietary Technology

The In|Sync adaptive signal control algorithm is proprietary to Rhythm Engineering and protected by five issued patents. The system's hardware and software are proprietary products. The City will receive a license to operate the In|Sync system at the deployed intersection for the duration of the software license agreement. Rhythm Engineering provides all system updates and maintenance as part of the ongoing support agreement.

8. Technical Strategic Plan: Integrated Queue Management

Beyond the core In|Sync deployment at the Palm Boulevard / 14th Avenue intersection, Rhythm Engineering proposes a strategic enhancement that directly targets the RFP's stated goal of reducing queue spillback: an integrated AI camera-based queue detection system positioned east of the intersection on Palm Boulevard.

8.1 The Problem: Queue Spillback on Palm Boulevard

During peak beach season, traffic queuing at the Palm Boulevard / 14th Avenue signal can spill back eastward along Palm Boulevard toward the beach access areas and Isle of Palms County Park. This spillback creates gridlock conditions that trap vehicles, block side street access, and delay emergency response. Conventional signal timing cannot anticipate or respond to downstream queue conditions because it has no visibility beyond the intersection's immediate detection zones.

8.2 The Solution: Cyclops AI Queue and Occupancy Detector

Rhythm Engineering proposes installing a Cyclops AI camera-based queue and occupancy detector at a strategic monitoring point east of the intersection, around the bend on Palm Boulevard. Cyclops uses convolutional neural networks (CNNs) for real-time object recognition and processes all detection locally on a cabinet-mounted GPU processor. It requires no cloud connectivity for operation.

Cyclops Hardware:

- **AI Camera:** IP optical video camera in outdoor-rated die-cast aluminum housing with polycarbonate lens. Rated IP67, NEMA 4X, IK08. Operating range: -40°F to 165°F. Powered via PoE.
- **GPU Processor:** Cabinet-mounted processor with local solid-state storage. Runs CNN-based detection algorithms entirely on-device. No cloud dependency.
- **Enclosure:** NEMA-rated enclosure mounted on existing City infrastructure (pole or utility structure) with access to power.

- **Communication:** Cellular modem with data plan at both the Cyclops location and the In|Sync intersection, enabling real-time communication between the two systems.

8.3 How It Works: Queue-Triggered Traffic Flushing

The Cyclops detector continuously monitors queue length and lane occupancy on the Palm Boulevard approach east of the intersection. Under normal conditions, In|Sync optimizes the signal using its standard real-time AI algorithm. When the Cyclops detector identifies that the queue has spilled back to the monitoring point, it sends a trigger to the In|Sync processor at the intersection. In|Sync then invokes a traffic flushing plan that prioritizes clearing the Palm Boulevard queue, restoring flow before the backup worsens.

This two-point detection architecture gives the system something no single-intersection solution can provide: advance warning of downstream congestion. The City effectively gains a second set of eyes on its most congested corridor, and the signal responds proactively rather than reactively.

8.4 Infrastructure Requirements

Requirement	In|Sync (Signal)	Cyclops (Queue Det.)
Location	Palm Blvd / 14th Ave intersection	Palm Blvd east of intersection
Mounting	Existing signal cabinet	City pole/structure with power
Enclosure	Existing traffic cabinet	NEMA-rated weatherproof case
Power	Existing cabinet power	City infrastructure power
Communication	Cellular modem + data plan	Cellular modem + data plan

This strategic enhancement is offered as an optional add-on to the base In|Sync deployment. It can be included in the initial installation or added at a later phase. Pricing for the Cyclops queue detection system is included as a separate line item in the cost breakdown.

9. Business License and FOIA Compliance

Rhythm Engineering acknowledges the requirement to obtain an Isle of Palms Business License and will procure the appropriate license prior to commencing work. Rhythm Engineering agrees to comply with the South Carolina Freedom of Information Act (FOIA) public disclosure standards as outlined in the RFP.

10. Conclusion

Rhythm Engineering is uniquely qualified to deliver an AI Controlled Traffic Signal System for the City of Isle of Palms. In|Sync is a proven, field-tested product operating at over 3,200 intersections in 160 cities across 33 states, backed by more than three dozen independent validation studies, and already deployed at over 115 intersections across South Carolina. The addition of Cyclops queue detection on Palm Boulevard gives the City a system that does not just optimize the signal, but anticipates and prevents the queue spillback that defines peak-season congestion.

We are committed to delivering measurable results for Isle of Palms: reduced delay, fewer stops, faster emergency response, better data, and a system that adapts in real time to your community's unique traffic patterns. We welcome the opportunity to discuss this proposal further.

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iteris®
ALMAVIVA GROUP

ITERIS, INC. RESPONSE TO

CITY OF ISLE OF PALMS REQUEST FOR PROPOSALS (RFP 2026-03) "AI CONTROLLED TRAFFIC SIGNAL SYSTEM"

Submitted to:

City of Isle of Palms South Carolina

APRIL 1, 2026

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I | Cover Letter

November 21, 2025

Douglas Kerr
City Administrator
City of Isle of Palms
1207 Palm Boulevard
Isle of Palms, South Carolina 29451

Re: City of Isle of Palms, Request for Proposals (RFP 2026-03)
"AI Controlled Traffic Signal System"

Mr. Kerr:

On behalf of Iteris, Inc., I am pleased to submit this Proposal in response to the City of the Isle of Palms (City) AI Controlled Traffic Signal System RFP 2026-03). Iteris appreciates the opportunity to partner with the City to enhance traffic signal operations, multimodal safety, and data-driven decision-making.

Understanding of the Project and Proposed Approach
The City of the Isle of Palms is seeking traffic signal detection equipment that provides reliable, advanced detection, supports multimodal users, delivers robust analytics, and ensures high detection accuracy. Iteris understands that the City also values proven technology, strong local and remote support, and a platform that can evolve as its safety and mobility needs grow.

Our firm understands that the City is seeking a qualified vendor to provide, implement, and maintain an Artificial Intelligence (AI)–controlled traffic signal system at a designated intersection. The system is intended to improve traffic efficiency, reduce peak-hour vehicle delay, minimize queue spillback, and enhance pedestrian safety while maintaining full compliance with applicable standards, including South Carolina Department of Transportation (SCDOT) requirements and the Manual on Uniform Traffic Control Devices (MUTCD).

The selected firm will be responsible for supplying intelligent traffic signal technologies, integrating them with existing infrastructure, and providing ongoing maintenance and performance monitoring. The system must deliver measurable, data-driven reporting on operational and safety outcomes. If the firm is capable of performing installation of the traffic signal system, this capability will be clearly identified and detailed within the proposal in accordance with City and SCDOT requirements.

To meet these goals, Iteris proposes the **Vantage Apex Vectors** detection system, a hybrid video + radar solution, paired with **ClearGuide Signal Trends** (probe-based analytics) and **VantageLive** (detection data analytics). Together, this ecosystem will enable the City to:

- Achieve **highly reliable multimode detection including vehicles, bicycles, motorcycles, buses and pedestrians** with advanced AI-based classification and presence.
- Improve **safety and operations** via a hybrid video-radar platform that performs well across weather, lighting, and congestion conditions to provide accurate vehicle position and speeds on high speed approaches.
- Leverage **data analytics**—from intersection detection data to probe-based data—to support signal timing, safety studies, and capital planning.

- Rely on a technology provider with a **large, experienced support team** and **decades of field-proven detection hardware**. Iteris product support personnel are available to be present at each new installation to insure the equipment is installed and operating as designed and meets the functional intent of the City.

Iteris' approach includes: (1) providing robust, field-hardened detection hardware; (2) providing guidance for optimal detector placement for intersection configurations; (3) integrating with the City's existing signal infrastructure; (4) enabling analytics via ClearGuide Signal Trends and VantageLive; (5) experienced product support professionals available for on site as well as remote support; and (5) delivering comprehensive training so City staff can fully install, configure, troubleshoot, and utilize the system.

We appreciate your consideration of our Proposal and look forward to the opportunity to work with the City of the Isle of Palms.

The information contained in this Proposal or any part thereof, including its Exhibits, Schedules, and other documents and instruments delivered or to be delivered to the City, is true, accurate, and complete. This Proposal includes all information necessary to ensure that the statements therein do not in whole or in part mislead the City as to any material facts.

I, Brian Girardot, have the authority to bind and negotiate on behalf of Iteris. Thank you for the opportunity to submit our RFP response and we look forward to assisting the City with Traffic Detection Equipment. Please contact me at 916-235-9353 or brg@iteris.com should you have any questions.

Sincerely,
Iteris, Inc

Brian Girardot
Vice President, Iteris, Inc.

II | Statement of Qualifications

A. REFERENCES

Iteris has successfully deployed the **Vantage Apex with Vectors** detection system and similar Vantage detection platforms at hundreds of intersections nationwide. Below are three municipal references comparable in nature, size, and complexity to the City of the Isle of Palms, each with **25 or more locations of Vantage Apex.**

City of Burleson, TX - Aug 2024

Technology:: APEX Detection, Clear Guide Signal Trends and SPM

Our team successfully upgraded 35 intersections for the City of Burleson including hardware implementation of Iteris Vantage Apex detection and software implementation of Iteris ClearGuide while delivering a new Advanced Traffic Management System (ATMS) to enhance traffic operations and intersection performance across the city. The project focused on deploying Iteris solutions to improve traffic management and Signal Performance Metrics (SPM) at **35 intersections**.

SCOPE OF WORK

- Iteris Solutions Implemented
  - Apex Detection System with Vector Hybrid Sensors (video-radar technology) for accurate vehicle detection.
  - ClearGuide Signal Trends for monitoring and performance analytics.
- System Configuration
  - Completed all final setup and configuration of detection-related components.
  - Configured SPM to deliver actionable insights
- Delivered a fully operational and optimized ATMS meeting all project requirements.

