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Figure 1 – Key Challenges and AW Solutions

The Team of Archer Western (AW), P&S Paving (P&S), GAI Consultants (GAI), and TranSystems (TCC) – the AW Team – is proud to submit this LOI to FDOT District 5 for the Wekiva Pkwy Section 8 Design-Build (DB) in Seminole County. The AW Team was specifically formed to achieve the unique goals associated with this complex project:

- Delivering a project that cleanly interfaces with Wekiva Pkwy Section 7A and I-4 Beyond the Ultimate (BTU) Section 3 and allows for simple future construction.
- Implementing an intuitive Maintenance of Traffic (MOT) plan that reduces impacts to users, provides clear guidance to tourists, and allows for efficient construction with limited "throw-away".
- Maintaining consistent and continuous coordination with key stakeholders such as Seminole County, utilities, and affected residents and businesses.
- Aggressively pursuing a schedule that matches opening of the interchange with the adjacent Wekiva Pkwy Section 7A project, allowing for full functionality of the Wekiva Pkwy system.
- Meeting all major commitments, including those within the Environmental Assessment and specific right-of-way (R/W) commitments stipulated within the RFP.

These unique goals require a team that has the proven, hands-on, local experience designing and constructing projects similar to Wekiva Pkwy Section 8. *WE ARE THAT TEAM!* AW and GAI have over 13 years experience working together to construct high-quality limited access facilities. Our relationship began with the construction of the I-10/I-95 Interchange "The Big I" (AASHTO 2011 America's Best Construction Project) for FDOT District 2 in 2004, and has continued through construction of the current I-95/I-4/US 92 Interchange DB Project for District 5, along with numerous other similar award-winning DB projects. *We are committed to bringing the entire team currently delivering the highly* ***successful I-95/I-4/US 92 Widening and Interchange project with the same firms – AW, GAI, P&S, TCC, Universal Engineering Sciences (UES), Traffic Management Solutions (TMS) – and the same design and construction leadership and production staff,*** *including* ***Construction PM Jeff Hutchinson, PE and Design PM Steve Boylan, PE.*** This team has repeatedly demonstrated technical expertise, innovation, and a collaborative spirit to develop win-win solutions throughout the life of the project.

The AW Team has developed a number of potential solutions, including Alternate Technical Concepts (ATCs), to critical project challenges (shown in Table 1) that save time, improve operations, and reduce impacts to the public:

Table 1 – Key Challenges & Solutions

Challenges	AW Team Solution
A Complex serpentine design from EB Wekiva Pkwy to EB I-4	ATC #1 – Construct a more gradual grade separation with a higher design speed that "flips" the geometry – placing the ramp underneath the Wekiva Pkwy to SR 417 movement, greatly improving constructability and enhancing the parkway "feel"
B Complex ramp geometry between SR 417, Wekiva Pkwy, and SR 46	ATC #2 – Improve access by further separating the SR 417 and Wekiva Pkwy movements from those accessing SR 46 – eliminating costly, complex straddle-bent bridges and providing an intuitive sequence of exits for motorists
C "Throw Away" of existing, expensive steel braided ramp bridge between CR 46A and I-4 EB	ATC #2 – Reconfigure access so this bridge (health index of 99.6, and sufficiency rating of 97.7) can be maintained, preserving the investment made by FDOT only 15 years ago
D Complexity of bridge construction over EB I-4 to Wekiva Pkwy ramp	ATC #3 – Modify ramp geometry to eliminate this costly bridge while maintaining design speed and improving constructability
E Avoiding overhead transmission line relocations	ATC #4 – Develop a design that lowers the profile in the vicinity of the overhead transmission line crossings, allowing them to remain and saving an estimated $6M
F Significant weave issue between SR 46 to WB I-4 traffic and the WB exit from I-4 to Wekiva Pkwy/SR 417	ATC #5 – Construct a ramp braid to separate these movements as is done elsewhere in the interchange – significantly improving operations and eliminating an extraordinarily short weave (1,400')
G Obtaining 16.5' of vertical clearance for the direct connect ramp from the express lane system to SR 417/ Wekiva Pkwy	Optimize alignments, minimize bridge depth, and set the profile on I-4 EB to provide this clearance and maintain effective drainage and stormwater treatment for the ramp below
★ Future re-work of drainage systems and lighting to accommodate I-4 BTU	Design ponds and conveyance for ultimate stormwater volumes requirements, and provide a lighting system that accounts for I-4 BTU

