



Meeting of the Board of Directors

August 22, 2022 - 1:30 p.m.

**THEA Headquarters
1104 E. Twiggs Street
First Floor Board Room
Tampa, FL 33602**

For any person who wishes to address the Board, a sign-up sheet is provided at the Board Room entrance. Presentations are limited to three (3) minutes. When addressing the Board, please state your name and address and speak clearly into the microphone. If distributing backup materials, please furnish ten copies for the Authority Board Members and staff. Any person who decides to appeal any decisions of the Authority with respect to any matter considered at its meeting or public hearing will need a record of the proceedings and, for such purpose, may need to hire a court reporter to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which an appeal is to be based.

I. Call to Order and Pledge of Allegiance

II. Public Input/ Public Presentations

III. Consent Agenda

A. Approval of the Minutes from the June 27, 2022, Board of Directors Meeting

B. Board Member Travel – IBTTA 90th Annual Meeting – Austin, Texas

C. ITS Grounding Mitigation Assistance - General Engineering Consultant Contract (GEC) - \$50,000

IV. Discussion/Action Items

A. Planning – John Weatherford, Chair – Bob Frey, Staff

1. MMITSS Queue Management - University of Arizona

Purpose: This application developed by the University of Arizona will utilize the THEA Connected Vehicle Pilot capabilities to address congestion issues on the exit of the REL at Twiggs and Meridian. The MMITTS Queue

Management System the exit of the REL at Twiggs and Meridian. The MMITTS Queue Management System detects spillbacks on the exit ramp and then uses MMITTS to clear the downstream queues and allow the exit ramp queue to dissipate by working with existing signals. This project will utilize existing CV pilot infrastructure to establish a framework for an additional three years (1 of design and deployment and 2 of performance measurement) of research that will be defined based on the needs and capabilities under emerging connected technology and the Vision Zero Program.

Funding: Capital Budget - \$324,000

Action: Request Board approval for THEA staff to execute a research agreement with the University of Arizona, College of Engineering in the amount not to exceed \$324,000 over three years for the Multi-Modal ITS (MMITS) queue management application implementation. Research agreement is subject to review and approval of THEA General Counsel.

2. Corridor Sketch Planning and Analysis – Concept Planning and Cost Estimation – WSP/RK&K

Purpose: To provide sketch level concept plans that address access, mobility and constructability based on the growth patterns Tampa Bay is experiencing. This includes sketch level concept planning and cost estimates, to include design, ROW, Construction and CEI, for up to three projects in FY 23.

Funding: Capital Budget - \$180,000

Action: Request Board approval for THEA staff to execute a purchase order in the amount not to exceed \$180,000 for the corridor sketch level concept planning and analysis.

3. Trails Micro-mobility Counts Program Development – Marlin Engineering

Purpose: To develop a micro-mobility (pedestrians, bicycles, scooters, and other micro transportation) data collection and monitoring service for three of THEA's trail systems – Selmon Greenway, Meridian Trail, and Brandon Parkway Trail. This task will include short-duration monitoring of micro-mobility traffic volumes. Data collected will be used to inform decisions for improving THEA's community enhancement program.

Funding: Capital Budget - \$82,000

Action: Request Board approval for THEA staff to execute a purchase order with the Marlin Engineering in the amount not to exceed \$82,000 for the development of the THEA Trails Micro-mobility Counts Program.

B. Operations & Maintenance – Bennett Barrow, Chairman – *Brian Pickard, Staff*

1. Construction, Engineering, and Inspection (CEI) Consultant for Meridian – Railroad Track Removal

Purpose: To procure the services of a CEI consultant to perform field engineering and testing for the removal of the railroad tracks which used to service Ardent Mills along Meridian Ave. Negotiations were conducted and finalized with KCI Technologies, Inc. selected previously (August 26, 2019, Board meeting) for push-button contracts for minor design and CEI projects.

Funding: Capital Budget - \$324,264

Action: Request the Board to authorize the Executive Director execute a purchase order with KCI Technologies, Inc. for \$324,264 to provide CEI services for the Meridian - RR Track Removal Project.

2. South Selmon Capacity Public Information Consultant – Through General Engineering Consultant Contract (GEC)

Purpose: To utilize GEC (HNTB) and their subconsultant, Versant, to provide public information consultant support during the procurement, design, and construction of the South Selmon Capacity Project.

Funding: Capital Budget - \$187,000

Action: Request the Board to authorize the Executive Director to execute a purchase order with HNTB for public information consultant support on the South Selmon Capacity Project.

V. Chairman – *Vincent Cassidy*

A. Acceptance of Board Member Evaluations of the Executive Director and General Counsel

VI. General Counsel – *Amy Lettelleir, Esquire*

A. Board Elections

- Chairman
- Vice-Chairman
- Secretary

VII. Staff Reports

A. Operations & Maintenance – *Brian Pickard*

B. Toll Operations – *Andy Lelewski*

C. Budget & Finance – *Jeff Seward*

VIII. Executive Reports

A. Executive Director – *Greg Slater*

1. Contract Closeout, Renewal and Expiration Report

2. Director's Report

B. General Counsel – *Amy Lettelleir, Esq.*

C. Chairman – *Vincent Cassidy*

1. Upcoming Meetings

- THEA Committees of the Whole – September 12, 2022
- THEA Board Meeting – September 26, 2022

IX. Old Business

X. New Business

XI. Adjournment

Tampa-Hillsborough County Expressway Authority
Minutes of the June 27, 2022, Board Meeting
1104 E. Twiggs Street
Tampa, FL 33602

The Tampa-Hillsborough County Expressway Authority held a public meeting at 1:30 p.m. on June 27, 2022, at THEA Headquarters, 1104 E. Twiggs Street in Tampa Florida. The following were present:

BOARD:

Vincent Cassidy, Chairman
Mr. Barrow, Vice Chairman
Mr. Alvarez, Secretary
Secretary David Gwynn, Member

Mr. Weatherford, Member
Mayor Jane Castor
Commissioner Ken Hagan

STAFF:

Greg Slater
Amy Lettelleir
Sue Chrzan
Bob Frey
Jeff Seward
Charlene Ponce
Chaketa Mister
Julie Aure
Lisa Pessina
Gary Holland

Krystina Stephen
Elizabeth Gray
Debbie Northington
Anna Quinones
Shannon Bush
Brian Ramirez
Emma Antolinez
Frederick Pekala
Charles Lockridge, Intern

OTHERS:

Alfonse Stewart, HNTB
Todd Josko, Ballard Partners
Carlos Ramos, Ballard Partners
Chris Santiago, Infotect
Joe Stanton, NMRS
Olivia Smith, Quest
John Generali, Wells Fargo
Rick Patterson, Raymond James
Brent Wilder, PFM

Drew Appler, B&N
Christina Kight, WSP
James VanSteenburg, HDR
Stefanie McQueen, HDR
Matthew Sansbury, RBC
Sally Dee, Playbook
Sarah Lesch, Playbook
Kamila Khasanak, Playbook

I. Call to Order and Pledge of Allegiance

Chairman Cassidy called the meeting to order at 1:30 pm, followed by the Pledge of Allegiance.

II. Public Input/Public Presentations/Public Comment on Whiting PD&E Study

There was no public input.

III. Discussion/Action Items

A. Planning and Innovation – Mr. Weatherford, Chairman

1. Adoption of THEA Work Program – Bob Frey, Staff

Mr. Frey gave a brief overview of the Capital Work Program which:

- Identifies capital projects and resource commitments
- Provides an annual snapshot of budgeting needs
- Reports six years out and continues ongoing preservation needs and planned enhancements (30) years.

The program consists of preservation and enhancement projects that will increase the safety, operations, and viability of the THEA system. The total budget for the six-year program is \$733M. The budget for FY2023 is \$90M.

Mr. Frey shared a map depicting the planned improvements, which were presented to the Board at its May workshop, and requested the Board approve the Capital Work Program.

The Chairman asked for a motion to approve. Mr. Alvarez moved approval, seconded by Mr. Barrow.

Chairman Cassidy asked how current the numbers are. Mr. Frey noted staff has gone back and updated the cost estimates and they are accurate to date.

Chairman Cassidy asked if a third of the work program is allocated to South Selmon. Mr. Frey replied in the affirmative.

The motion passed unanimously.

2. Acceptance of the Whiting Street Project Development and Environment (PD&E) Study

Mr. Frey presented the Whiting Street PD&E Study, which outlines corridor characteristics, evaluates impacts, informs of proposed mitigation strategies, and confirms there are no disproportionate impacts. He discussed the environmental considerations and community input and engagement that has occurred. Mr. Frey also reviewed the study area and the PD&E Study process, including the preferred alternative. The report is presented today for Board acceptance.

The Chairman asked for a motion to adopt. Mr. Barrow moved approval seconded by Mr. Alvarez.

Mayor Castor noted that this project has been in the works for a long time, and it is an important turning point for the City of Tampa, and it will have an incredible impact on downtown. The city has recently been discussing the expansion of the Convention Center, which will also be impacted. The mayor requested that agenda items 2 and 3, relative to the Whiting Street PD&E, be postponed for 60 days.

Mr. Cassidy asked General Counsel to discuss what it is the Board is being asked to approve, as well as what they are instructing staff to do in terms of reaching this design and what a 60-day delay would mean.

Ms. Lettelleir advised that THEA has been having ongoing discussions with the city and others. She noted that discussions can continue, but the board will have to accept the PD&E before those conversations can move forward.

The mayor noted that once the PD&E is accepted, the city could lose the ability to modify crucial elements of the plan.

Chairman Cassidy asked how THEA can work with the city while at the same time move forward and adopt the PD&E Study.

Ms. Lettelleir reiterated that acceptance of the PD&E would give staff direction to move into design and those discussions could occur - the PD&E must be accepted by the board in order to move forward.

Mr. Alvarez asked the mayor for clarification on her concerns. The mayor explained that it is the city's desire to ensure that once the Board accepts the PD&E that we can continue those discussions and the consideration of the expansion of the Convention Center and look at how Whiting flows from Water Street into the downtown area, as well as the flow numbers. Her understanding is that we cannot have discussions with the developers on the details until the PD&E is accepted, but can as a group – THEA, FDOT, and the city – to further refine the PD&E.