IN ADDITION TO ITERIS TECHNOLOGIES, OUR TEAM SUPPLIED AND/OR IMPLEMENTED THE FOLLOWING 3RD PARTY COMPONENTS:

- Traffic signal controllers
- ATMS software platform
- PTZ cameras for intersection monitoring
- Cell routers for reliable connectivity
- Design and installation of Traffic Management Center (TMC) video wall

OUTCOME

- Improved intersection efficiency and traffic flow.
- Enhanced detection accuracy through hybrid video-radar technology.
- Delivered a scalable and future-ready ATMS infrastructure for the City of Burleson.

✓ • Number of Locations Deployed: 35

City of Richardson, TX – Feb 2020

Technology:: Software Program/Version: APEX Detection

The City of Richardson initiated a two-phase project to upgrade and replace traffic detection systems throughout the city. The objective was to enhance traffic management capabilities and improve overall system reliability and performance.

SCOPE OF WORK

- Phase 1: Iteris was selected to install and configure 34 detection systems.
- Phase 2: Based on successful delivery and performance in Phase 1, Iteris was re-selected to provide the same solution for an additional 21 intersections

KEY DELIVERABLES

- Installation and configuration of advanced detection systems.
- Integration with existing traffic management infrastructure.
- Testing and validation to ensure optimal performance.
- Training for city staff on system setup and maintenance.

OUTCOME

- Both phases were completed on time and met all project requirements, resulting in improved traffic detection and operational efficiency for the City of Richardson.

✓ Number of Locations Deployed: 55

Through a collaborative, resilient, and future-ready approach, the Iteris team is committed to delivering a robust framework that ensures the **integrity, reliability, and scalability** of the City's traffic management platform. Iteris operates its Cloud Services using Amazon Web Services maintaining 24x7 monitoring of all applications using internal and external monitoring tools to ensure compliance with all Service Level Objectives. Iteris has a dedicated operations team responsible for addressing issues on a 24x7 schedule with escalation and support provided by development and product teams. Iteris also has a product security team responsible for conducting and reviewing application security scans on a weekly basis, overseeing a vulnerability management program, and ensuring compliance with policies that are compliant with agency requirements.

The data, analytics, and alerting available through ClearGuide and Iteris's tools provide **actionable insights** for traffic operators that have significantly enhanced their operations. Our goal is to help traffic managers and operators make sense of all the data coming from different sources in their ever-growing and ever-changing transportation network. The reports and dashboards we implement and the data sources we integrate as part of ClearGuide make it easy for agencies and users to know where to focus their efforts so they can better manage time and resources when it comes to traffic management and operations. As an example of demonstrated customer satisfaction, LA Metro has worked with Iteris and our products historically and currently, and they are planning to rely on us and our platform as a trusted member of their team to support their traffic management efforts during the upcoming Olympic games.

Our approach is the same with any team we work with. As outlined in our support summary, we meet regularly and maintain strong relationships with the staff using our tools throughout the duration of our contracts. Our team works hard to connect an agency's vision to the platform we provide and support their needs when it comes to data integration and traffic management improvement. Our customers, including UDOT, SCDOT and LA Metro, recognize our dedicated efforts and we consistently receive positive customer feedback from the staff who use Iteris tools.

These customers are also consistently open to trialing and testing our new products, as evidenced by all three of the referenced agencies trialing our Signal Trends module in ClearGuide. To demonstrate their positive experience, these agencies continuously meet with our teams to discuss further integration and development opportunities, test our new products and features, and provide helpful feedback to make the tools the best they can be. We consistently maintain open dialogue between agency staff and internal teams to ensure users are benefiting from ClearGuide and using it to the best of its ability while also providing feedback for improvement. We are proud of the strong relationships we've built and would be delighted to embark on a similar journey with the City to enhance traffic management and operations with our tools.

> *I can't imagine going back to the days without ClearGuide. An environment without data-driven decisions would feel akin to losing connection to the internet.*
>
> **Kelly Njord, P.E, PTOE**
> **Statewide Traffic Operations Engineer**
> **Utah DOT**

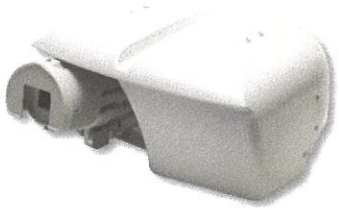
B. HARDWARE SPECIFICATIONS

The proposed solution is based on the **Vantage Apex Vectors** detection sensor and the **Vantage Apex CCU** (Cabinet Control Unit). Together, they form a fully integrated, hybrid video + radar detection platform designed for robust performance using AI algorithms in real-world traffic conditions.

Detailed datasheets and specification sheets, including hardware characteristics, electrical requirements, and environmental ratings, are provided with this submittal in the Appendix.

Core Hardware Components

- **Vantage Apex Vector Sensor**
  - Integrated video and radar-based detection platform.
  - 1080P HD video resolution supports detection and classification of multiple object types including vehicles, bicycles, and pedestrians.
  - 4-D Radar has a range of 600' for advanced detection and speed sensitive detection for real-time safety applications such as red-light runner prediction and dilemma zone protection.
  - Designed for mast arm or strain pole mounting for span-wire intersections at typical signal heights, with wide field-of-view coverage.



- **Vantage Apex CCU**
  - Advanced AI-Pro provides detection for all road users and classifies them into 8 different classifications (*car, bus, truck, motorcycle, school bus, semi-truck, bicycle, pedestrian*). The detection supports different outputs and timing per classification.
  - Field-hardened cabinet control unit that manages power, communications, detection logic, and controller interface.
  - Interfaces with existing traffic signal controllers via standard SDLC communications.

- Provides local data storage and supports real-time data interfaces.

- **Ancillary Equipment**
  - All equipment required for installation will be included with each intersection design. This typically includes (as applicable): mounting brackets, cabling, and surge protection devices.

Network Ports and Protocols (High-Level)

The System supports standard IP-based communications over Ethernet. At a minimum, the following protocols and services are available and can be configured to meet the City's IT policies:

- **SDLC** – Used for communications with the traffic signal controller and for basic device monitoring and status.
- **MQTT** – Provides a local real-time data stream for high-resolution detection and performance data.
- **RTSP** – Real-Time Streaming Protocol for video camera feed, enabling access to live video where permitted.

A detailed list of port and protocol is included in attached specification sheet. This allows the City's IT team to review and approve network configurations consistent with security and operational policies.

C. SYSTEM DATA AND REPORTING CAPABILITIES

The Vantage Apex with Vectors solution, combined VantageLive and ClearGuide Signal Trends analytics, provides comprehensive traffic detection and analytics capabilities.

Summary:

Iteris proposal offers two solutions:

1. Vantage Apex that delivers AI-driven signal control, hardware/software supply, and real-time optimization required for the intersection, with strong integration and compliance capabilities.
2. ClearGuide that excels at analytics, reporting, and modeling, supporting the city's need for measurable performance and informed decision-making

RFP KEY REQUIREMENTS

- **AI-driven traffic signal optimization**: Real-time traffic efficiency, predictive analytics, emergency vehicle prioritization, pedestrian safety, and measurable performance reporting.
- **Integration & Compliance**: Must integrate with existing infrastructure and comply with SCDOT and MUTCD standards.
- **Hardware & Software Supply**: AI-enabled controllers, sensors, cameras, and software.
- **Maintenance & Support**: Ongoing technical support, updates, and health monitoring.
- **Training & Information**: Briefings for city leadership and hands-on training for Public Safety staff

HOW CLEARGUIDE SUPPORTS

ClearGuide is typically used for real-time traffic analytics, performance monitoring, and reporting. Here's how it aligns with the City of Isle of Palms RFP:

- **Performance Reporting**: ClearGuide provides dashboards and analytics to measure improvements in traffic efficiency, vehicle delay, and queue spillback—directly supporting the RFP's requirement for measurable performance reporting.

- **Predictive Analytics**: Its traffic modeling can help optimize signal timing and anticipated congestion, supporting the AI capabilities requested.
- **Integration**: ClearGuide is designed to measure external to the traffic management systems giving analysis of the results. ClearGuide also supports APIs for integration into other services as needed.
- **Training & Information**: ClearGuide's user-friendly interface and reporting tools can facilitate briefings for city leadership and training for staff.
- **Support**: Ongoing software updates and technical support are part of ClearGuide's offering, aligning with the RFP's maintenance requirements

ClearGuide has three modules, ClearGuide Roadways, ClearGuide Saftey and ClearGuide Signals. For the RFP, we recommend ClearGuide Roadways and ClearGuide Signals. Iteris will set up an Isle of Palms site that displays traffic for the Island and its approaches. In the site will be traffic

SCDOT + CLEARGUIDE (ROADWAYS AND SIGNALS)

Summary of SCDOT's use of ClearGuide Roadways: South Carolina DOT has used ClearGuide Roadways (with HERE traffic data) statewide since 2018 to monitor and analyze roadway performance in real time and historically. The platform supports traffic measurement of delay, queues, speeds, and travel times and is used by SCDOT traffic operations and planning teams to manage congestion, support construction/work zone management, and complete before-and-after studies. ClearGuide outputs are also used to inform travelers via SCDOT's 511 service and are integrated into operations workflows via APIs and connections to SCDOT's traffic management systems.

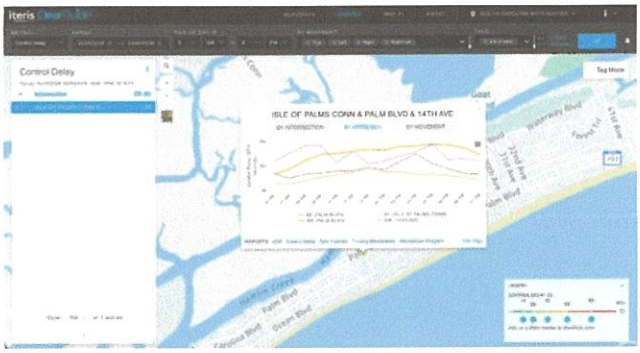
ClearGuide supports the following for SCDOT today:

- Network-wide performance measurement (speeds, travel times, delay, and queues) with real-time monitoring and historical trend analysis.
- Operational support through route-based alerts, bottleneck identification, and map-based visualizations for situational awareness.
- Traveler information support via 511 (including travel times/map tiles and congestion alerts, depending on integration approach).
- Project support such as construction/work zone monitoring and before-and-after reporting for operations and planning.