SECTION 1 – DESIGN-BUILD FIRM NAME AND QUALIFICATIONS

The contracting entity for this project will be Archer Western Construction, LLC. Our Team's prequalifications are presented in the accompanying organization chart.

SECTION 2 – PAST PERFORMANCE EVALUATIONS, DESIGN-BUILD PROJECT EXPERIENCE, ORGANIZATION, STAFFING

2.1 Contractor Grades

AW has consistently demonstrated our ability to manage FDOT's most complex projects with a high level of quality, safety, and schedule adherence, while maintaining focus on your critical project objectives. *This is emphasized by our current statewide average* ***CPPR score of 100 – earned primarily on FDOT's largest and most complex projects.*** Most importantly, AW's Florida Region has completed every project for FDOT on time, and in most cases, well ahead of schedule. Our current DB projects have achieved an average 14% schedule reduction, and our ***I-95/I-4/US 92 Project for District 5 (CPPR 100) has completed all interim milestones to date ahead of schedule.*** Individual CPPR scores for our similar projects can be found in Tables 2 and 3.

2.2 Professional Consultant Grades

GAI has gained significant experience with FDOT as EOR on many DB projects, and has worked closely with FDOT and CEI staff throughout design and construction, achieving excellent CPPR grades on every project. This is further demonstrated by GAI's average consultant performance grade of 3.4 on conventional projects.

2.3 Performance History with Other States or Agencies if None with Department – *Not Applicable*

2.4 Design-Build Project Experience of the Contractor and Professional Consultant

Over the past 13 years, AW and GAI have developed a strong partnership, successfully working together on some of the largest and most complex projects for FDOT, including the I-95/I-4/US 92 Systems Interchange, I-10/I-95 Operational Improvements, the I-10/I-95 Interchange, Overland Bridge, I-95 Express Rigid Concrete, SR 9B Phase 1, and the MLK Interchange Project. Our numerous joint DB projects, listed in Table 2, illustrate the unparalleled DB project experience our Team brings to FDOT. Additionally, we have a history and reputation of providing innovative and cost savings solutions, including:

- I-4/I-95/US 92 Interchange DB (AW/GAI) – *Modification eliminating major R/W acquisition and significant earthwork, MSE walls, and bridge length* – ***$40M in Savings.***
- SR 9B Phase 1 DB (AW/GAI) – *Modification to the 9B roadway profile – a reduction of over 1 million CY of embankment* – ***$7M in Savings.***
- SR 115/MLK Interchange DB (AW/GAI) – *Modification to the SR 115/ Phoenix Ave./Port Entry Interchange* – ***$10M in Savings.***
- I-10/I-95 Operational Improvements – *Modification reducing bridge deck and salvaging existing concrete paving* ***– $16M in Savings.***