Mr. Frey noted that the approval of the PD&E only moves the project into design. The details will be determined at that point. With the approval of the PD&E, the City will be involved in the design discussions.

Mr. Weatherford did not see an issue with delaying for 60 days.

Ms. Lettelleir advised that staff cannot bring back design until PD&E is accepted.

Mayor Castor added that she wants to ensure that we refine what we show as a Board and as THEA before we bring it forward. She would like further discussion and opportunity to review the drawings that were just presented to the board before the board accepts the PD&E.

Chairman Cassidy asked for a clarification about what is different about the discussions that have occurred during this process versus what we are authorizing if we move forward with the PD&E today.

Mr. Slater provided some clarity, noting that the collaborative work we have done has gotten us to these concepts, and a delay would still allow us to continue to collaborate, but it would not allow us to get into some of those more advanced detailed design conversations that we do need to get to in order to make some final decisions.

Mr. Alvarez spoke in favor of the delay, noting it was only 60 days.

Mr. Frey noted that 60 days in the process will not impact the project; however, there are aspects of the project that cannot move forward without Board acceptance of the PD&E.

Mr. Barrow withdrew his second.

Mr. Alvarez amended his motion - to postpone the consideration of the PD&E for 60 days and to have it reconsidered at the August Board meeting, seconded by Mayor Castor.

The motion passed unanimously.

3. Adoption of Resolution 670 Approving the Whiting Street PD&E

Per the previous motion, this item was postponed for 60 days.

B. General Counsel – Amy Lettelleir, Esquire

1. Fiscal Year 2023 Commercial Property Insurance, Railroad Insurance and Crime Insurance

Ms. Lettelleir introduced Mr. Chris Connelly to present the proposed FY2023 Commercial Property Insurance, Railroad Insurance and Crime Insurance Coverage overview. Mr. Connelly reviewed the historical insurable values and property insurance rates, noting current rates with Zurich are 25% less than what the rates were in 2012, adding that the cumulative savings is more than \$1M over ten years. He then discussed the program renewals for the infrastructure property program, railroad liability, and crime insurance.

Mr. Weatherford asked about cyber coverage. Mr. Connelly noted that they do not currently place any cyber insurance for THEA, but it is part of a package policy you have with the Florida League of Cities.

The Chairman asked for a motion to approve. Mr. Alvarez moved approval, seconded by Mr. Barrow.

Chairman Cassidy asked for clarification about the \$1M savings mentioned during the presentation. Mr. Connelly explained that the savings is the relative rate today versus where it was in 2011, so the difference between what THEA was paying in relative rate versus what you are paying now would be \$100K per year, so it's cumulative savings.

The Chairman also asked about the term of the policy. Mr. Connelly confirmed it is a one-year policy.

Chairman Cassidy questioned whether THEA would still need railroad coverage once THEA removes the tracks in the downtown area.

Ms. Lettelleir explained that we would need coverage until the tracks are removed at which point THEA could cancel.

The Chairman asked if those were the tracks along Meridian. Ms. Lettelleir replied in the affirmative.

The Chairman then asked if those were the only tracks we need to insure. Mr. Connelly explained that the policy follows the contract, so the exposure under the contract with CSX is what is picked up.

To clarify, the Chairman asked if THEA pulls up the tracks will the coverage still be needed, or do we need to consider the Gandy crossing. Ms. Lettelleir stated coverage would be needed for the South Selmon project.

The motion passed unanimously.

2. Update Policy 402 and 403.01 Operations and Maintenance Policies

Ms. Lettelleir advised that Policy 402 and 403.01 Operations and Maintenance Policies are being updated to insert “THEA” and remove “FDOT” for bridge inspections and permitting, and she asked the board for approval of the change.

The Chairman asked for a motion to approve. Mr. Alvarez moved approval, seconded by Mr. Barrow.

The motion passed unanimously.

C. Operations & Maintenance – Mr. Barrow, Chairman – Anna Quinones, Staff

1. Consultant Services for the Inspection of THEA’s Structures

Ms. Quinones presented the Evaluation Committee’s final ranking of the three shortlisted firms to provide periodic inspections of THEA’s bridges and ancillary structures. Funding will come from the Operations and Maintenance budget in an amount not to exceed \$500,000.

Firm Name	Ranking
Burgess & Niple, Inc	1
MARLIN Engineering, Inc.	2
Kisinger, Campo & Associates, Corp.	3

Ms. Quinones requested the board approve the rankings and authorize and direct staff to negotiate and execute a contract with the number one ranked firm. If negotiations are unsuccessful, staff shall negotiate with the number two ranked firm. Contract is subject to review and approval of THEA General Counsel.

The Chairman asked for a motion to approve the ranking and direct staff to negotiate and execute a contract. Mr. Alvarez moved approval, seconded by Mr. Weatherford.

The motion passed unanimously.

2. THEA Right-of-Way Environmental Assessment Between the Kotfila Dog Park and 12th Street

Ms. Quinones presented an item to procure the services of a consultant to conduct an environmental assessment in THEA Right-of-Way between the Kotfila Dog Park and 12th Street. Funding will come from the Capital Budget. The request is for the Board to authorize the Executive Director to sign a Task with APTIM Environmental & Infrastructure to undertake an environmental assessment of soils and make recommendations for a not-to-exceed amount of \$52,0000 in accordance with the terms in Contract O-01219.

The Chairman asked for a motion to approve. Mr. Alvarez moved approval, seconded by Mr. Weatherford.

Mr. Alvarez asked for additional information regarding the need for these services.

Mr. Slater explained that THEA had previously done an assessment in the area right around the dog park, but if we want to expand our footprint of those facilities down toward 12th street, we need to do the same evaluation.

Chairman Cassidy also noted there have been discussions on using our property to the benefit of the community and before we can do that, we have to determine what the environmental issues might be.

The motion passed unanimously.

D. Audit and Finance – Commissioner Hagan, Chairman

1. Budget – Fiscal Year 2022 (July 1, 2022 – June 30, 2023)

Mr. Seward presented the highlights of the proposed FY 2023 Budget. He reported that the total estimated revenue increased by 11.75% budget over FY22 budgeted revenue. He also pointed out that a 2.5% toll indexing was applied; there was an increase of about 1.1M toll transactions; the Toll-By-Plate differential went unchanged; the Ardent Mills lease ended; and there was the addition of two new property leases.

He continued with Expenditures:

Expenditures increased by a net total of 14.14% over FY2022 budgeted expenditures; 5.63% of the increase are one time FY expenses.

Toll Operations expenditures include a 22.10% increase. This is due to an increase in Florida's Turnpike Enterprise expenses; an increase in image review costs and contractor staffing; oversight of FTE development of a new back-office system; and an increase in software licensing and IT support costs. Other expenses include an increase for in-lane equipment maintenance and an increase for tolling cabinet AC and generator maintenance costs.

Maintenance Expenditures include a 12.66% increase. The key drivers to the net increase include adding the development of Roadway Management System, Bridge Inspection Support, Bridge Management Program, and support of a contractual ITS Manager; increases in contractual maintenance costs; and an increase in expense of THEA taking over bridge inspections.

There is no change in the Communications expenditures.

Personnel Expenditures include a 7.43% increase. Key drivers include 5% annual salary COLA for all employees; 7% estimated increase in healthcare benefits; 3% increase in State mandated employer FRS contributions; addition of a third intern position and increase to intern hourly rate; and the reclassification of a vacant position for procurement support.

Professional Services Expenditures increased by 6.11%. Key drivers include an increase in outside legal support and the inclusion of corporate-wide contingency.

Administration Expenditures increased 10.17%. Key drivers include the increases in all property and liability insurance expenses, and an increase in professional development, tuition reimbursement, and conference travel.

Mr. Seward summarized the key take-aways:

- Revenue increased by 11.75%.
- Expenditures increased by 14.14%
- FY23 CIP is fully funded
- Projected to increase long-term CIP fund by \$50M
- Estimated Debt Service Ratio of 2.32 at end of FY23

The requested action to for the board to adopt the annual operating maintenance and administrative budget for FY2023.

The Chairman asked for a motion to adopt the FY2023 budget. Mr. Alvarez moved approval seconded by Bennet Barrow.

Mr. Weatherford about Full-Time Employee Equivalents and whether that is another way of saying full-time employees. Mr. Seward replied in the affirmative.

Mr. Alvarez extended his appreciation of what THEA is doing to invest in its employees.

Mr. Slater thanked the board for its support in investing in our staff.

Chairman Cassidy asked for a discussion on the cost of video tolling at an upcoming meeting to better educate board members on the technology.

The motion passed unanimously.

E. Executive Director Report – Greg Slater, Executive Director

Mr. Slater briefly discussed the task orders on the consent agenda, which represent tasks that are ongoing or that need to be available July 1 to continue advancement. These include activities such as:

- HNTB support for existing construction
- GEC and community relations activities for construction and pre-construction of the South Selmon
- Planning activities to inform our PDE program
- Traffic and revenue models
- Implementation activities of the workplan
- On-going activities for further development of our CV pilot, and
- Collaboration resources with FDOT

These task orders represent \$3,855,821 of the total \$114M budget - that includes capital and operating.

Chairman Cassidy asked the Board if there were any questions about any of the task orders on the consent agenda. There were none.

Mr. Slater then updated the Board on the Real Estate advisory services, noting that THEA has been working with outside procurement counsel and expect to have a final RFP on the street before the August Board meeting. It is THEA's intent to engage a qualified real estate advisory firm to assist in evaluating the proposed uses. Specific uses are unknown but could include various development, equity, or partnership structures or a combination thereof. Proposers will be required to identify in their Statement of Qualifications their complete suite of Advisory

Services they propose to provide and their unique, detailed approach to providing those services.