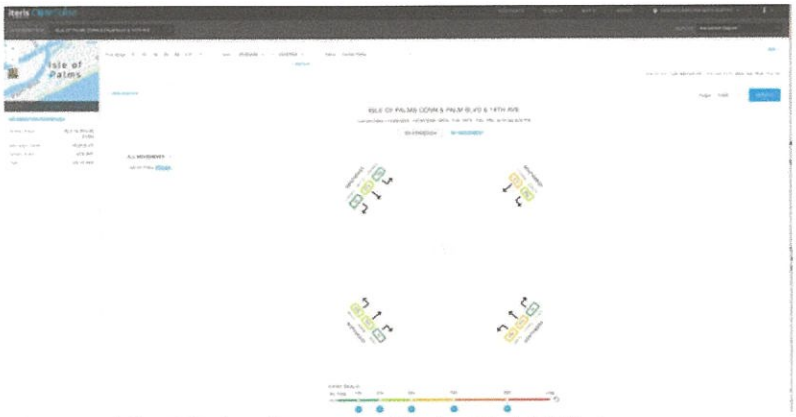
Summary of what ClearGuide Signals provides the City: ClearGuide Signals (Signal Trends) would give the City near-real-time and historical visibility into the City of Isle of Palms signalized intersection and corridor performance leading to and on the Island using GPS probe-based data (no additional field hardware required). Through ClearGuide the City would be able to monitor signal performance, create repeatable reports, and prioritize locations for retiming and operational attention. The ClearGuide service also provides APIs for integrating metrics into existing workflows and dashboards.

- Intersection and approach performance metrics in near real time, plus a one-year historical archive for trending and seasonality.
- AI based anomaly alerts for the City's signal to provide alerts when movements at the signal are experiencing unusual issues.
- Before-and-after analysis and corridor-level reporting to quantify the impact of timing changes, construction impacts, special events, or policy changes.

- Configurable alerts/notifications when performance degrades (to support proactive operations and faster issue identification).
- APIs to export metrics and support integration with existing city tools (e.g., reporting dashboards, signal management processes)



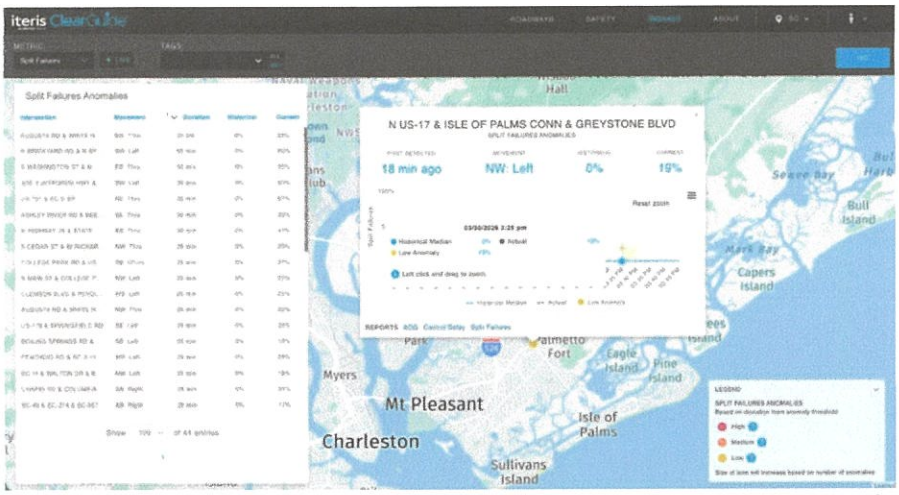
Signal Trends Dashboard: Isle of Palms Connector / Palm Blvd / 14th Avenue



Signal Trends Intersection Diagram: Isle of Palms Connector / Palm Blvd / 14th Avenue

AI Signal Anomaly Alerts: ClearGuide Signal Trends includes an AI-powered anomaly detection capability that proactively flags abrupt, unexpected changes in signal performance using probe trajectory data. This provides an operations-focused way to quickly identify when a specific intersection movement is behaving unusually, so that staff can investigate the likely cause (e.g., traffic incident impacts, work zone shifts, special events, or signal maintenance issues), fix the issues in real-time and document before/after recovery.

- AI Signal Trends Anomalies uses probe-data-only detection (no controller communications or additional field hardware required).
- Live anomalies view with a map and list of current anomalies, ranked by most recent occurrence and color-coded by severity (high/medium/low).
- Movement-level detail to see which approach/movement is impacted and compare current performance against a historical baseline (e.g., median for the selected time-of-day/day-of-week).
- Configurable alerting so staff can be notified when anomalies are detected (choose severity, thresholds, active duration, time-of-day/day-of-week, exclusions for expected conditions like holidays/events, and who receives the alerts).



Signal Trends Anomalies: Example Intersection showing Split Failure approaching the Isle of Palms Connector. Note: Isle of Palms Connector / Palm Blvd / 14th Avenue would be the signal configured for the deployment, this is to show how the anomalies work

HOW APEX SUPPORTS

Apex is used for advanced traffic signal control and AI-driven optimization:

- **AI Signal Control**: Apex can deliver real-time optimization of traffic signals, prioritizing emergency vehicles and enhancing pedestrian safety—core requirements of the RFP.
- **Hardware & Software Supply**: Apex can provide AI-enabled sensors, and cameras, meeting the RFP's hardware/software supply needs.
- **Integration & Compliance**: Apex is built to integrate with legacy infrastructure and is configurable for SCDOT and MUTCD compliance.
- **Pedestrian Awareness**: Apex's algorithms can incorporate pedestrian movement requirements, ensuring compliance with the RFP's pedestrian-aware mandate.
- **Maintenance & Support**: Apex offers ongoing technical support, health monitoring, and software updates.
- **Installation Capability**: If Apex's deployment includes installation services, this would fulfill the RFP's preferred installation capability

Detection and Traffic Statistics

The Apex System is capable of collecting and displaying, at a minimum, the following detection data and statistics:

- **Multimodal Object Detection & Classification**
    - AI-Pro detection for all road-users
    - 8 classifications: *car, bus, truck, motorcycle, school bus, semi-truck, bicycle, pedestrian*.
- **Traditional Detection & Presence**
    - Stop-line and advanced detection zones for all road users including vehicles, scooters, bicycles, and pedestrians.
    - Support for phase calls and detector outputs to the traffic signal controller.
    - Traffic volumes and occupancy by time interval.
    - Speed measurements by lane, using the integrated radar.

- **Traffic Statistics**
    - Control Delay, Arrivals on Green, and Split Failures per movement in Signal Trends

Data Access and Analytics

Data can be accessed and used by the City via multiple pathways:

- **Local Data Access**
    - Data files stored on the edge device for download via secure connection.
    - Local configuration and diagnostic interfaces for technicians.
- **Real-Time APIs and Streams**
    - Real-time detection data available through **MQTT** streams and other supported APIs.
    - Integration with third-party systems can be supported using open, documented interfaces.
- **Cloud Analytics Platforms**
    - **VantageLive**: Detection data analytics platform for high-resolution, intersection-level analysis, historical trending, and reporting of volumes
    - **ClearGuide Signal Trends**: Probe-based analytics platform to provide intersection metrics including Control Delay, Arrivals on Green and Split Failures

Together, these capabilities provide the City with a unified view of local intersection, corridor and network performance, supporting safety studies, signal timing, and long-term planning.