Table 2 – Joint Design-Build Project Experience (P) - Prime, (S) - Sub

I-95/I-4/US 92 Systems Interchange, FDOT D5, $205M, Completion 2018, CPPR 100 | ***AW (P), P&S (S), GAI (P), TCC (S), UES (S)***
This project includes reconfiguration of the systems interchange of I-95 with I-4 and with US 92, along with widening of I-95 from 4 to 6 lanes from SR 44 to US 92. GAI's innovative redesign of the interchange resulted in saving over $20M of R/W acquisition. Additional scope items include drainage improvements, bridge widening/replacement, and ITS modifications. This project fronts the Daytona International Airport, and required extensive coordination with both the FAA and airport operations for crane use and permanent construction. *Ref: Paul Wabi, PE (386) 740-3594. Key Staff: AW: Brian Sparks, Kevin McGlinchey, Jeff Hutchinson. P&S: Pat Richards. GAI: Steve Boylan, Kevin Leadbetter, Bobby Jamieson, Bob Baxter, Sylvester Asiamah, DJ Silverberg, Randy Miner, Ali Noorollahi. TCC: Eric Wooley. UES: Jeff Pruett.*

I-95 at I-10 Operations Improvements, FDOT D2, $117M, Completion 2020, CPPR 100 | ***AW (P), GAI (P), UES (S), Hanson (S)***
The AW Team is providing design and construction services for operational improvements to the existing interchange at I-95 and I-10 in Duval County, Florida. The $117M DB project includes the widening of the Fuller Warren Bridge over the St. Johns River for an additional lane and a pedestrian path. *Ref: Craig Teal, PE (386) 961-7703. Key Staff: AW: Brian Sparks, Kevin McGlinchey. GAI: Bobby Jamieson, Bob Baxter, Jim Murray, Randy Miner, Sylvester Asiamah, Lloyd Gurr, Kevin Leadbetter. Hanson: Bikram Behzadi. UES: Jeff Pruett.*

I-95 Overland Bridge, FDOT D2, $160M, Completion 2017, CPPR 94 | ***AW (P), GAI (S), UES (S)***
Reconstruction of I-95 through downtown Jacksonville, new CD roads, new full interchange with Atlantic Boulevard, 14 new bridge structures and a 3rd level flyover. Major components include: widening/reconstruction, interchange modification, PCCP, major bridge, asphalt/concrete paving, public involvement, MOT/High volume, drainage improvements, environmentally sensitive, interagency/utility coordination. *Ref: Craig Teal, PE (386) 961-7703. Key Staff: AW: Brian Sparks, Kevin McGlinchey. GAI: Randy Miner. UES: Jeff Pruett.*

SR 115/21st St. Interchange, FDOT D2, $31M, 2014, CPPR 100 | ***AW (P), GAI (P), UES (S)***
This project included interchange improvements with three new bridge structures utilizing shallow foundations, curved structure over the JAXPORT Railroad, 71,000 SY of PCCP, permanent and temporary MSE wall design, and a complex MOT plan that kept four lanes of traffic open on SR 115 at all times during reconstruction of the mainline and associated bridges. *Ref: Craig Teal, PE (386) 961-7703. Key Staff: AW: Kevin McGlinchey, Brian Sparks. GAI: Kevin Leadbetter, Steve Boylan, Bobby Jamieson, Bob Baxter, Ron Hoogland, Anna Zhang, Sylvester Asiamah, Randy Miner. UES: Jeff Pruett.*

SR 9B (SR 5/US 1 to I-295), FDOT D2, $68M, 2013, CPPR 91 | ***AW (P), GAI (P), UES (S)***
This project included a system to system Interchange at I-295 and SR 9B, three miles of new interstate alignment, PCCP construction, 13 bridge structures over waterways, wetlands and active interstate highways, stormwater management facility design and permitting, wetland permitting oversight *Ref: Kathy Thomas, PE (386) 961-7533. Key Staff: AW: Brian Sparks, Kevin McGlinchey, Daniel Madden. GAI: Kevin Leadbetter, Steve Boylan, Randy Miner, Bob Baxter, Ron Hoogland, Bobby Jamieson, Sylvester Asiamah, Matt Bolyard. UES: Jeff Pruett.*