Mr. Slater continued with an update on toll transactions. In May, THEA processed 6.1M transactions, which is 14.9% higher than the same period in 2019 (pre-Covid). This was the third highest month in a row of toll transactions. He also noted that on a typical weekday in May THEA processed 217K transactions, with 152K transactions on weekend days.

Mr. Slater recalled that at the last board meeting there was a question about through traffic. He explained that the busiest section of the Selmon Expressway reported for April on the east side of Tampa is just west of 50th Street at 95K vehicles per weekday. The busiest section of the Selmon Expressway reported for April on the west side of Tampa is just east of Plant Avenue at 78K vehicles per weekday. Approximately 25K vehicles travel through both the east and west mainline gantries, and 6K vehicles travel through the Selmon West Extension and the East Mainline gantry for the whole system.

Next Mr. Slater discussed Cyber Security and THEA's focus on protecting the Authority. THEA has:

- Seven layers of protection on all our networks
- Three firewalls configured to direct valid traffic and block attacks
- Webroot scanning software running on all equipment
- Email servers configured for a balance of filtering most SPAM and allowing valid emails through
- Annual user training for all aspects of Cyber Security, as well as biennial assessments of our network protection systems
- A scheduled penetration test and more regularly scheduled online staff training

Finally, Mr. Slater gave an update on team THEA, noting that he is joining the Tampa Bay Stem Network Advisory Board. He also announced:

- Julie Aure is taking on a new role as procurement coordinator
- Judith Villegas received her Master of Engineering from the University of Florida
- Brian Ramirez is welcoming a new baby girl

Chairman Cassidy asked Ms. Lettelleir to update the Board on recent State Legislation regarding ransom. Ms. Lettelleir reported that for cyber security, the legislature passed new legislation that says municipalities/government agencies cannot pay ransom. There is an expectation that future discussion will occur because that leaves these agencies unable to negotiate/operate.

Mr. Weatherford asked about Cyber Security coverage. Ms. Lettelleir noted that THEA has \$1M coverage through the Florida League of Cities. As Mr. Connelly mentioned earlier, we can look for more, but companies are leaving the market and it's becoming very expensive.

Chairman Cassidy provided some clarification on the RFP for the (Real Estate) advisor, noting that it is to select an advisor who will help us evaluate the subsequent proposals for the next RFP. In other words, this RFP is not to determine what we should do with the property, it is to help us develop an RFP to evaluate alternatives for the use of our real estate. Mr. Slater concurred.

IV. Consent Agenda – Vince Cassidy, Chairman

A. Approval of the Minutes from the May 23, 2022, Board of Directors Meeting

B. Approval of Board Member Travel – IBTTA Global Summit – October 23-25, 2022

C. Approval of Annual Ongoing Task Work Orders – FY2023

1. ITS Master Plan Design Support, HNTB, \$100,000
2. Selmon East Ramp DB and CEI Support, HNTB, \$472,000
3. Meridian Track Removal Support, HNTB, \$80,000
4. East Selmon Paving Support, HNTB, \$60,000
5. South Selmon Community Relations and Communications Plan, Playbook, \$240,000
6. Software Modification and Testing to Support CUSIOP Interoperability, TransCore, \$53,821.56
7. Planning Support, WSP, \$100,000
8. Downtown Traffic Analysis Support, RS&H, \$100,000
9. Economic Analysis Support, CUTR, \$100,000
10. Annual Traffic and Revenue Agency Support, Stantec, \$80,000
11. Development Transportation Planning Support, HNTB \$75,000
12. Annual CPMP and Work Program Support, WSP, \$100,000
13. CPMP Procurement Support, WSP, \$30,000
14. CPMP Finance Support, WSP, \$60,000
15. GIS Support, WSP, \$75,000
16. CPMP Key Performance Indicator Support, WSP, \$170,000
17. Greenway/Facilities Urban Design Support, WSP, \$200,000
18. THEA Corridor Urban Design Traffic Support, KH, \$100,000
19. Strategic Projects/GEC Support, HNTB, \$100,000
20. Strategic Planning GEC Organizational Support, HNTB, \$100,000
21. Traffic & Revenue and New Project Sketch Level Support, Stantec, \$300,000
22. FDOT Corridors Central Office Coordination, HNTB, \$100,000
23. FDOT D7 Planning Collaboration, HNTB, \$100,000
24. System Resiliency Support, WSP, \$100,000

25. Emerging Technologies Support, HNTB \$100,000
26. Emerging Technologies Support, Yunex, \$100,000
27. ITS America Task Force, ITS America, \$100,000
28. ITS America Technical Support, HNTB \$60,000
29. Decision Support System – Needs Assessment and ConOps, HNTB, \$250,000
30. Decision Support System Performance Measures and KPIs Development, CUTR, \$150,000
31. Decision Support System Digital Labs and Data Hub, Yunex, \$100,000

The Chairman asked for a motion to approve the consent items. Mr. Alvarez moved approval, seconded by Mr. Weatherford. The motion passed unanimously.

V. Executive Reports

A. General Counsel – Amy Lettelleir

No report.

B. Chairman – Vincent Cassidy

1. Upcoming Meetings

- Committees of the Whole – July 11, 2022 (Cancel)
- Board Meeting – July 25, 2022 (Cancel)

- Committees of the Whole – August 8, 2022
- Board Meeting – August 22, 2022

VI. Old Business

No old business.

IX. New Business

No new business.

X. Adjournment

With no further business the meeting adjourned at 2:30 p.m.

APPROVED: _____ **ATTEST:** _____
Chairman: Vince Cassidy **Vice Chairman: Mr. Barrow**

DATED THIS 22nd DAY OF AUGUST 2022.

THEA TRAVEL ADVANCE REQUEST FORM

TRAVELER NAME: Bennett Barrow

DEPARTMENT: THEA Board Member

TRAVEL DATES & TIMES - FROM: Saturday, September 17, 2022 TIME: 8:00 ☒ AM
☐ PM
TO: Wednesday, September 21, 2022 TIME: 8:00 ☐ AM
☒ PM

PURPOSE OF TRAVEL: Attend IBTTA 90th Annual Meeting

DESTINATION: Austin, TX

TRAVEL G/L ACCOUNT #: _____

CPMP PROJECT #: _____

~~ ATTACH ALL SUPPORTING DOCUMENTATION ~~

No.	Expense	Expense Estimate	Actual Expense	
			P-Card Payment	Request for Payment (A/P)
1.	Registration Fee: <u>Attach agenda</u>	\$ 675.00	\$	\$
2.	Hotel:No. of Nights <u>4</u> X \$ <u>250.00</u> (Rate)	\$ 1,000.00	\$	
3.	Air Fare: <u>Attach supporting documents</u>	\$ 500.00	\$	
4.	Airline Baggage Fee: <u>1 checked bag each way</u>	\$ 50.00		
5.	*Per Diem:	\$ 225.00		\$
6.	Privately-owned Vehicle: <u>0</u> miles X <u>0.560</u> ¢/mile	\$ 0.00		
7.	THEA Vehicle Usage (Fuel) _____ miles	\$		
8.	Auto Rental: No. of Days _____ X \$ _____	\$ 0.00		
9.	Shuttle/Other Conveyance to & from Airport/Hotel:	\$ 200.00		
10.	Parking: No. of Days <u>0</u> X \$ _____ (Rate)	\$ 0.00		
11.	Other/Miscellaneous Expenses:	\$		
	Total	\$ 2,650.00	\$	\$

Note - Check Agenda: ☐ Any Meal(s) Provided ☐ No Meal(s) Provided

1.	Traveler Signature:		Date:
2.	Supervisor:		Date:
3.	Department Director:		Date:
4.	Executive Director:		Date:
5.	Director of Finance:		Date:

~~ Only forms with original signatures will be processed by Finance ~~

Instructions for Travel Advance Request Form

THIS COMPLETED FORM WILL ACCOMPANY THE COMPLETED TRAVEL REQUEST/AUTHORIZATION REPORT FORM TO RECEIVE AUTHORIZATION FROM THE DIVISION CHIEF FOR THE TRAVEL.

This form should be completed as early as possible, but no later than 4 weeks prior to start of travel.

Traveler Name/Department Name – Enter the information pertinent to the person who is traveling.

Travel Dates & Times – Enter the day, date and time the traveler will be leaving for and returning from the trip. The dates and times entered will be used to substantiate the per diem allowance.

Purpose of Travel – Enter the name of the seminar/training.

Destination – Enter the City and State of the seminar/training.

G.L. Account # – Enter the appropriate general ledger account number to be charged.

CPMP Project # – Enter the CPMP Project # if this travel is related to a project.

Expenses – All anticipated/estimated expenses will be listed in the **Estimates** column.

- **Registration Fee:** Enter the amount of the registration/seminar fee. Every effort should be made to obtain discounted advance rates whenever possible.
- **Hotel:** Rate should include **hotel fees & sales tax** if employee is staying in an out-of-state hotel. Hotels within the State of Florida will be sales tax exempt **just include hotel fees**.
- **Airfare & Baggage:** Airfare can be determined by using an internet travel service. Travelers will be reimbursed for one (1) checked bag each way. Be sure to obtain the receipts.
- ***Per Diem:** Enter the total amount of the per diem – calculate per policy.
- ****Privately-Owned Vehicle:** If using your own vehicle, calculate number of miles from home to seminar or from work to seminar (whichever is closer). Attach a DOT map or MapQuest map to justify mileage. The rate is set by IRS and changes yearly.
- ****THEA Vehicle Usage (fuel):** Include an estimate of fuel needed in order to complete the trip using a company vehicle. Don't include if a THEA card will be used.
- **Auto Rental:** This should be coordinated with the state approved contract vendor who can provide an estimate.
- **** Other Conveyance Costs:** Enter the amount estimated for shuttle services or other to/from airport.
- ****Parking:** Type the estimated amount needed for parking. Could be for airport or hotel parking fees. Airport parking will be reimbursed only at the "Economy Lot" rate at the airport of departure. Hotel parking fees will be reimbursed only at the "Self-Park" rate.
- ****Other/Miscellaneous Expenses:** Please give a description of other anticipated fees.
 - *This item must be detailed on Request for Payment Form*
 - **These items, the traveler must obtain original receipts & upon return attach to the Voucher for Reimbursement of Traveling Expenses to receive full reimbursement.*

Approval Process – All approvals must be obtained before travel arrangements are made.