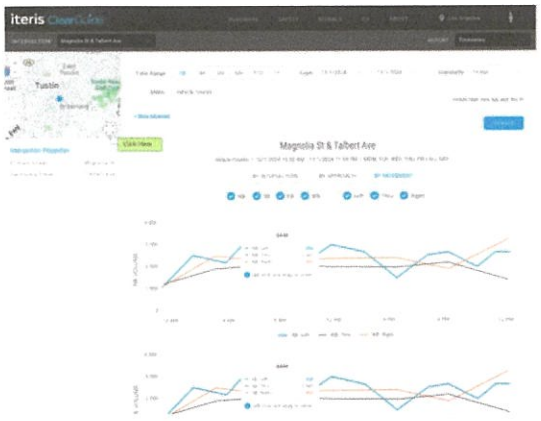
Sample Datasets and Reports

Txt file with volume, occupancy, speeds, sensor status is stored on the processor and can be retrieved locally or through the agency network. Sample shown below:

```
013, 2024-05-01 07:45:00, 13,0,0,0,0,0,0, Video OK,C-29
014, 2024-05-01 07:45:00, 16,0,0,0,0,0,0, Video OK,C-32
015, 2024-05-01 07:45:00, 8,0,0,0,0,0,0, Video OK,C-27
501, 2024-05-01 07:45:00, 7,0,31,0,0,0,0, Video OK,C1 LT
502, 2024-05-01 07:45:00, 25,0,0,0,0,0,0, Video OK,C1 T
503, 2024-05-01 07:45:00, 0,0,0,0,0,0,0, Video OK,C1 RT
601, 2024-05-01 07:45:00, 0,0,0,0.0,0.0,0.0,0, Video OK,C1 PD
602, 2024-05-01 07:45:00, 0,0,0,0.0,0.0,0.0,0, Video OK,C1 PD
651, 2024-05-01 07:45:00, 41,28,15,0,3,38,0, Video OK,C1 AS
701, 2024-05-01 07:45:00, 8,0,0,0,0,0,0, Video LC,C1 R1
703, 2024-05-01 07:45:00, 22,0,0,0,0,0,0, Video LC,C1 T1
704, 2024-05-01 07:45:00, 0,0,0,0,0,0,0, Video LC,C1 T2
705, 2024-05-01 07:45:00, 0,0,0,0,0,0,0, Video LC,C1 T3
706, 2024-05-01 07:45:00, 0,0,0,0,0,0,0, Video LC,C1 T4
707, 2024-05-01 07:45:00, 0,0,0,0,0,0,0, Video LC,C1 T5
708, 2024-05-01 07:45:00, 11,0,0,0,0,0,0, Video LC,C1 L1
709, 2024-05-01 07:45:00, 0,0,0,0,0,0,0, Video LC,C1 L2
044, 2024-05-01 07:45:00, 35,0,0,0,0,0,0, Video OK,C-13
045, 2024-05-01 07:45:00, 16,0,0,0,0,0,0, Video OK,C-14
046, 2024-05-01 07:45:00, 19,0,0,0,0,0,0, Video OK,C-16
047, 2024-05-01 07:45:00, 15,0,0,0,0,0,0, Video OK,C-11
504, 2024-05-01 07:45:00, 10,0,50,0,0,0,0, Video OK,C2 LT
505, 2024-05-01 07:45:00, 40,0,0,0,0,0,0, Video OK,C2 T
506, 2024-05-01 07:45:00, 0,0,0,0,0,0,0, Video OK,C2 RT
603, 2024-05-01 07:45:00, 0,0,0,0.0,0.0,0.0,0, Video OK,C2 PD
604, 2024-05-01 07:45:00, 0,0,0,0.0,0.0,0.0,0, Video OK,C2 PD
652, 2024-05-01 07:45:00, 62,23,21,3,7,52,0, Video OK,C2 AS
711, 2024-05-01 07:45:00, 26,0,0,0,0,0,0, Video LC,C2 R1
```

ClearGuide VantageLive

ClearGuide VantageLive ingests detection data stored on the processor that is available to visualize detection data. A sample of VantageLive is shown below:



III | Description of Methodology

Iteris will implement a focused, efficient installation process to integrate AI-enabled traffic detection and optimization equipment at the City of Isle of Palms' single signalized intersection in compliance with SCDOT requirements and MUTCD standards.

The project will begin with a brief coordination meeting with City representatives and SCDOT, as applicable, to confirm scope, schedule, safety protocols, and communication procedures. A dedicated Iteris Project Manager will serve as the primary point of contact throughout installation and commissioning.

Iteris will conduct a targeted field verification of existing conditions, including the signal controller cabinet, available power and communications, pole and mast arm locations, existing detection systems, and pedestrian facilities. This assessment will confirm compatibility and finalize equipment placement.

All Iteris equipment will be staged, pre-configured, and tested prior to field deployment to minimize installation time and traffic disruption. Installation will be performed by qualified technicians using appropriate traffic control measures and safety practices.

Following installation, Iteris will integrate the system with its AI optimization platform, calibrate vehicle and pedestrian detection zones, and configure operating parameters specific to Isle of Palms traffic patterns. Functional testing will validate detection accuracy, pedestrian service compliance, system responsiveness, and fail-safe operation.

	TASK	WEEK 1					WEEK 2					WEEK 3				
1	• Hardware/Software Installation	■	■													
	• Detector Set-Up		■	■												
2	• Before Travel Times w/Velocity	■	■	■												
	• Collect Counts w/ Vlive!				■	■	■	■								
	• Synchro Model Development	■	■	■	■	■	■	■								
3	• Calculate New Clearance/Ped Times		■	■	■											
	• Optimize Timing Plans								■	■	■					
4	• Controller Programming											■	■			
5	• Fine Tuning												■	■		
6	• After Studies														■	■

IV | Key Project Personnel

The Iteris team meets the minimum mandatory qualifications for this proposal by maintaining the required licenses and permits necessary to provide the requested services in State of Colorado, if required for certifying plans, reports, etc. Iteris team members are Product Support Technicians are IMSA Certified. IMSA Certification demonstrates that an individual possesses the necessary knowledge and skills to safely install, maintain, and inspect traffic signal systems, thus ensuring proper functioning and contributing to public safety by upholding industry standards set by the International Municipal Signal Association (IMSA) which is widely recognized in the field.

Nader Ayoub, PE | Vice President

Mr. Ayoub has over 40 years of experience in traffic operations specializing in vehicle detection and control systems design, ITS communications design, ITS/signal system implementation and ITS project management. He has extensive experience in project management and deployment of traffic signal control systems. He has established procedures and recommended practices for the operation of traffic signals in the areas of detector design and operation, coordination and special phasing which have been adopted by TXDOT. In addition, Mr. Ayoub has developed training courses for traffic signal operations and design. He has successfully completed numerous projects within Texas that included the full complement of ITS devices and signal operations that include not only the design but also implementation, integration and ongoing maintenance and operations assistance.

Allison Palumbo , PE | Senior Engineer

Ms. Palumbo serves as a Senior Engineer for Iteris' Advanced Sensor Technologies division and has been with the firm since 2017. She has over 23 years of experience in traffic signals utilizing a unique skill set that includes both traffic engineering and extensive knowledge of traffic signal hardware including controllers and detection systems. Ms. Palumbo's traffic operations research background with the Texas A&M Transportation Institute specializes in diamond interchange operation which she has used to implement diamond operation throughout Texas. She has also written traffic signal controller and video detection specifications for TxDOT and served as technical support for all TxDOT districts. She has developed and taught training courses with a focus on teaching traffic engineering to signal technicians and controller programming to engineers in order to bridge the gap and establish communications between traffic engineers and signal technicians within an agency. Ms. Palumbo has been paramount in the development of the Iteris Signal Performance Metric (SPM) tool through the design of each of the charts and metrics..

Alex Kopec | Senior Product Manager

Alexander Kopec serves as the Product Manager for Iteris' Sensor division which includes sensor hardware and software. As a Product Manager, Alexander is responsible for overseeing the development and management of a portfolio of sensor products from concept to launch. Alexander works closely with cross-functional teams, including engineering, design, and sales to ensure that products meet agency needs. Alexander has been with the firm since 2022 and has over 6 years of experience in the traffic control and management industry, including development of ATMS systems, traffic controllers, connected vehicle technologies, and traffic data analytics. Alexander's expertise in the traffic industry combined with the deep understanding of how these underlying systems operate gives him a unique perspective on the development of new functionality and the ability to diagnose the root of any issue.

Jesse Phillips | Manager, Product Support

Jesse Phillips brings strong experience in intelligent transportation systems through his roles as Senior Product Support Engineer III and Eastern Regional Manager at Iteris. He provides hands-on technical support, system troubleshooting, and field expertise for advanced detection and traffic management technologies. Jesse's background combines engineering support with regional operational leadership, enabling him to bridge technical requirements with real-world deployment needs. Known for his problem-solving skills and customer-focused approach, he works closely with agencies and field teams to ensure reliable system performance and successful project execution.

Mark Zelinske | Account Executive

Mark Zelinske is a results-driven technology solutions professional with extensive experience supporting complex infrastructure and AI-enabled systems for public-sector and enterprise clients. He combines analytical, technical, and consultative expertise to help agencies translate congestion, safety, and operational challenges into clear, actionable solution strategies. Mark excels at coordinating cross-functional teams, aligning stakeholders, and ensuring solutions meet regulatory requirements including SCDOT and MUTCD standards. Known for his strong communication skills and executive presence, he builds trusted relationships with senior decision makers and technical staff. His disciplined, customer-centric approach supports effective needs assessments, solution planning, training, and long-term system performance—key elements in successful AI-controlled traffic signal deployments.

Iteris will provide a comprehensive training program to ensure City personnel can fully **install, configure, troubleshoot, and utilize** the Vantage Apex Vectors System, including associated analytics platforms.

Training Objectives

The Training Plan is designed to:

- Equip **signal technicians and field staff** to install and maintain sensors, CCUs, and communications.
- Enable **signal engineers and operations staff** to configure detection zones, integrate with controllers, and interpret data.
- Provide **operations and planning staff** with the skills to use VantageLive and ClearGuide Signal Trends for analytics and reporting.

Iteris will train all City personnel identified by Charlotte as needing access to the System, and can expand training as needs evolve.

Training Format and Location

All training will be conducted **on-site in City facilities and in-field**, consistent with the RFP requirements. A typical initial training program is structured as follows:

- **Classroom Training** (City facility)
- **In-Field Training** (selected intersections equipped with Vantage Apex Vectors)

Iteris can provide additional training needed to accommodate City staffing and scheduling through remote sessions. Iteris is flexible and can adapt the training sequence, duration, and audience composition based on the City's staffing and scheduling needs. Iteris can also provide follow-up or refresher training sessions, either on-site or virtually, if desired by the City.

Training Costs

All training described in this section, including:

- On-site classroom sessions
- In-field practical sessions
- Training materials and documentation

will be **included in the Proposal Pricing** in accordance with the RFP. The associated labor, travel, and related costs will be reflected in the attached Pricing Form and can be clearly identified as training-related line items.

V | Budget/Cost

EQUIPMENT LIST/COST INFORMATION

Product	Supplier	Model Number	APL Number	Cost
Vantage Vector	Iteris, Inc.	Vantage Vector	660-015-031	$4,038
Radius (Microwave Detection)	Iteris, Inc.	RADIUS-CCU-SM	660-018-00	$9,093
APEX	Iteris, Inc.	APEX	Pending	Pending
ClearGuide				$0

VI | Issues

Iteris proposes to support the City by deploying and installing Transportation Systems Management and Operations (TSM&O) equipment at selected intersections to collect high-quality digital traffic data. All data collection will be performed without capturing any personally identifiable information (PII). Using a range of available sensing technologies—including, but not limited to, optical, thermal, and LiDAR—these temporary, standalone systems will assist the City in evaluating intersection operations, identifying near-miss events, and conducting comprehensive traffic safety assessments. The equipment will function independently of existing infrastructure and will be installed only for the duration and at the locations specified by the City.