- (1) Traveler signs form ensuring all documents are attached.
- (2) Traveler's supervisor/director approves the form and forwards them to the Executive Director.
- (3) The Executive Director will forward the packet to the Finance Department.
- (4) Finance Director will review the documents and obligate the funds for the trip.
- (5) Traveler will forward the packet to AP.
- (6) If any changes over \$300 are made prior to actual travel, the travel packet must go through another approval process.

NOTE: If any changes are made during travel the additional expense may be the responsibility of the traveler.

Attach all supporting documentation to this form, including, but not limited to:

- **Complete conference/meeting agenda**
- **Hotel information**
- **Airfare selection**
- **Auto rental information**
- **POV - mapquest or DOT map**
- **Parking - Airport and Hotel**
- **Shuttle/other conveyance and incidental estimates**
- **Extended stay documentation and detail in a note to file**
- **Alternative route plans (include details in a note to file)**
- **Cost comparison (include details in a note to file)**

HNTB PR 20230XXX

HI-0216 C-XX

ITS Grounding Mitigation (7/1/22 - 6/30/23)

Scope Of Services

HI-0216 C-XX

Purpose & Need

With their small in-house staff, THEA requires support to provide engineering and administrative support to assist THEA Staff on the ITS Grounding Mitigation Project. This task work order is for ITS Grounding Mitigation Support from 7/1/22 - 6/30/23.

Scope

Provide support as required to assist THEA Staff on the ITS Grounding Mitigation Project. Anticipated work includes providing analysis, engineering, project management, administrative and operational support as necessary to complete the ITS Grounding Mitigation Project.

SUMMARY FEE SHEET																					
ATTACHMENT "A"																					
PROJECT DESCRIPTION:		Tampa-Hillsborough Expressway Authority				HNTB PR 20230XXX															
GEC CONTRACT NO.		HNTB PR 20230XXX				ITS Grounding Mitigation (7/1/22 - 6/30/23)															
HI-0216 C-XX																					
PRIME CONSULTANT:		HNTB Corporation																			
ACTIVITY		Sr. Technical Advisor		Project Manager		Chief Eng./Planner Sr. Proj. Eng.		Sr. Eng./Planner		Proj. Eng./Planner		Engineer/Planner		Sr. Technician		Clerical		TOTAL		Avg. Hourly Rate	
		Man Hours	Hourly Rate	Man Hours	Hourly Rate	Man Hours	Hourly Rate	Man Hours	Hourly Rate	Man Hours	Hourly Rate	Man Hours	Hourly Rate	Man Hours	Hourly Rate	Man Hours	Hourly Rate	By Activity	Salary Cost By Activity		
MDOT Collaboration Support		6	\$859.20	36	\$4,904.64	36	\$3,409.92	36	\$2,620.80	48	\$2,572.80	48	\$2,115.84	21	\$819.84	16	\$405.76	247	\$17,708.80	\$71.70	
Total Man Hours		Total Salary [(MHxHR)]		6	\$859.20	36	\$4,904.64	36	\$3,409.92	36	\$2,620.80	48	\$2,572.80	48	\$2,115.84	21	\$819.84	16	\$405.76	247	\$71.70
		Basic Activities Maximum Limiting Fees (Salary Costs)																		\$17,708.80	
		Cost Elements & Additives																			
		(a) 2.78 Multiplier																		\$49,230.46	
Direct Expenses		4.37%		\$ 773.87		SUBTOTAL (Cost Elements applied to Basic Activities Fee):														\$49,230.46	
		(d) Direct Reimbursables																		\$773.87	
		Total Project Cost:																		\$50,004.34	
		Maximum Limiting Amount:																		\$50,000.00	



TAMPA HILLSBOROUGH ESPRESSWAY ATHORITY (THEA)

CCTV GROUNDING TESTING RESULTS & RECOMMENDATIONS REPORT

January 12, 2021

Prepared By



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Introduction

This document provides the testing results and recommendations to the grounding system at ITS CCTV locations as listed herein. This work was performed throughout the Tampa Hillsborough Expressway Authorities system.

The results of the data obtained during the site visit and ground measurements performed during the site visit, are presented in this report with TransCore recommendations.

The test results tables include the following information:

1. The Camera ID for the location where the test was performed
2. The GPS latitude and longitude of the location where the test was performed
3. The date on which the test was performed
4. Contact information of TransCore Staff, name, signature of the person conducting witnessing and verifying the test
5. Summary Table showing the ground resistance reading and soil conditions
6. Remediation recommendations

The site inspection performed at locations where CCTV are mounted to light poles or other structures on the elevated portion of the roadway do not permit fall-of-potential tests due to the elevated manner of the sites. These grounding locations were measured for resistance at each accessible lighting circuit ground using a clamp-on ground resistance tester. Additionally, and in preparation for bonding the lighting circuit ground to these locations, the closest lighting load center ground was measured by fall-of-potential method.

At locations where a standalone CCTV exists on a dedicated pole or a CCTV is installed on a ground mounted light pole, the ground resistance was measured by fall-of-potential method. These grounds were measured for earth/ground resistance, soil resistivity and current flow. This test was conducted using the fall-of-potential method as described in the Institute of Electronic and Electrical Engineers (IEEE) Standard 81. At locations where there was not enough available ground area for conducting a fall-of-potential test, the grounds were measured for resistance using a clamp-on ground resistance tester.

Make	Model Number	Serial Number
AEMC Instruments	Ground Tester Model 6416	134243TJDV



Figure 1: Ground resistance test equipment

Testing Summary Table – Fall- Of -Potential

CAMERA ID	CAB OHMS READING	10FT	20FT	30FT	40FT	50FT	60FT	70FT	80FT	90FT	100FT	AVG	Soil Conditions
101	7.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
102	3.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
103	3.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
104	3.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
105	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
106	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
107	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
108	3.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
109	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
111	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
112	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
113	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
114	20.4	3.74	3.85	3.94	4.01	4.09	4.2	4.44	5.36	9.06	287	32.97	Slightly Moist
115	5.9	4.96	5.01	5.08	5.18	5.09	5.15	5.3	5.38	5.85	136.5	18.3	Slightly Moist
116	43.2	3.63	3.78	3.79	3.8	3.84	3.89	3.97	4.07	4.32	5.52	4.06	Slightly Moist
117	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
118	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
119	0.36	1.51	1.56	1.58	1.59	1.61	1.65	1.71	1.86	2.65	10.08	2.58	Slightly Moist
120	3.4	2.77	2.94	3.04	3.12	3.19	3.25	3.35	3.48	3.86	6.75	3.57	Slightly Moist
121	5.9	3.87	3.98	4.09	4.19	4.37	4.63	5.15	6.24	10.02	55.3	10.18	Dry
122	16.4	3.15	3.31	3.42	3.5	3.6	3.73	3.93	4.32	5.56	8.76	4.3	Dry
123	5	2.2	2.39	2.45	2.51	2.5	2.58	2.68	2.6	3.3	6.4	2.96	Slightly Moist
124	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
125	10	6.19	6.19	5.41	5.76	6.19	6.51	6.95	7.64	9.6	59.2	11.3	Slightly Moist

Camera ID

CAMERA ID	POLE TYPE	CABINET LOCATION	GPS LOCATION	TEST DATE	NAME	SIGNATURE	WITNESS	SIGNATURE	EMPLOYER
101	ITS POLE	ON POLE	27.57'06.01"N, 82.27'03.75"W	1/4/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
102	ITS POLE	ON POLE	27.56'59.42"N, 82.26'56.15"W	1/5/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
103	ITS POLE	ON POLE	27.57'07.53"N, 82.25'56.60"W	1/5/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
104	ITS POLE	ON POLE	27.57'08.45"N, 82.26'52.68"W	1/5/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
105	STREET LIGHT POLE	INSIDE BRIDGE	27.57'20.18"N, 82.26'50.18"W	1/6/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
106	STREET LIGHT POLE	INSIDE BRIDGE	27.57'19.39"N, 82.26'18.93"W	1/6/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
107	STREET LIGHT POLE	INSIDE BRIDGE	27.57'08.14"N, 82.26'00.05"W	1/6/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
108	ITS POLE	ON POLE	27.57'10.36"N, 82.25'31.19"W	1/5/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
109	STREET LIGHT POLE	ON POLE	27.57'16.96"N, 82.25'05.95"W	1/6/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
110	STREET LIGHT POLE	INSIDE BRIDGE	27.56'59.36"N, 82.24'08.88"W	1/6/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
111	STREET LIGHT POLE	INSIDE BRIDGE	27.56'59.99"N, 82.23'28.69"W	1/6/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
112	STREET LIGHT POLE	INSIDE BRIDGE	27.57'01.01"N, 82.22'49.44"W	1/6/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
113	STREET LIGHT POLE	INSIDE BRIDGE	27.57'01.23"N, 82.22'13.52"W	1/6/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
114	STREET LIGHT POLE	ON POLE	27.56'38.37"N, 82.21'41.73"W	1/5/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
115	ITS POLE	ON POLE	27.56'28.07"N, 82.21'36.89"W	1/5/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE

CAMERA ID	POLE TYPE	CABINET LOCATION	GPS LOCATION	TEST DATE	NAME	SIGNATURE	WITNESS	SIGNATURE	EMPLOYER
116	STREET LIGHT POLE	ON POLE	27.56'11.70"N, 82.21'31.19"W	1/6/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
117	STREET LIGHT POLE	ON POLE	27.56'02.08"N, 82.21'25.45"W	1/6/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
118	ITS POLE	ON POLE	27.55'45.16"N, 82.20'24.63"W	1/5/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
119	STREET LIGHT POLE	ON POLE	27.55'37.82"N, 82.19'14.43"W	1/5/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
120	ITS POLE	ON POLE	27.55'39.53"N, 82.19'07.21"W	1/5/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
121	ITS POLE	ON POLE	27.55'43.94"N, 82.19'12.49"W	1/5/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
122	ITS POLE	ON POLE	27.55'34.36"N, 82.19'02.72"W	1/5/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
123	ITS POLE	ON POLE	27.55'42.14"N, 82.18'55.99"W	1/5/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
124	STREET LIGHT POLE	INSIDE BRIDGE	27.27'06.28"N, 82.25'47.60"W	1/6/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE
125	ITS POLE	ON POLE	27.55'40.12"N, 82.19'56.81"W	1/6/2021	RUSSELL FELGEMACHER		JOSHUA NEAL		TRANSCORE

Site Observations

CAMERA ID	NOTES
101	.46A on the ground and neutral (REF NEC 250.6), 121.4v on circuit
102	Loose ground connection- 122.2v on circuit
103	122.3v on circuit
104	122.2v on circuit
105	No cabinet ground, circuit ground only, separate conduit from streetlighting (REF NEC 725.55), 121.8v on circuit
106	No cabinet ground, circuit ground only, separate conduit from streetlighting (REF NEC 725.55), 122v on circuit
107	No cabinet ground, circuit ground only, separate conduit from streetlighting (REF NEC 725.55), 123.1v on circuit (a little high)
108	122.5v on circuit
109	No cabinet ground, separate conduit from streetlighting (REF NEC 725.55) 119.1v on circuit
110	No cabinet ground, no circuit ground (REF NEC 250.4 A3), separate conduit (REF NEC 725.55), broken conduit, 122v on circuit
111	No cabinet ground, separate conduit from streetlighting (REF NEC 725.55) 120.1v on circuit, broken conduit
112	No cabinet ground, separate conduit from streetlighting (REF NEC 725.55) 122.7v on circuit
113	No cabinet ground, separate conduit from streetlighting (REF NEC 725.55) 121.5v on circuit
114	121.9v on circuit, separate conduit from streetlighting (REF NEC 725.55)
115	122.1v on circuit
116	121.3v on circuit, (REF NEC 725.55)
117	No cabinet ground, separate conduit from streetlighting (REF NEC 725.55) 120.9v on circuit
118	Ground on cabinet is broken (open on ground resistance meter), unable to perform test. 122.4v on circuit
119	122.3v on circuit
120	121.6v on circuit
121	121.7v on circuit
122	121.7v on circuit
123	121.6v on circuit
124	No cabinet ground, circuit ground only, separate conduit from streetlighting (REF NEC 725.55), 109v on circuit (SPD is bad)
125	125.3v on circuit, very high voltage

NEC Requirements

250.6. Objectionable Current Flowing Through the Grounding Path (A) Arrangement to Prevent Objectionable Current. To prevent a fire or electric shock, the grounding of electrical systems, circuit conductors, electrical equipment, and conductive metal parts must be done in a manner that objectionable current will not flow over the effective fault current path.

Improper Neutral-to-Ground Connection [250.142]

Panelboards - Bonding of the neutral terminal to the case of a panelboard on the load side of service equipment will create a parallel path for neutral current which allows neutral current to flow on the neutral conductor as well as the fault current path.

Mixing the grounded neutral between systems - The NEC does not prohibit the mixing of different systems in the same raceway or enclosure and as a result, maintenance personnel, as well as others who are not qualified, can accidentally mix up the grounded (neutral) conductors between the systems in violation of 210.4. When this occurs, the fault current path will carry objectionable neutral current, and a dangerous voltage can exist on metal parts of the electrical system, even when it appears that all circuits have been de-energized.

Electromagnetic interference from objectionable neutral current on the fault current path and building structure can disrupt the performance of sensitive electronic equipment, particularly video monitors, electronic microscopes, etc.

The NEC addresses voltage induction as a concern. Voltage induction means voltage can actually transfer from one cable to another due to the magnetic field generated by the higher voltage cable. In the case of Ethernet data cabling, this would not be acceptable. The effect would be a piece of sensitive electronic equipment receiving voltage when it should not, potentially cause a fire hazard or voltage strong enough to cause personal injury or even death. DO NOT, under any circumstances, run Ethernet data cabling in parallel to extremely high voltage cable unless the power cabling is properly grounded.

Ethernet data cable should be shielded and properly grounded at one end only. Power cable or Ethernet data cable (or both) should be run through separate metal conduit. All Conduit(s) should be properly electrically grounded. Cables should be separated by a distance of at least 8 inches, even if both are running in their own separate metal conduits.

If unshielded (U/UTP) Ethernet cable is used in proximity to extremely, high-voltage electrical wire, then start increasing the separation distances to larger distances. A reference number to start with separation would be four feet, or 48 inches. Although the power cabling may be 480V, the amperage being pushed across the cable may require increasing of this distance.

[725.55] (Separation from Other Systems) Class 2 or Class 3 circuit conductors are not permitted in any enclosure, raceway or cable with conductors of power or Class 1 conductors. Class 2 and Class 3 circuits can be installed with Class 1, non-power-limited fire alarm and medium power network-powered broadband communications circuits if they are separated by a barrier (see Figure 725-30 un725-30 725-55B.cdr).

Inside an enclosure, Class 2 and Class 3 circuits can be run in a raceway to separate them from Class 1, non-power-limited fire alarm and medium power network-powered broadband communications circuits. Class 2 and Class 3 conductors can be installed with power conductors in boxes or enclosures, if the power circuit conductors are introduced solely to connect to the equipment connected to Class 2 and 3 circuits and certain spacing criteria and voltage requirements are met.

Class 2 conductors and other Class 2 conductors can be installed with Class 3 conductors with other Class 3 conductors. However, if Class 2 conductors are installed with Class 3 conductors, Class 3 wiring methods must be utilized for the Class 2 conductors.

Recommendations

CAMERA ID	RECOMMENDATIONS
101	Objectionable current was found on the ground. Need to check all grounds and neutrals to make sure they are separated.
102	Tighten all ground terminals to correct torque settings per NEC 110.14(D)
103	No current issues with grounding
104	No current issues with grounding
105	To avoid voltage induction, electrical interference, and a potential shock hazard the CCTV and lighting conductors need to be in separate conduit.
106	To avoid voltage induction, electrical interference, and a potential shock hazard the CCTV and lighting conductors need to be in separate conduit.
107	A ground needs to be installed to the cabinet with 2AWG tinned copper. To avoid voltage induction, electrical interference, and a potential shock hazard the CCTV and lighting conductors need to be in separate conduit.
108	No current issues with grounding
109	A ground needs to be installed from a ground rod to the cabinet with 2AWG tinned copper. To avoid voltage induction, electrical interference, and a potential shock hazard the CCTV and lighting conductors need to be in separate conduit.
110	A ground needs to be installed for the electrical circuit. Repair all broken conduit leaving the cabinet. To avoid voltage induction, electrical interference, and a potential shock hazard the CCTV and lighting conductors need to be in separate conduit
111	To avoid voltage induction, electrical interference, and a potential shock hazard the CCTV and lighting conductors need to be in separate conduit. Repair broken conduit from cabinet.
112	To avoid voltage induction, electrical interference, and a potential shock hazard the CCTV and lighting conductors need to be in separate conduit.
113	To avoid voltage induction, electrical interference, and a potential shock hazard the CCTV and lighting conductors need to be in separate conduit.
114	To avoid voltage induction, electrical interference, and a potential shock hazard the CCTV and lighting conductors need to be in separate conduit.
115	No current issues with grounding
116	To avoid voltage induction, electrical interference, and a potential shock hazard the CCTV and lighting conductors need to be in separate conduit.
117	Repair damaged cabinet ground. To avoid voltage induction, electrical interference, and a potential shock hazard the CCTV and lighting conductors need to be in separate conduit.
118	Cabinet appears to have a ground conductor terminated but circuit stays open while performing Ohms test which means the ground is broken and needs to be repaired/replaced.
119	No current issues with grounding
120	No current issues with grounding
121	No current issues with grounding
122	No current issues with grounding
123	No current issues with grounding
124	A ground needs to be installed to the cabinet with 2AWG tinned copper. To avoid voltage induction, electrical interference, and a potential shock hazard the CCTV and lighting conductors need to be in separate conduit. SPD needs to be replaced in cabinet.
125	No current issues with grounding

Conclusion

This report shows the recommendations to be implemented to the system, if Tampa Hillsborough Expressway Authority (THEA) elects to consider. The continued maintenance and upkeep of these CCTV cameras is of paramount importance in the functionality of the system.

CCTV Bridge locations (105, 106, 107, 110, 111, 112, 113, 124) - Separating the CCTV and street lighting circuiting would require coring into the bridge for a new conduit path and new conduit to be installed for the CCTV cabinets.

CCTV locations not on the bridge that share a pole with lighting (109, 114, 116, 117, 119) - Separating the CCTV and street lighting would require installing new conduit on the outside of the street lighting pole for camera power.

Surge Protection - Recommend that all current surge protection for the CCTV cabinets is updated to Type 1 120v SPD with neutral to ground protection or an equivalent device.

Florida adapted the 2017 NEC in Aug 2019 requiring specific torque settings for all electrical terminals, lugs, etc. While conducting the testing, multiple grounds were found to be loose. Would recommend that all terminal connections in every cabinet be checked with a calibrated torque tool as specified in 110.14(D) of the NEC. Torque specifications are listed on the equipment or through manufacturer's specifications.