All operational data generated by the AI-controlled traffic signal system—including traffic volumes, performance metrics, and system logs—will be owned by the City. The firm's AI algorithms, software platform, and optimization methodologies remain proprietary; however, the City will retain full access to all system data in exportable formats. City data will not be sold or shared with third parties without written authorization, and all data will be returned to the City upon contract termination.

If video-based detection is used, video will be processed primarily for real-time traffic analysis and not for surveillance. Retention periods will be configurable and coordinated with the City, and no facial recognition or personally identifiable tracking will be employed. Privacy protections such as anonymization, masking, and limited retention will be incorporated to protect the public.

The system will follow industry-standard cybersecurity best practices, including encrypted communications, access controls, audit logging, and secure remote access. Any proprietary hardware, software licensing, or subscription dependencies will be clearly disclosed, including lifecycle and long-term support considerations, to minimize vendor lock-in and ensure system resilience.

APPENDIX

Specification Sheet

- Vantage Apex
- Specification for a Modular (Multi or Single Camera) Video Detection System

Vantage Apex®

The future is here.

AI-powered HD video and radar detection in a single sensor

Industry-leading detection and tracking, powered by the latest artificial intelligence (AI) algorithms

1080p high-definition (HD) video for brilliant display at the traffic management center

Video-radar fusion provides comprehensive data for ITS applications

Vantage Apex® is a full-featured multimodal detection system that combines 1080p HD video and 4D/HD radar hybrid sensor technology with sensor fusion and AI, setting it apart from anything else on the market.

Unique AI Algorithms for Detailed Vehicle Detection and Object Classification

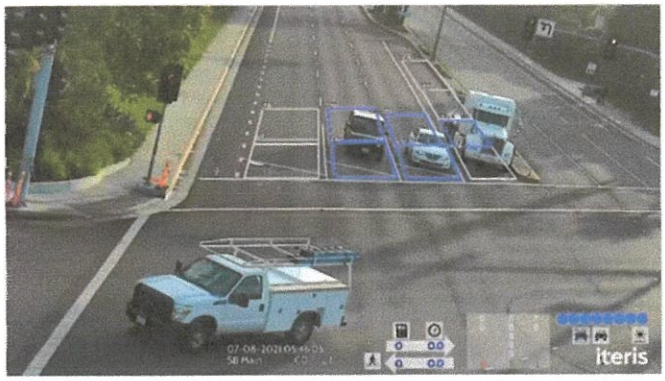
Built on the leading AI compute platform, Iteris' AI video analytics identifies objects based on machine learning using Iteris' extensive image library and high performing neural network algorithms. This enables incredible precision and detailed classification of many different vehicle types and vulnerable road users such as pedestrians and cyclists.

High-Definition Video for Unmatched Clarity

Full HD video streaming using 1080p cameras results in ultra-crisp-vision with unmatched depth and clarity of traffic at your intersections. Gain crystal-clear viewing in your traffic management center or remotely on mobile devices via the Iteris Video Viewer app.

Complete Multimodal Detection in a Single System

Using forward-fire radar technology, to virtually eliminate occlusion, this hybrid sensor uses industry-leading 4D/HD radar technology with a field of view exceeding 600 feet.



The Vantage Apex sensor enables decision-zone safety functions, collision avoidance and advanced lane-by-lane detection that delivers precise traffic detection and data.

iteris®
ALMAVIVA GROUP

The Ideal Sensor for Advanced Traffic Applications

Vantage Apex improves efficiency and responsiveness by providing real-time, accurate and robust detection data streams that feed into any adaptive control system.

Additional Benefits

- Connected vehicle ready – provide safety alerts to vehicles with Iteris' Vantage CV™ platform.
- Includes SmartCycle® and PedTrax® for bicycle and pedestrian detection and counting.
- Embedded 'mouse and monitor' setup in addition to Laptop or remote setup.
- Easy installation – a simple three-wire cable and shelf-mount cabinet control units make installation quick and cost-effective.
- Comprehensive on-screen display includes many features for instant monitoring of system.
- Flexibility – choose from either a hybrid video and radar sensor option or a video-only sensor option.
- VantageCare™ eligible – compatible with the VantageCare detection health monitoring service.
- Fully compatible with Iteris' ClearGuide® Signals and VantageLive!®, as well as other third-party web and mobile-based traffic measurement applications.

Specifications

SYSTEM - GENERAL

Environmental	
Temperature	-35°F to +165°F (-34°C to +74°C)
Humidity	0% to 95% non-condensing
Vibration	0.5G, 3 axes, 5-30Hz
Shock	10G in all 3 axes
Ingress Protection	IP 67
Regulatory	NEMA TS-2
	FCC Part15, Class A
Warranty	3 Years limited warranty

SENSOR HEAD - GENERAL

Connections	Terminal Block
Communications	Ethernet over Power line
Power	Voltage – 110VAC
	Consumption: Camera Only - 15W (Max) Hybrid - 25W (Max)
Dimensions (Excluding Mounting Bracket)	Camera Only – 16" (406mm) D x 6.25" (159mm) W x 7" (178mm) H Hybrid – Physical 17" (432mm) D x 15" (381mm) W x 14" (356mm) H
Weight	Camera Only – 5lbs (2.3kg) Hybrid – 10lbs (4.55kg)

SENSOR HEAD - CAMERA

Imager	1080P 30FPS
	0.003 to 10,000 Lux
	3D-DNR Noise Reduction
Lens	Lens 12x Optical Zoom
	Focal Length 5.4° tele to 50.7° wide
	Dynamic Range > 100dB
Heater	Indium Tin Oxide

SENSOR HEAD - RADAR

Frequency	24GHz (K-Band)
Accuracy	Speed 0 to 150mph ±1mph (0 to 240kph ±1.5kph)
Tracked Objects	Up to 64

NEMA SHELF MOUNT CABINET EQUIPMENT

Configuration	Up to 4 sensors
Communications	Ethernet
	USB x4
	SDLC
	EMBUS
Cabinet Interface (CI) Dimensions	10" (254mm) D x 4" (101.6mm) W x 10" (254mm) H
CI Weight	10.1lbs (4.6kg)
Power Injector (PI) Dimensions	10" (254mm) D x 4" (101.6mm) W x 10" (254mm) H
PI Weight	9.1lbs (4.1kg)

ISO 9001:2015 certified.

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July 2025 Rev 7

City of Isle of Palms I Request for Proposals I

RFP 2026-03 AI Controlled Traffic Signal System

SUBMITTED By: Cubic ITS, Inc.

March 27, 2026

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Trademarks

Cubic® is a registered trademark of Cubic Corporation.

All other product and service names mentioned herein are the service marks, trademarks or registered trademarks of their respective companies or owners.

Abbreviations/Acronyms

ASCT	Adaptive Signal Control Technology
ATC	Advanced Transportation Controller
ATCS	Adaptive Traffic Control System
ATMS	Advanced Traffic Management System
ATSM	Adaptive Traffic Signal Management
ATSPM	Automated Traffic Signal Performance Measures
CMPS	Cubic Mission and Performance Solutions
CTS	Cubic Transportation Systems
EV	Emergency Vehicle
FAE	Field Application Engineer
IT	Information Technology
ITS	Intelligent Transportation Systems
LADOTD	Louisiana Department of Transportation and Development
NCDOT	North Carolina Department of Transportation
RFP	Request for Proposal
SCDOT	South Carolina Department of Transportation
SPM	Signal Performance Measures
TSP	Transit Signal Priority
VRU	Vulnerable Road User

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1. Cover Letter

March 27, 2026

Douglas Kerr
City Administrator
City of Isle of Palms
1207 Palm Boulevard
Isle of Palms, South Carolina 29451

Respondent: Andy Gaskins
Sales Executive
Cubic ITS, Inc.
522 Gillingham
Sugar Land, TX 77478
Andy.Gaskins@cubic.com

Subject: **RFP 2026-03 AI Controlled Traffic Signal System**

Dear Evaluation Committee:

Thank you for the opportunity to submit our proposal for your *AI Controlled Traffic Signal System in response to RFP Contract 2026-03*. The selection of a traffic signal system provider is a critical decision for agencies throughout the United States, as traffic control is one of the most visible public works services. Selecting system vendors is a partnership, facilitating safe and reliable traffic operations as well as capital improvements, community mobility, economic development, and transportation plans for decades. Cubic is a trusted brand throughout the world, providing mobility solutions for agencies of all sizes. South Carolina Department of Transportation (SCDOT) is a current Cubic customer, allowing our team to leverage existing systems and provide a proven, low-risk, cost-effective Adaptive AI solution.

Cubic has a significant presence in South Carolina and the Southeast United States and has deployed over 250 intersections of our SynchroGreen Adaptive Traffic Signal Management (ATSM) systems in South Carolina since 2014. No other vendor is as experienced with ATSM in South Carolina and deploying these systems for the unique traffic conditions in the state. Cubic has previously installed systems in Beaufort County, as well as Myrtle Beach and are aware of the daily, but also seasonal traffic conditions that an ATSM must help resolve at vacation destinations. Our systems have yielded travel time and delay savings in other areas of the state, and we are confident that our systems and staff are up to this challenge, within the specified project timelines.

Our proposal includes SynchroGreen ATSM, our Signal Performance Measures (SPM) cloud service, as well as our latest Scout Controller Software and Gridsmart detection technology that will provide reliable detection and inputs for the adaptive. The goal of the SynchroGreen adaptive system will be to focus on the Isle of Palm's unique daily traffic, but also seasonal traffic and non-traditional traffic conditions such as timeshare turnover that can prove challenging to accommodate using standard time-of-day timing plans. SynchroGreen will provide tailored traffic signal timings in real time, using data supplied from the Gridsmart video detection system to capture fluctuations in traffic and implement settings that optimize in real-time to lower travel time and delays. Our SPM Cloud service will be used to measure system performance and provide Isle of Palm's decision makers with the tools to measure project success.