Appendix: Site Photos

Site 101





Site 103



Site 108



Site 109

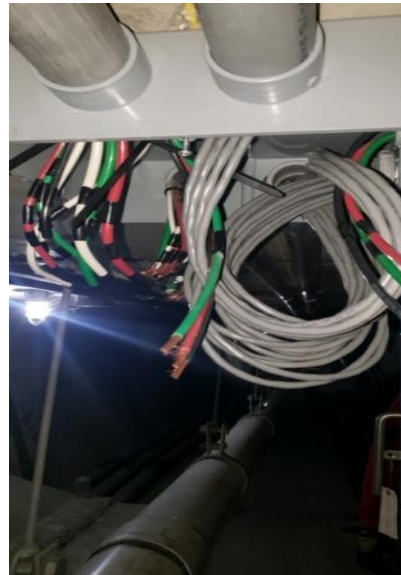


Site 117





Miscellaneous Photos





Emerging Connected Technologies Vision Zero: THEA CV Pilot - MMITSS Queue Management Enhancement

Revised: April 21, 2022

Estimated Project Start Date: May 16, 2022

Introduction

This project is intended to use the THEA Connected Vehicle Pilot capabilities to address a serious congestion issue that exists where vehicles exit the Selmon Expressway Reversible Express Lanes (REL) (FL-618) at the signalized intersection of Twiggs St. and Meridian Ave. during the AM Peak commute period. Queues frequently extend up the Twiggs St. ramp and onto the expressway due to congestion at the downstream intersections. Primarily, vehicles that exit the expressway and either make a right turn at Twiggs St. and Meridian Ave. (yield movement) then proceed to Twiggs St. and Nebraska Ave. (signalized intersection) or they pass straight through Twiggs St. and Meridian Ave. (signalized intersection) and travel southbound along Meridian Ave. through a series of coordinated traffic signals (Kennedy Blvd., Jackson St., Whiting St., Cumberland Ave., and Channelside Dr.). The network is shown in Figure 1.



Figure 1. THEA MMITSS Corridor

The connected vehicles deployed in Phase 3 of the THEA Connected Vehicle pilot have shown that the extent of the queue can be estimated during the peak commute period (reference USF report). The concept for this MMITSS Queue Management system is based on the ability to detect queue spillback on the exit ramp and then use the MMITSS priority control logic to “flush” the downstream queues and allow the exit ramp queue to dissipate.

This proposal includes descriptions of the tasks that will be taken to successfully modify and demonstrate the MMITSS Queue Management concept and establishes a framework for an additional two (2) years of research that will be defined based on needs and capabilities under the Emerging Connected Technologies Vision Zero program.

Tasks (Assumed Start Date of TBD)

Task 1: Concept of Operations and Requirements: Target Completion – 3 weeks after start

A high-level concept of operations (ConOps), functional requirements, and system requirements will be developed that captures the need and the proposed MMITSS Queue Management approach. The ConOps will identify the key stakeholders including THEA and the City of Tampa and the roles each of these stakeholders have in the system. It will identify the system architecture and how MMITSS will be integrated into the existing traffic management system, including integration with the RSUs, traffic signal controller, addition of the intersection edge processor, and a Linux server at the Traffic Operations Center. The ConOps will include a high-level description of the queue flush algorithm that will be used to manage the queue spillback within the normal traffic signal management operations. Specifications for interfaces and hardware (e.g., intersection edge processor and Linux server) will be developed.

Task 2: Coordination Deployment: Target Completion – approx. 90 days after start (to allow for procurement, installation, etc)

An initial MMITSS system that provides coordination along Meridian will be deployed. This will serve two purposes: 1) it will give city of Tampa Traffic personnel experience with MMITSS in an operational environment, and 2) it will allow collection of connected vehicle data (e.g., basic safety messages) that can be used in the development of the queue estimation algorithm (Task 3). Operational experience with MMITSS will allow City of Tampa Traffic personnel to provide feedback on MMITSS operation and configuration. The deployment will include:

1. Development of MAP messages for each intersection
2. Configuration of MMITSS components for each intersection
3. Configuration of MMITSS coordination timing for each intersection
4. Installation of MMITSS Roadside Processor (TBDA, but a Raspberry Pi 4¹ is the initial target platform)
5. Integration into a server located at the THEA with the City of Tampa Transportation Center. This server will be used for data collection and management of MMITSS. (It is assumed that the THEA or City of Tampa will provide a server: Linux Ubuntu 18.04 or 20.04)
6. Integration Testing

Task 3: MMITSS Queue Control Design and Implementation: Target Completion – approximately 90 days for development and testing after completion of Task 1

Based on the Concept of Operations, Functional, and System Requirements developed in Task 1, either existing or new MMITSS components will be modified or created, respectively. The MMITSS software architecture is shown in Figure 2. The left side of Figure 2 represents the possible non-Priority Eligible Vehicles (OBU only) and Priority Eligible Vehicles (OBU plus the

¹ The operating temperature of a Raspberry Pi 4 is 85 degree C

(<https://copperhilltech.com/content/The%20Operating%20Temperature%20For%20A%20Raspberry%20Pi%20E2%80%9393%20Technologist%20Tips.pdf>)

MMITSS Vehicle Side Processor VSP). The trajectory aware component collects data from basic safety messages that are received by the roadside unit (RSU). This data will be used to estimate the queue length on the Selmon Expressway Twiggs St. exit ramp and, possibly, the queues at the downstream intersections (assuming the market penetration rate is sufficient). The queue estimation algorithm will be developed by the University of South Florida (Professor Sisinnio Concas) based on previous research. If required, the use of infrastructure-based detectors will be considered in a future year effort (see Task 7 below). A new MMITSS component, called the Queue Request Generator, that is similar to the Coordination Request Generator, will provide priority requests to each downstream signal (from Twiggs and Meridian). These priority requests will be coordinated to ensure the queue on the expressway exit ramp is “rapidly” reduced.

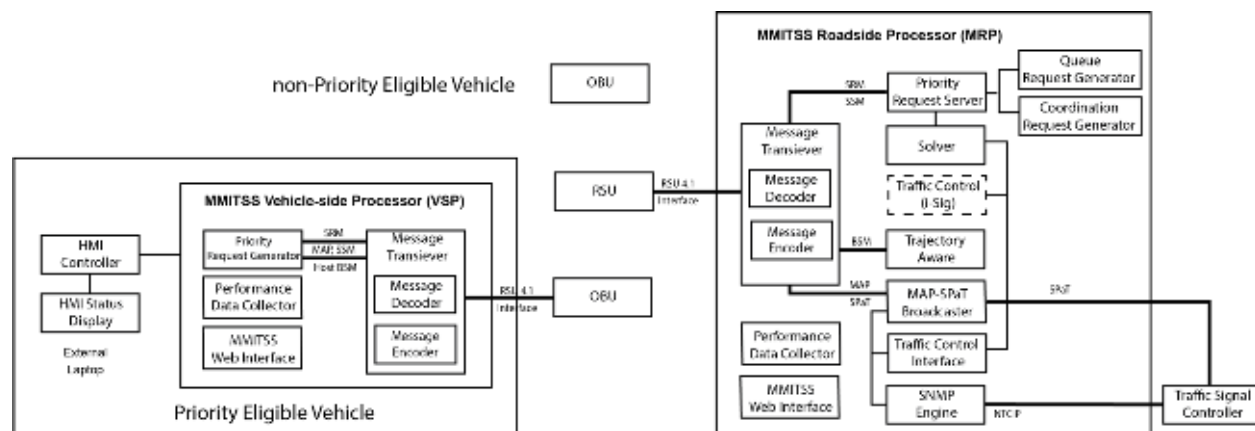


Figure 2. MMITSS software architecture (VSP not required for Phase I of this project).

Task 4: Modeling and Analysis: Target Completion TBD 90 days in parallel with Task 3

Using an existing VISSIM model of the Tampa corridor and the MMITSS Simulation System, the operation of the MMITSS Queue Control capability will be tested and evaluated for effectiveness. A variety of traffic demand patterns will be simulated and several control strategies, such as “flushing” the downstream queues by turning all signals green as soon as possible or “coordinated flush” the downstream signals by sequencing them over time, will be evaluated. The goal of the modeling and analysis will be to demonstrate the operation to City of Tampa Traffic Engineers and to evaluate the most effective strategies.

Task 5: MMITSS Queue Control Deployment: Target Completion - 30 days after completion of Task 3

The tested and evaluated MMITSS Queue Control system will be deployed to the intersections. The MMITSS version used in Task 2 will be replaced with the new version, the configuration will be updated, and the system will be tested in the field. UArizona team members will be present during the deployment, integration testing, and initial operational period (e.g., 5 days). THEA and UArizona will establish a set of MOEs to evaluate the performance.

MMITSS is deployed using Docker Containers, so the upgrade only requires replacement of the current MMITSS image with the new image that has the modified and new MMITSS components.

Assessment will be conducted by the University of South Florida (Professor Sisinnio Concas) using the methodology established during the Connected Vehicle Pilot Study. Queue length (maximum, average) at the identified intersections, travel time and travel time reliability will be used to assess performance of the system.

Task 6: Training, Operations, and Support: Target Completion– 2 weeks after Task 5

UArizona will provide training and operational support to City of Tampa Traffic personnel. Operators will be briefed in the theory of operation, interfaces, configuration, and procedures for starting and stopping MMITSS. Training will be conducted in two parts: 1) a 1-day classroom type training session will be held that explains MMITSS architecture, algorithms, and user interfaces, and procedures for configuring intersections, including observation of a VISSIM simulation of MMITSS operation, and 2) 2-days of operational training that will involve roadside observation of the MMITSS Interface (web-based tool), traffic signal controller, and MMITSS team members. Support will be provided for 6 months following the installation and operation of MMITSS for troubleshooting and operational support.

Task 7: Scoping Effort for Year 2 and 3 Research – 1 week in parallel with Task 6

The project team will identify additional opportunities, including special treatment for pedestrians and the use of the Intelligent Signal Control (I-SIG) component of MMITSS with non-connected vehicle detection.

Budget and Budget Justification
The University of Arizona

		YEAR 1	YEAR 2	YEAR 3	TOTAL
Personnel	Hours/year				
Prof. Larry Head, PI	116	\$16,794	\$17,298	\$17,817	\$51,909
TBN, Graduate Assistant	1032	\$26,788	\$27,591	\$28,419	\$82,798
Subtotal-Personnel		\$43,582	\$44,889	\$46,236	\$134,708
Fringe Benefits	Rate				
Prof. Larry Head, PI	31.9%	\$5,357	\$5,518	\$5,684	\$16,559
TBN, Graduate Assistant	13.0%	\$3,482	\$3,587	\$3,694	\$10,764
Subtotal-Fringe Benefits		\$8,840	\$9,105	\$9,378	\$27,323
TOTAL DIRECT LABOR		\$52,422	\$53,994	\$55,614	\$162,030
Travel		\$7,104	\$7,104	\$7,104	\$21,312
Other Direct Costs					
Tuition Remission		\$12,348	\$13,336	\$14,403	\$40,087
Supplies		\$ 500	\$ 500	\$ 500	\$ 1,500
Total Direct Costs		\$72,374	\$74,934	\$77,621	\$224,929
Modified Total Direct Cost (MTDC) Base (excl. tuition remission)		\$60,026	\$61,598	\$63,218	\$184,842
Indirect Costs @ 53.5% MTDC		\$32,114	\$32,955	\$33,822	\$98,891
TOTAL PROJECT COSTS		\$104,488	\$107,889	\$111,443	\$323,820

PERSONNEL

Dr. K. Larry Head, Principal Investigator

Effort for Prof. Head is budgeted at 0.75 summer month per year to coordinate the overall research, educational and outreach activities of the project. A 3% inflationary increase is factored into subsequent years. Fringe benefits are calculated at 31.9% (full-benefit employee rate) of the salary request.

TBN, Graduate Assistant I

A to-be-named Graduate Assistant is budgeted for 800 academic hours (0.50 FTE) and 232 summer hours per year to gather and analyze data for the project. Salary requested for the Graduate Assistant is based on current University of Arizona College of Engineering pay rates for Graduate Assistant/Associates. A 3% inflationary increase is factored into subsequent years. Fringe benefits are calculated at 13% (graduate assistant/associate rate) of the salary request.

Salary requested for named personnel is based on the individual's current rate as stated in the University's Employee Management system. The estimate of hours and/or hourly rates is furnished solely for the purpose of this proposal. It is understood that the University will not be required to maintain a record of hours of effort under any resultant award. The University operates per 2 CFR 200.430 (h) and (i), and its financial system is based on a percent of effort, not hours worked.

FRINGE BENEFITS

Full-Benefit Employee: 31.9%
Graduate Assistant: 13.0%

The University of Arizona defines fringe benefits as direct costs and estimates benefits as a standard percent of salary applied uniformly to all types sponsored activities, and charges benefits to sponsors in accordance with the federally negotiated rates in effect at the time salaries are incurred. Fringe benefits are comprised of FICA, Retirement, Unemployment Compensation, Worker's Compensation, Liability Insurance, Health/Dental/Life Insurance, and Dependent Care Assistance. The rates used in the proposal budget are based on the current federally negotiated rate agreement and can be accessed via this link: <https://www.fso.arizona.edu/financial-management/ere-rates>.

TRAVEL (DOMESTIC)

Purpose of trip:	Prof. Head and Graduate Assistant travel to Tampa, FL for collaboration meetings with sponsor.	
No. of trips:	4	
No. of travelers:	2	
Origin:	Tucson, AZ	
Destination:	Tampa, FL	
Duration:	3 days	
Cost Per Person:	Airfare	\$350
	Ground Transportation	\$75
	Per Diem	\$153 (\$51/day)
	Lodging	\$310 (\$155/day)
	Total per Traveler	\$888
	Total per Year	\$7,104
	Project Total	\$21,312

The travel budget was estimated in accordance with the University's travel policy (see <http://policy.fso.arizona.edu/fsm/1400>). Travel funds are based on current economy-class airfare, current State of Arizona published lodging, per diem, and airport parking rates, airport shuttle services, and car rental, as well as historical costs. Travel costs will be reimbursed in compliance with federal and university policies.

OTHER DIRECT COSTS

Materials and Supplies - \$1,500

Materials are budgeted for \$500 per year for research materials needed to support the proposed scope of work at UArizona.

Other-Graduate Tuition Remission - \$40,087

Tuition for Graduate Assistants is a mandatory benefit and is charged in proportion to the amount of effort Graduate Assistants will work on a project. For Graduate Assistants budgeted at 0.50 FTE or greater, tuition remission is calculated at a rate of \$6,174 per academic semester (\$12,348 per academic year). For Graduate Assistants budgeted at less than 0.50 FTE, tuition remission is calculated at a rate of \$3,087 per academic semester (\$6,174 per academic year). An 8% inflationary increase is factored into out years.

Additional information pertaining to how the University calculates tuition remission is located at: <https://grad.arizona.edu/funding/ga/benefits-appointment#tuition-remission>. Graduate tuition rates are

based on the University's institutionally approved rates as of date of budget preparation. Rate information is located on the University website at: <https://tuitioncalculator.fso.arizona.edu>.

Total Other Direct Costs: \$41,587

Total Direct Costs: \$224,929

INDIRECT (F&A) COSTS

The University's DHHS-approved facilities and administrative (F&A) cost rate is 53.5% of Modified Total Direct Costs (MTDC). Graduate Tuition Remission, capital equipment, participant support, and subcontractor costs in excess of \$25,000 is excluded from the MTDC base used to calculate F&A costs.

The University's approved F&A rates, including a link to the current Department of Health and Human Services-approved rate agreement, is available at <https://research.arizona.edu/administration/build-budget/FA-Costs/FA-rates>.

Modified Total Direct Cost Base: \$184,842

Total Indirect (F&A) Costs: \$98,891

Total Project Costs (Direct + Indirect): \$323,820

**MISCELLANEOUS PLANNING & TRAFFIC SERVICES
THEA CONTRACT NO. P-00819-WSP
WORK ASSIGNMENT No: 19**

Sketch-Planning Analysis Support

1.0 DESCRIPTION OF SERVICES

The CONSULTANT, as part of the Miscellaneous Planning & Traffic Services Consultant Services contract for the Tampa-Hillsborough Expressway Authority (THEA), will provide services to THEA as an extension to THEA staff to develop sketch planning analysis for up to two corridors or project areas. Services to be provided by WSP and subconsultant (RK&K) shall include on-demand support as needed for THEA staff.

2.0 SERVICES TO BE PERFORMED

WSP and RK&K shall each provide the following sketch analysis support within two corridors/project areas (one each) with complementary work product review as needed:

- Sketch-planning level concept development
 - Identification of potential issues and concerns regarding alternatives developed:
 - Effect on local traffic patterns
 - Potential intersection considerations
 - Drainage and permitting
 - Potential ROW constraints
 - Utilities and utility impacts
 - Constructability
 - Identification of potential project phases
- Cost estimate for sketch-planning level concept:
 - Estimates to include cost for:
 - Future PD&E studies and environmental clearances with agencies
 - Future Design cost
 - Future ROW costs including needs for off-site stormwater facilities.
 - Future Construction and Construction Engineering and Inspection (CEI) costs
- Coordination with other ongoing THEA studies
- Quality Control and Assurance for all deliverables
- Meeting/presentation attendance to discuss the above items as needed

3.0 SERVICES TO BE PROVIDED BY THEA

- THEA shall make task assignments, review deliverables, and provide management of WSP and RK&K staff
- WSP will provide oversight management and review support as needed

- THEA shall provide information, studies, and files when necessary to complete assignments related to this task

4.0 LENGTH OF SERVICE

Original contract, as amended.

5.0 ESTIMATE OF SERVICE

Details of the estimated costs are contained in Attachment “A”.

ATTACHM ENT A: ESTIM ATE OF W ORK

Task Work Order: **19**
 Project Manager: Bob Frey
 Contract Number: P-00819-WSP
 Project Description: Sketch Analysis
 Completion Date: 30-Jun-23

WSP Tasks		Staff Classification							Staff Hours by Activity	Burdened Cost by Activity
		Chief Planner	Project Manager	Chief Engineer	Senior Planner	Planner	Engineer	Designer		
		Loaded rates based on averaged base rate per classification with overhead, fixed fee, and FOCM	\$293.44	\$380.36	\$283.40	\$188.03	\$104.08	\$137.82	\$138.88	
1	New Corridors Data Collection and Analysis									
	Research and Identification of Areas Issues/ Opportunities	8		12	40	40	80	32	212	\$32,902.48
	Concept Development	4		12	40	16	60	90	222	\$34,529.44
	Cost Estimate Development	4		32	16		90	12	154	\$27,321.40
3	PROJECT M ANAGEM ENT & COORDINATION									
	Project Management/ Consultation/ Oversight		32						32	\$12,171.52
	Total Staff Hours by Classification	16	32	56	96	56	230	134	620	\$106,924.84
	Total Staff Cost (Unburdened) by Classification	\$4,695.04	\$12,171.52	\$15,870.40	\$18,050.88	\$5,828.48	\$31,698.60	\$18,609.92		

WSP Fee Estimate	\$106,924.84
Subconsultant Fee: RK& K	\$82,502.36

TOTA FEE	\$189,427.20
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RATE SCHEDULE - RK&K

assumes a 3% annual increase.

TotalRevised 7/15/22



THEA

Micromobility Traffic Monitoring Strategic Plan and Data Collection Services

Scope of Work

July 26, 2022

Developed for:

Anna Quiñones, AICP, Project Manager
Tampa Hillsborough Expressway Authority
1104 East Twiggs Street, Suite 300
Tampa, Florida 33602
P: 813.272.6740 x124 C: 813.422.8125
anna.quinones@tampa-xway.com

Developed by:

Elizabeth Stolz, Director of Traffic Data Programs
Marlin Engineering, Inc., Emerging Technologies and Data Analytics
C: 303.501.5300
estolz@marlinengineering.com

A Introduction

The following scope of work is for services provided by Marlin Engineering, Inc. (Marlin) and the Tampa Hillsborough Expressway Authority (THEA). Marlin will provide micromobility traffic monitoring program development services that include the development of a strategic plan from which THEA can build upon and the best in practice data collection and micromobility facility monitoring activities. The first step in building any traffic monitoring and data collection program is to develop a strategic plan. This strategic plan will include all the elements required to build a high-quality traffic data monitoring program. Below are the sequential steps (tasks) in building the strategic plan that Marlin will work with THEA to complete.