We bring decades of experience in designing and deploying solutions that integrate seamlessly with existing infrastructure, minimizing disruption while maximizing impact. From computer vision-based safety systems like Gridsmart to real-time adaptive technologies such as SynchroGreen, our innovations *help agencies respond faster, reduce congestion, and protect pedestrians and bicyclists—the most vulnerable members of our communities.*

Beyond technology, we pride ourselves on partnership. Our team works closely with transportation authorities to understand their goals, budgets, and challenges, ensuring solutions that are right-sized and future-ready. With thousands of successful deployments worldwide and a strong local presence, we offer unmatched expertise and support. We understand your need to improve traffic congestion at your intersection and to have a trusted solution and experienced team to deliver your AI Controlled Traffic Signal System.

We appreciate your consideration and look forward to the opportunity to collaborate on delivering a Smart Mobility solution that not only meets but exceeds your expectations. We are uniquely positioned to install into the existing SCDOT existing ATMS infrastructure. Please feel free to contact Andy Gaskins at Andy.Gaskins@cubic.com with any questions or clarifications.

Thank you for your time and trust. Together, we can shape a safer, more efficient, and more connected future for all road users.

Sincerely,

John Greiner
Vice President and General Manager, Intelligent Traffic Systems

2. Description of Qualifications

2.1. Technical Capabilities

Cubic brings global ITS experience to the traffic control industry and has quickly gained a prominent role in the traffic signal control industry through the acquisition of Trafficware and Gridsmart. Trafficware and Gridsmart will remain product brands in the Cubic portfolio, with all employees united under the *One Cubic* banner.

Since 1979, Cubic ITS has been dedicated to the traffic signal control industry, providing uncompromised quality and service. Cubic is known worldwide for Synchro Studio, the traffic engineering standard for signal timing and optimization, as well as ATMS, our Advanced Traffic (central) Management System. We have also leveraged our expertise in Synchro, ATMS and traffic control hardware products to create the nation's fastest growing Adaptive Signal Control Technology (ASCT), SynchroGreen. All Cubic ITS products are proudly designed and supported in America and are held to the highest standards for quality and customer care.

Cubic offers the most extensive product catalog in the traffic signal control industry, including traffic controllers, cabinets and accessories, detection, central management systems, adaptive systems, emergency response systems, traffic simulation software and more. A summary of technical services is below, with items in bold proposed as part of this project.

Table 1 - Summary of Cubic Technical Capabilities	
• ATC, NEMA, **2070 Controllers**	• Traffic Simulation (Synchro/SimTraffic)
• **Traffic Controller Software/Firmware**	• **Central Management Systems (ATMS)**
• NEMA, 33x, ITS, & ATC Cabinets	• **Adaptive Systems (SynchroGreen)**
• Cabinet Accessories	• Emergency Response Module
• CMUs/MMUs	• Connected Vehicle Technology
• **Video Detection (Gridsmart)**	• **Transit Signal Priority (TSP) Systems**
• **Hardware Installation Services**	• **Signal Performance Measures**
• **Systems Design and Engineering**	• **Signal Timing Optimization**

Cubic is uniquely position with our ATMS already established for SCDOT managing over 200 intersections including district 6 centralized signal control for 54 locations. The ATMS system is already equipped with SynchroGreen adaptive. Assuming the City of Isle of Palms can coordinate authorization from SCDOT for access, the Cubic team can configure user permissions for view-only on other districts signals (if desired) and full control only for the signalized intersection of Isle of Palms, which the Cubic team will onboard and configure as part of this proposal. This approach of leveraging the already approved, established SCDOT systems allows the system base, system deployment, and SynchroGreen Interface/Integration fees to be waived (therefore excluded from this proposal).

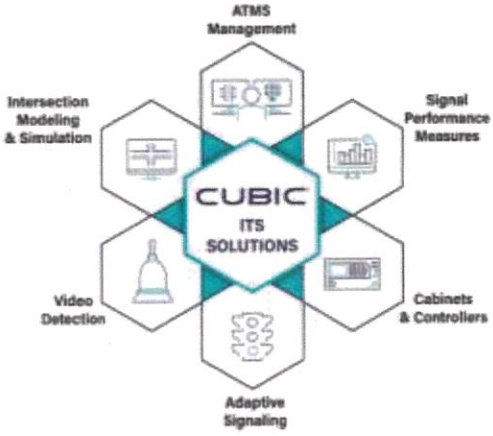
Cubic's controllers, central system and adaptive solutions have been deployed throughout the World and operates some of the largest traffic signal systems in the United States, including:

- South Carolina Department of Transportation (SCDOT) – 3,000+ intersections
- Palm Beach County, Florida – 1,500+ intersections
- Broward County, Florida – 1,500+ intersections
- City of Fresno, California – 580 intersections

While these projects are large scale, multi-year projects, they illustrate Cubic's ability to manage projects and the ability to follow through on our commitments for customers regardless of size. Following through on commitments means delivering projects on time, on budget, and having an open, honest dialog with our customer. It also means understanding the customer's current and future issues and guiding the customer toward solutions to help resolve these matters. These projects have enabled Cubic and our deployment teams to develop organized project management strategies, as well as collaboration tools to make sure our entire team (agency included) is constantly appraised of project status, as well as directly benefit from the innovations a new project necessitates.

3. Corporate Information

Cubic Corporation's corporate headquarters is in San Diego, California with over 5,000 employees globally. Delivering engineering and technology innovation since 1951, Cubic is a leading integrator of payment, information technology and services to create intelligent travel solutions for transportation authorities and operators. Cubic is a privately held company, owned by Veritas Capital and Evergreen Coast Capital, with two major business units, Cubic Transportation Systems (CTS) and Cubic Mission and Performance Solutions (CMPS). Cubic CMPS provides networked Command, Control Communication, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) capabilities for defense, intelligence security and commercial missions and is a leading provider of live, virtual constructive and game-based (LVC-G) training solutions for the United States military and allied forces. Cubic is a diverse and inclusive workforce that strives to make a positive difference in people's lives. CTS is a leading integrator of payment and information solutions and related services for intelligent travel applications in the transportation industry. We deliver integrated systems for transportation and traffic management, providing tools for travelers to choose the smartest and easiest way to travel and pay for their journeys, while enabling transportation authorities and agencies to manage demand across the entire transportation network. Cubic ITS is a product-based business within CTS, comprised of the Trafficware, Gridsmart and Umo IQ (formerly NextBus) product lines.



Together, Cubic CTS and ITS are working towards a collective vision of Digital Mobility. This is a comprehensive transportation strategy that offers long-term solutions for the challenges of population growth, carbon emissions and urbanization. Centered around those three core principles, Cubic's Digital Mobility has actionable steps for operators, planners, leaders and end-users to work towards a more sustainable and equitable transit future. Digital mobility is built around the idea of harmonizing disparate systems across the mobility network to enable collaborative and holistic decision making between local, regional, national and even international stakeholders. These disparate systems are not just a city's various public transit services; digital mobility includes everything from ridesharing to traffic and intersection management. With one transportation network comprising multiple modes, we expect users to tie together these different options throughout their journeys. We should manage these systems in the same way that users experience them: as coordinated entities. By integrating every mode of transportation in a given area, digital mobility offers each service provider, stakeholder and end user with a common operating picture across the entire transit ecosystem. This real-time information supports data-driven decision making and efficient network management. Intelligent and actionable information is the key to ensuring that travel networks run as safe, smooth, and efficient as possible – empowering riders to make smarter, more informed decisions.

4. Project Methodology

The City of Isle of Palms is seeking an AI-controlled traffic signal system that reduces congestion, improves peak-hour performance, enhances pedestrian safety, and supports first responder mobility. Cubic's safety-first product suite comes out of the box with the advanced analytics and support of Emergency Vehicle (EV) preemption with robust field experience proven to reduce congestion, reducing Isle of Palms risk for this high visibility/exposure project.

Our adaptive has proven results, as outlined in our case studies summarized in Appendix A. SynchroGreen's Three-Factor Optimization Engine—built around real-time adjustments to Cycle Lengths, Splits, and Offsets—provides a precise match to these needs by delivering dynamic, corridor-aware control that satisfies all mandatory RFP requirements. The City currently operates a single signalized intersection that experiences significant congestion during beach season, peak recreational travel periods, and weekend surges. These conditions contribute to queue spillback, prolonged delays for residents and visitors, and slower emergency response. SynchroGreen's adaptive engine is uniquely suited for this environment because it does not rely on static timing plans but continuously analyzes real-time traffic conditions *every single cycle*.

Detection is key for real-time adaptive control, and Gridsmart is a revolutionary concept in video detection, delivering a best-in-class solution with the lowest cost of ownership on the market. It delivers safety objectives by delivering full-scene, AI powered intersection detection that protects pedestrians, cyclists, and drivers. By accurately detecting and classifying all road users, including vulnerable pedestrians, Gridsmart provides the real-time situational awareness needed to reduce crashes and create safer, more predictable intersections non-intrusive intersection management and data collection solution, leveraging state-of-the-art developments in machine vision processing. The tracking-based system effectively detects vehicles, bicyclists, pedestrians, scooters and more.

CONFIDENTIAL

Our project will kick off by assessing the current infrastructure and assessing current problem sets with data from the field with a Pilot Study. This will be done either with the existing controller high-resolution data, or if not possible/easily feasible with current Controller firmware Cubic will install and configure our latest Scout Controller Software on new 2070 hardware. The pilot study will be based on existing Time of Day timing plans and high-resolution data for at least two weeks of round-the-clock data collection.

Please note, depending on level or elaboration expected for system design and planning, cubic can remove all optional costs around SPM solution and current congestion case study, as the ATMS and adaptive turn on configurations has sufficient reporting outputs for adaptive rollout and calibration. That has been outlined in section 7.