Additionally, this scope of work is for the short-duration monitoring of micromobility traffic volumes only. It is anticipated that future continuous counting and monitoring would be necessary and would require an updated scope of work with updated pricing and scheduling. Also, this scope of work can be expanded to include other locations upon request and increase in budget. As THEA begins monitoring traffic on its facilities, program monitoring activities are expected to be expanded over time. The best technologies at the time of data collection will be utilized by the Marlin staff.

B Work Tasks

1. Task 1 – Kick-off Meeting - will include a strategy meeting to obtain user needs, facility specifics (for all 3 facilities), and details for the site selection activities including follow-on contract needs for the implementation of the plan (data to be collected once the strategic plan is completed)
2. Task 2 – Gather Information / Virtual Site Selection - will including documenting methods for selecting sites specific to the 3 THEA facilities and geographic area, will include conducting virtual



site visits within the 3 facilities evaluating the entire geographic area, and will include conducting on-site data collection site selection visits for all 3 facilities

3. Task 3 – On-site Selection – will include a on-site visits to all 3 facilities to review and evaluate each facility for the optimal and most accurate data collection sites and technologies for collecting traffic volume count data
4. Task 4 – Findings Meeting – will include a meeting with data partners, users, and stakeholders
5. Task 5 – Develop Strategic Plan - will include documenting the sites selected, equipment needed for each site, and overall strategic plan that will provide a step-by-step method of building the THEA micromobility traffic monitoring program
6. Task 6 – Collection of Short-duration Counting data – will include traffic data collection activities at 2 locations on 3 different facilities 2 times per year

All tasks will include strategic and thoughtful consideration of all federal, state and other local agency program and data needs. For example, data formats that adhere to the Federal Highway Administration (FHWA) traffic monitoring guidebook will be considered. During the development of the program, Marlin will also consider all aspects of collecting data including cost, accuracy of data, integration and data dissemination, and data user's needs. Marlin will also coordinate with FDOT Transportation Data and Analytics staff to facilitate partnership development and maximization of resources.

C Resources

Resources used on this project are organized by resource types. There are 3 different types of resources required for the completion of this project including project management, data processing/analyses support, and data collection staff. Each are listed and described below.

1. RESOURCE 1 – Project Management – Elizabeth Stolz will serve as the project manager for all activities related to this contract. All matters related to the traffic monitoring activities should be requested in writing and sent to Elizabeth directly. Her contact information is:

Elizabeth Stolz, Director of Traffic Data Programs
estolz@marlinengineering.com
303-501-5300

2. RESOURCE 2 – Data Processing/Analyses Supporting Staff – All supporting staff will be managed by the project manager and provide data processing (qa/qc and reporting preparation) as well as analyses of data collected
3. RESOURCE 3 – Data Collection, Installation, and Field Monitoring Staff – Highly skilled and trained professionals will install traffic monitoring equipment to collect data for this project

D Deliverables

Marlin Engineering will provide the following deliverables during the micromobility traffic monitoring strategic plan development project:

1. Kick-off Meeting – Marlin staff will conduct a kick-off meeting with THEA staff to determine, document, and define project goals and objectives



2. Virtual Site Selection Visits – Marlin staff will guide THEA staff through the virtual site visit process on all 3 THEA facilities and document all activities and findings during the virtual site visit process
3. On-Site Selection Visits – Marlin staff will be on-site to conduct site selection visits on a total of 3 facilities and document all activities and findings during the site visit process
4. Strategic Plan – Marlin staff will develop a strategic plan for future micromobility traffic volume counting efforts that will include a summary of all the activities conducted during this project
5. Data Equipment Installation – Marlin staff will install equipment on the facilities for a 2-week duration, twice per year (On-peak/Off-peak)
6. Data Collection – Marlin staff will download, format, manage, and provide quality control and quality assurance (QA/QC) of all data collected
7. Final Electronic Data Package – Marlin staff will provide all data in an electronic standard format that is user-friendly and easily accessible as well as understood by all data users, data will also be formatted and collected using all state and federal formatting and data collection practices so that data can be easily integrated and shared with the Florida Department of Transportation (FDOT) and Federal Highway Administration (FHWA)

E Cost and Hours for Service

Task #	Task Name	Hours	Cost
1	Kick-off Meeting	8	\$2,000
2	Gather Information / Virtual Site Selection	20	\$5,000
3	On-Site Selection	16	\$4,000
4	Findings Meeting	24	\$6,000
5	Strategic Plan	80	\$20,000
6	Data Collection for 2 years - 6 sites/year	*N/A	\$39,681.36
	Travel/Lodging	N/A	\$5,000

****TOTAL \$81,681.36**

*N/A – Not Applicable by hours this cost is calculated by short-duration data collection site – this includes 3 sites * 2 times a year for 3 facilities (or 6 sites/year two years in a row) where the total cost is \$3,306.78/site and a total of \$39,681.36

**Travel/lodging costs are estimated at \$5,000 making the final project budget \$81,681.36.

FIRM PREPARING ESTIMATE:

FINANCIAL PROJECT ID:

FAP NO.:

PROJECT NAME/From/To:

COUNTY:

PROJECT TYPE & DESCRIPTION:

DATE PREPARED:

KCI Technologies, Inc.

THEA RR removal and 3 Intersection Mods

Hillsborough

CEI Services

7/22/2022

Department Estimate

x

Consultant Estimate

	442027-4-62-01																		
Item No.	Personnel Classifications	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Man Months	Man Hours	Hours with 1.15 Factor	Rates	Totals
		1	2	3	4	5	6	7	8	9	10	11	12	13					
1	CEI Senior Project Engineer - KCI	0.08	0.15	0.15	0.15	0.15	0.15	0.15	0.08						1.05	173.25	199.24	202.65	\$40,375.48
2	CEI Project Administrator - KCI	0.25	0.40	0.60	0.60	0.60	0.40	0.40	0.25						3.50	577.50	664.13	155.00	\$102,939.38
3	CEI Contract Support Specialist - KCI	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10						0.80	132.00	151.80	102.60	\$15,574.68
4	CEI Senior Inspector #1 KCI		0.50	1.00	1.00	1.00	0.10	0.10							3.70	610.50	702.08	97.56	\$68,494.44
5	CEI Senior Inspector #2 KCI			0.15	0.15	0.15									0.45	74.25	85.39	97.56	\$8,330.40
6	CEI Senior Inspector #3 KCI			0.15	0.15	0.15									0.45	74.25	85.39	97.56	\$8,330.40
7	CEI Inspector #1 - KCI		1.00	1.00	1.00	1.00	1.00	1.00							6.00	990.00	1,138.50	70.46	\$80,218.71
	TOTAL	0.43	2.15	3.15	3.15	3.15	1.75	1.75	0.43						15.95	2,631.75	3,026.51		\$324,263.49

HNTB PR 20230XXX

HI-0112 C-XX

2022-2023 South Selmon Capacity DB PIO Support (9/1/22 - 6/30/23)

Scope Of Services

Purpose & Need

With their small in-house staff, THEA requires support to provide Communications and Public Information support to assist THEA Staff during the procurement phase of the THEA South Selmon Capacity DB project. This task work order is for support services from 9/1/22 - 6/30/23.

Scope

Provide support on the South Selmon Capacity DB project as required to assist THEA Staff in the implementation of their communications and public information program. Anticipated work includes providing public information staff support necessary to assist with the THEA Communications Program for the South Selmon Capacity DB project procurement phase.

SUMMARY FEE SHEET																						
ATTACHMENT "A"																						
PROJECT DESCRIPTION:		Tampa-Hillsborough Expressway Authority				HNTB PR 20230XXX																
GEC CONTRACT NO.		HNTB PR 20230XXX				2022-2023 South Selmon Capacity DB PIO Support (9/1/22 - 6/30/23)																
HI-0112 C-XX																						
PRIME CONSULTANT:		HNTB Corporation																				
ACTIVITY		Sr. Technical Advisor		Project Manager		Chief Eng./Planner Sr. Proj. Eng.		Sr. Eng./Planner		Proj. Eng./Planner		Engineer/Planner		Sr. Technician		Clerical		TOTAL		Avg. Hourly Rate		
		Man Hours	Hourly Rate \$	Man Hours	Hourly Rate \$	Man Hours	Hourly Rate \$	Man Hours	Hourly Rate \$	Man Hours	Hourly Rate \$	Man Hours	Hourly Rate \$	Man Hours	Hourly Rate \$	Man Hours	Hourly Rate \$	Manhours By Activity	Salary Cost By Activity			
			147.50		140.33		97.56		74.98		55.21		45.40		40.21		26.12					
South Selmon Capacity DB PIO Support			\$0.00	8	\$1,122.64	8	\$780.48		\$0.00		\$0.00		\$0.00		\$0.00	4	\$104.48	20	\$2,007.60	\$100.38		
Total Man Hours		Total Salary [(MHxHR)]		0	\$0.00	8	\$1,122.64	8	\$780.48	0	\$0.00	0	\$0.00	0	\$0.00	4	\$104.48	20	\$2,007.60	\$100.38		
		Basic Activities Maximum Limiting Fees (Salary Costs)																		\$2,007.60		
		Cost Elements & Additives																				
		(a) 2.78 Multiplier																		\$5,581.13		
Direct Expenses		4.37%		\$87.73		SUBTOTAL (Cost Elements applied to Basic Activities Fee):															\$5,581.13	
		(d) Direct Reimbursables																		\$87.73		
		Subconsultants- Versant Strategies																		\$181,300.00		
		Total Project Cost:																		\$186,968.86		
		Maximum Limiting Amount:																		\$187,000.00		

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**CONTRACT RENEWAL
and
EXPIRATION REPORT
(> \$30,000)**

Report month: August 2022

Project Manager	Firm	Description of Services	Contract Effective Date	Contract Expiration Date	Term of Contract (Years)	Bid / Renew / End
Shari	Metric Engineering	ITS Network Support	3/1/2019	2/28/2023	3 Years + 2 additional one-year renewal option	Renew (2nd year renewal ~ 2/28/22 - 2/28/23)