Our proposal includes the fundamental building block and future-proofed toolset to allow the Isle of palms to achieve their goals within their physical constraints:

- SynchroGreen adaptive licenses and 5 years SMA
- 2070 Traffic Signal Controller with latest Scout Software and Transit Signal Priority
- Gridsmart Video Detection with dual bell camera for optimized Vulnerable Road User Protections
- Optional SPM Activation and 5-year subscription

These products will work seamlessly with one another and help establish an adaptive solution that alleviates the City's unique traffic congestion and safety problems.

In addition to the products above, Cubic will provide services for the following:

- SPM Data Activation and Configuration
    - Optional High-res data collection for baseline performance and optimization recommendation for recommended adaptive settings
- Controller Installation and database conversion to latest controller software
- Video Detection installation and initial configuration
- SynchroGreen adaptive configuration
- 6 days Training (Controller, Video Detection, Adaptive, SPM)
    - 3 Days training after installation
    - Annual Refresher Training (1 day session) for 3 years

After field installations, communication established into ATMS Server as noted in the assumptions section, and software configuration, our team will work closely with Isle of Palm and dedicated stakeholders to our active adaptive solution at the signalized intersection.

For SynchroGreen system activation, Cubic will be onsite with our expert. Our team will meet with the agency prior to activation to discuss the process and to address any requests or concerns. Our team will require turn on verification at this meeting. With written approval in hand, our team will activate the system and be present at the location to monitor traffic operations. Once the system has been successfully activated, our team will begin adjusting SynchroGreen settings based on observations and measurements from system detection. Our calibration will be on adjusting detection zones and sensitivity as well as optimizing local traffic signal operations. Lastly, our team will adjust settings for any special logic desired by the agency to capture special

traffic conditions or events. The adjustment period is expected to no more than one week on site but may last up to three (3) weeks with remote monitoring after the activation week.

In summary, we will provide services and hardware including adaptive and where most adaptive traffic systems optimize a single factor, SynchroGreen optimizes three—Cycle Lengths, Splits, and Offsets—to deliver a best-of-three approach ideally suited to the City of Isle of Palms' congestion challenges. By adjusting coordination in real time, SynchroGreen reduces backups, improves peak-hour performance, and distributes green time effectively across the City's only signalized intersection.

We are confident we can meet your project objectives, with a tailored solution based on specific findings and observations from our in-field data study, and sound methodology based on decades of experience specific to South Carolina's congestion and seasonal trends.

4.1. Project Plan, Timeline and Deliverables

Cubic is excited for the opportunity to support the City of Isle of Palms in delivering a modern, adaptive signal solution for your identified intersection. While this project focuses on a single location, we recognize its importance to local mobility, safety, and future traffic management goals in Isle of Palms. Our team brings proven expertise, reliable technology, and a commitment to excellence that ensures a smooth deployment with minimal disruption to the community.

The following Sample Project Plan outlines the major tasks, timelines, and responsible parties associated with deployment of the adaptive, AI systems at the selected intersection. Schedule can be shifted according to the procurement and contracting schedule as needed leading up to the project kick-off meeting. Cubic has a dedicated technical team for SynchroGreen system activations in the United States and does not expect any major conflicts that would impact our project schedule.

4.1.1. Sample Project Plan

This project plan will be elaborated with dates once we better understand Isle of Palms timing constraints and expectations.

Phase/Tasks	Deliverables	Timeline / Resources
Project Management	- Project Kick-off Meeting - Updated Scope and Schedule - Re-occurring Meeting Cadence	1–2 Days – Cubic Team; City of Isle of Palms *Isle of Palms to provide List of Users, Traffic Signal Latitude/Longitude, and existing Controller Databases in.STD.PRM or .UPL format in this meeting to facilitate configuration of systems*

Pilot Intersection Study ***(Optional)***	- Assessment of current high-res to determine if Controller Installation dependent - SPM Cloud Activation and intersection configuration - Data Collection Verification (2 weeks) - Signal Performance Reporting - Optimization Output Findings	**CONFIDENTIAL** ~4 Week – Cubic Account Executive; City of Isle of Palms Note: Risk of Dependency on Controller Installation or moved later in schedule
Deployment Plan	- Review Pilot Findings and baseline Controller Database - Detection & Installation Plan - Intersection Installation Checklist - Procurement Paperwork (2070 Controller & Dual Camera Gridsmart Intersection Solution) - ATMS Authorization	1-2 weeks – Cubic Account Executive; Isle of Palms to provide SCDOT authorization of ATMS including network permissions granted for new controller
Manufacture Hardware	- Manufacture Gridsmart Hardware - Manufacture 2070 Controller	2–4 Weeks – Cubic Manufacturing Note: subject to separate tasks for critical path timing
Field Installation	- Gridsmart Field install with Bucket Truck - Controller Conversion or Manual Creation - Controller Installation	1-2 Days – Cubic Account Executive; City of Isle of Palms Note: Might be split as separate tasks. May perform some tasks in lab setting or remote
Software Configuration	- Gridsmart Software Configuration - ATMS Device Onboarding - ATMS Intersection Layout	< 1 Week – Cubic Support and Field Service Engineer Note: Same day/next day for Gridsmart Software
Adaptive System Activation & Testing	- Adaptive System Configuration and Activation - Field Deployment and Optimization	~3 Weeks
Final Review, Training & Acceptance	- Training on the adaptive AI solution including Adaptive Controls, Field and ATMS manual commands, and Gridsmart Video Detection - Briefing on System Capabilities, Limitations, and results	<1 Week Annual Training and Support On-going

4.1.2. Assumptions

Please note we have assumed the City's intention for the mandatory System Design & Planning scope around assessment of current traffic infrastructure is for the purpose of optimally deploying hardware and software configuration to support AI / adaptive control, without consideration of changes to physical capacity constraints. Our proposed solution additionally includes the following assumptions:

- Isle of Palms has established good communication to the cabinet which is high quality and can be used by our proposed AI-enabled traffic signal controllers and cameras. Communication issues will prevent *any* adaptive solution from functioning successfully; good communication is required from controller to existing SCDOT ATMS Server. If Isle of
-

Palms requires cellar modem and service for controller communication, our proposal requires update (or Change Order).

- Isle of Palms will coordinate authorization of SCDOT ATMS for district 6 to be configured for this intersection. This will be including user access, intersection layout and SynchroGreen settings performed by Cubic, and network configuration for controller onboarding by SCDOT.
    - Isle of Palm or SCDOT District 6 will furnish and install VPN/RDP applications such that ATMS can be accessed remotely. It is also assumed that this VPN/RDP connection will remain open during the warranty/support/maintenance period for Cubic to provide expedited service.
- Isle of Palm will repair any pre-existing traffic signal cabinet issues, or issues that may impact traffic operations, including pedestrian pushbuttons, etc.
- Isle of Palm will provide all signal timing sheets for existing intersections in enough detail that all settings may be converted to latest Scout database format
- Isle of Plam will provide any available signal layouts or as-built drawings in enough detail to construct any intersection graphics provided as part of this project. This includes signal phase-direction, detector locations, etc.
- Controller database entry (conversion) will not require checks or re-timing for compliance with the Manual on Uniform Traffic Control Devices.
- Cubic will not be responsible for repairing or replacing any crushed, blocked, or full conduit or conduit that does not allow for new cables to be pulled. Any instances where this occurs will be repaired by others prior to any Gridsmart installation.
- Isle of Palm will provide a representative onsite during all field installation of 2070
- All work is assumed to be performed during business hours and no night-time

5. Key Personnel

Cubic is proud to present a highly experienced team of key personnel who will serve as the primary leads for the Isle of Palms project. Behind these individuals stands one of the industry's largest and most capable ITS organizations—engineers, software specialists, field technicians, and support professionals who work together to ensure our customers receive reliable, responsive service at every stage of a project. In addition to the expertise of our core team, Cubic maintains local and regional staff who are familiar with the transportation needs of South Carolina and the surrounding coastal communities. This deep bench of nearby resources enables us to be on-site quickly, provide hands-on support whenever needed, and ensure continuity long after deployment. With Cubic, Isle of Palms receives not only dedicated key personnel but an entire ITS support ecosystem committed to the city's long-term success.

Andy Gaskins – Sales Account Executive

Andy Gaskins is an experienced Sales Account Executive at Cubic Transportation Systems, where he has led sales for Trafficware hardware and software solutions, as well as Gridsmart video detection technologies, across North Carolina, Virginia, Washington, D.C., and Maryland since 2021. With more than 22 years of proven sales experience—including roles in municipal and inside sales, beverage distribution sales management, and pharmaceutical sales—Andy brings a deep understanding of customer needs and long-term relationship building to every

engagement. Prior to entering the transportation technology field, he served in the U.S. Navy and built a strong foundation in both leadership and technical discipline. Andy holds a Bachelor of Science from East Carolina University and an Associate of Science from Pamlico Community College.

Steve Carver, P.E. – ITS Software Services Manager

Steve Carver is an accomplished Professional Engineer and ITS Software Services Manager at Cubic Transportation Systems, bringing deep expertise in SynchroGreen adaptive signal control, ATMS software, and advanced traffic engineering solutions. With a foundation in civil engineering from Texas A&M University and more than a decade of hands-on experience in analysis, design, microsimulation, and system deployment, Steve has led or supported SynchroGreen implementations across nine states, including major projects for Lafayette, Louisiana; SCDOT District 3; and numerous cities nationwide. His work spans large-scale adaptive signal deployments, traffic modeling for major airports such as DFW, CLT, and JFK, and corridor timing improvements in cities like Fort Worth and Atlanta. Steve's background includes roles in municipal engineering, airport landside planning, and traffic operations, giving him a comprehensive perspective that supports successful ITS system delivery, customer training, and long-term operational success.

Matt Greenoe – Director of Technical Services and Support

Matt Greenoe is the Director of Technical Services and Support at Cubic Transportation Systems, bringing over 25 years of experience in technical services, operations, product development, and team leadership. Known for his innovative problem solving and customer-first approach, Matt oversees field engineering operations from design through deployment, leads cross-functional initiatives, and serves as a key technical liaison ensuring successful project delivery and long-term customer satisfaction. Prior to his current role, he managed a 27-person technical support organization as Senior Manager of Field Services and previously helped build Gridsmart Technologies from startup to industry leader before its acquisition by Cubic. Matt holds an MBA in Logistics, Supply Chain, Entrepreneurship, and Venture Capital from the Haslam College of Business at the University of Tennessee, as well as a degree in International Business from Auburn University.

Derrick Spatafora – Field Application Engineer Supervisor

Derrick is an experienced Senior Field Application Engineer with over seven years of technical and field expertise supporting transportation and traffic signal systems. In his role at Cubic Transportation Systems, he delivers advanced application engineering support in a remote capacity, leveraging his strong background in electronics, troubleshooting, and transportation technology. Previously, as an Electronics Technician II with NCDOT Division 7, he specialized in diagnosing and repairing traffic signal components, estimating project costs, and executing both routine and scheduled maintenance. Derrick has extensive experience programming and configuring new traffic signal cabinets, interpreting blueprints, and coordinating contractors through all phases of construction and system upgrades. He routinely

collaborated with municipalities to conduct final inspections, ensure compliance with build specifications, and validating system acceptance.

6. References

We are pleased to share several recent Cubic projects that align closely with the scale and goals of the Isle of Palms initiative. Across our portfolio, agencies consistently return to Cubic to expand their systems—whether adding adaptive signal control or advancing toward Connected and Autonomous Vehicle readiness. Notably, Cubic delivered major system modernizations in Council Bluffs, Iowa (~70 intersections) and Pearland, Texas (~90 intersections), implementing new Trafficware ATMS platforms and ATC controllers with the same experienced team proposed for Isle of Palms. These successes reflect a proven methodology that ensures high-quality project delivery and fosters long-term customer partnerships.

Columbia, SC | South Carolina Department of Transportation	Summary
Brett McCutchan, Traffic Signal and Systems Engineer, (839) 223-6227, mccutchanbj@scdot.org	Cubic ITS provided cabinets, thousands of traffic controllers, local controller software, and devices in addition to a statewide deployment of an Advanced Traffic Management System (ATMS).

Hampton, VA | City of Hampton	Summary
Carol Bowen, Superintendent of Traffic Engineering, (757) 778-5697, carol.bowen@hampton.gov	Cubic has provided the City of Hampton Virginia with the deployment of ATMS, traffic cabinets and controllers for over 20+ years.

Baton Rouge, LA | Louisiana Department of Transportation and Development (LADOTD)	Summary
Andre Fillastre, Traffic Control Engineer Manager, (225) 242-4646, Andre.Fillastre@la.gov	Cubic ITS provided LADOTD with the deployment of an ATMS as well as associate modules, traffic controllers and traffic cabinets to thousands of intersections. Cubic also installed our controller software on every state-controlled signalized intersection.

For additional references please see the case studies included in Appendix A.

7. Detailed Budget and Cost

The following products and services are included in our offering.

Proposed Component	Parts & Quantity	Total Cost
In-field Pilot Timing Study (minimum 2 weeks field data) for System Design & Planning ***Optional*** as ATMS and adaptive turn on configurations has minimum sufficient reporting outputs for "System Design and Planning" Mandatory Task 1	-SPM System Activation Fee -SPM Annual Service -SPM Intersection Configuration -SPM Data and field analysis Pilot	$47,075.00
AI enable traffic signal controller with Emergency Vehicle Pre-emption and Ped Safey & Gridsmart Computer Vision Detection Solution (Intersection bundle on fiber with dual fish-eye camera for enhanced Ped Safety)	-2070 Controller with Scout Software and Transit Signal Priority -GS3 System -Bell Camera Kits (2), Fiber, Option Card, Bracket -Performance Plus, Installation Services	$28,235.00
AI Capabilities (real-time SynchroGreen Adaptive Signal Control)	-ATMS & SynchroGreen License	$10,950.00
Installation and Configuration Services	-Database Conversion -Intersection Turn On Assistance -Gridsmart Field Service Support -ATMS Intersection Graphics Development -SynchroGreen Configuration and activation	$39,484.00
Training, Maintenance & Support	-3 days System Instal Training -3 Annual Refresher Training -5 years ATMS/SG SMA	$31,750.00
	Grand Total	**$157,494.00**
	Total w/o Optional Item	**$110,419.00**

8. Proprietary Issues

Any system processing real-time data, especially video and behavioural analytics, requires strong data protection and secure device firmware to protect users from any proprietary issues or

concerns. Isle of Palms can find additional information on system support in Section 9.1. and on https://itssupport.cubic.com/support/home.

9. Software Support and Maintenance

Our Team is providing three (3) years of software support and maintenance on all Cubic software procured as part of this project. In cases where software defects are discovered during the software support period related to Cubic software products, Cubic will provide a software update that addresses the issue. Critical software issues will receive priority and will be addressed immediately. Critical software issues are defined as those that directly impact traffic operations. Other issues will be addressed through routine software updates. All software support requests will first be addressed remotely and then onsite. Software maintenance will be addressed through bi-annual updates to ATMS (including SynchroGreen and modules – if purchased) that will be available to the agency. ATMS updates will include new features and functionality, as well as address bugs identified during the prior period. All agencies subscribing to Trafficware's ATMS Software Support and Maintenance program will receive emails announcing new features included in the release.

Cubic's ATMS Software Support and Maintenance Program also entitles the agency to yearly system "health checkups" on the IT environment in which the ATMS system resides and recommendations to improve performance. The agency must provide remote access to the system in order to perform this checkup. The agency must schedule all checkups 30 days prior to the desired service by contacting Cubic's at https://itssupport.cubic.com/support/home.

9.1. Support Requests Procedure

All support issues may be submitted to Cubic via our online support portal (https://itssupport.cubic.com/support/home). On average, Cubic has over a dozen qualified systems technicians and engineers (agents) available during business hours to remotely assist customers with support inquiries. Cubic contact information for all support inquiries is below.

Cubic ITS, Inc.
522 Gillingham
Sugar Land, TX 77478
Support Hotline: 1-(800)-952-7285
Website: https://itssupport.cubic.com/support/home
Hours: Weekdays (Excluding Holidays) 8AM – 5PM EST

Customers will also be provided the phone number for their regional Field Application Engineer (FAE). This phone number will be used for urgent support items that require after-hours assistance.

10. Terms and Conditions

This proposal is submitted contingent upon Cubic's standard Terms and Conditions. These Terms and Conditions, though omitted from the RFP response to comply with page-count requirements,

remain fully applicable and may be provided at the City's request or upon issuance of an award or notice to proceed.

11. Appendix A

Clark County, Washington

Clark County modernized its outdated traffic infrastructure with a fully integrated solution from Cubic Transportation Systems—pairing Gridsmart video detection with SynchroGreen adaptive signal control and ATSPM analytics. With Gridsmart providing full-intersection visibility and real-time tracking, SynchroGreen dynamically adjusted signal timing to match traffic in the moment. Left turn waits dropped by 40%, collisions fell by 30%, and traffic flowed more efficiently. On a busy retail corridor near Highway 99, SynchroGreen cut peak signal cycles from 130 seconds to 80–90 during COVID-19, eliminating the need for manual adjustments and preserving 100% of the County's traffic operations budget. Pedestrian safety was built in, not bolted on. Drivers are now held at red while pedestrians cross, and flashing yellow arrows across walkways were removed, creating safer, more predictable intersections. As of mid-2021, Gridsmart was live at 15 intersections and SynchroGreen at 30, with plans to scale to 90. Clark County now moves faster, operates safer, emits less, and runs on a traffic system built for what's next.

Chula Vista, CA

Chula Vista implemented SynchroGreen®, a real-time Adaptive Traffic Control System (ATCS), across 24 intersections along its busiest corridors—and the effect was immediate. Designed to respond to actual traffic conditions instead of rigid schedules, the system continuously adjusted signal timing to keep vehicles moving. A third-party study confirmed what drivers experienced firsthand: faster commutes, fewer stops, and less time wasted in traffic. On East H Street, stopped delay dropped by more than 30%. Travel times improved in both directions, and fuel consumption and emissions each fell by around 5%, turning daily drives into smoother, cleaner trips. Telegraph Canyon Road saw similar wins: nearly 29% less delay, fewer stops, and a noticeable drop in fuel use and emissions. Meanwhile, Otay Lakes Road delivered the biggest shift. Stops fell by over 33%, travel times dropped 15%, and emissions—including carbon dioxide and nitrous oxide—dropped by more than 10%. Chula Vista's investment in SynchroGreen paid off—reducing congestion, cutting pollution, and making the city's streets measurably more efficient. The project's success earned regional recognition, including an Honor Award from the American Public Works Association's San Diego chapter.

Seminole County, FL

To bring the corridor under control, Seminole County deployed SynchroGreen, an adaptive signal control solution from Cubic's Trafficware. By analyzing real-time traffic conditions and interfacing directly with controllers, SynchroGreen continuously adjusted timing across all twelve signals, balancing the flow of both vehicles and pedestrians without manual intervention. The results were immediate and measurable. Travel times through the corridor dropped by up to 27%, while arterial delay was slashed by as much as 46%. SynchroGreen restored coordination across intersections, reduced the gridlock triggered by pedestrian surges, and gave emergency vehicles clear paths they needed to respond without delay. By dynamically managing one of Central Florida's most heavily used corridors, Seminole County turned a bottleneck into a smart, safe, and fast route for

everyone who relies on SR 436—whether on foot, behind the wheel, or in the back of an ambulance.

For additional information on these case studies and much more, we invite the City of Isle of Palms to https://www.cubic.com/news/success-stories.