I-95/I-295 North Interchange (Phase II), FDOT D2, $176M, Completion 2020, CPPR 100 | ***AW (P), GAI (CEI), UES (S)***
This project adds lanes and improve connectivity between I-95 and I-295 at the north end of Jacksonville near Jacksonville International Airport. The project is approximately six miles in length, with the pavement section primarily concrete. The project also includes extensive MSE walls, soil remediation and 4,000 LF of noise walls. There are 13 new bridges, plus two temporary Acrow bridges, and seven bridge removals. *Ref: Brian Benton, PE (904) 360-5544. Key Staff: AW: Brian Sparks, Kevin McGlinchey. GAI: John Saunders. UES: Jeff Pruett.*

I-95 Express Rigid Concrete Pavement, FDOT D6, $89M, Completion 2020, CPPR 100 | ***AW (P), GAI (S), UES (S)***
The project reconstructs 3.041 miles of SR 9A/I-95 concrete mainline pavement and shoulder pavement including five bridge railing retrofits. The project also includes the construction of Express Lanes Emergency Stopping Sites (ESS) in the median at 5 locations between NW 62nd St. and NW 131st St., based on the emergency directive of Rick Scott (Governor of Florida) for safety along I-95. The inside (median) shoulder has been reduced in width to accommodate the ESS sites and vary from 2.5' to a maximum of 13.33' at the ESS sites. *Ref: Mario Cabrera, PE (305) 216-4962. Key Staff: AW: Brian Sparks, Kevin McGlinchey. GAI: Luis Tellechea, Judson Fohr, Jim Murray, Anna Zhang, Steve Boylan, Bobby Jamieson, David Verlander, Randy Miner, Chelsea Romero. UES: Jeff Pruett.*

2.5 Similar Types of Work Experience

Additional relevant work experience directly applicable to the Wekiva Pkwy Section 8 project is offered in Table 3.

Table 3 – Similar Project Experience (P) - Prime, (S) - Sub

	Project	Value	Design-Build	Express Lanes / Tolls	Widen / Reconstruct	Major Interchange	New Alignment	Major Bridge	System to System	Drainage / Perm.	Complex MOT	Utility Coordination	Adj. Project Coord.	Public Involvement
	Wekiva Pkwy Section 6 (Design/Design-Build RFP), FDOT D5, 2015 | *GAI (P)* *Key Staff: GAI: Steve Boylan, Bobby Jamieson, Sylvester Asiamah, Bobby Jamieson, Randy Miner, Jim Schlottman, DJ Silverberg, Jim Murray.*	$215M		●	●	●	●	●	●	●	●	●	●	●
	I-10/I-95 Interchange Ph 1, FDOT D2, 2010 *AW (P), GAI (CEI) , UES (S), TCC (S)* *Key Staff: AW: Jeff Hutchinson, Jamie Rogers, John Saunders.*	$158M			●	●	●	●	●	●	●	●	●	●
	I-295 Express Lanes – East, FDOT D2, Completion 2018, CPPR 100 *AW (P), UES (S)* *Key Staff: AW: Brian Sparks, Kevin McGlinchey. UES: Jeff Pruett.*	$140M	●	●	●	●	●	●	●	●	●	●	●	●
	I-4 Crosstown Connector Interchange, FDOT D7, 2014, CPPR 102 *AW (P)* *Key Staff: AW: Kevin McGlinchey, Jamie Rogers.*	$420M		●	●	●	●	●	●	●	●	●	●	●
	SR 91 (Florida Turnpike)/I-4 Interchange, FTE, Completed 2014 | *GAI (P)* *Key Staff: GAI: Steve Boylan, Bobby Jamieson, Lloyd Gurr, Kevin Leadbetter, Randy Miner, Sylvester Asiamah, Anna Zhang.*	$12M	●		●	●		●	●	●	●	●	●	●
	US 1/San Sebastian River, FDOT D2, 2013, CPPR 106 | *AW (P), GAI (P), UES (S)* *Key Staff: AW: Kevin McGlinchey, Brian Sparks. GAI: Kevin Leadbetter, Steve Boylan, Randy Miner, Bob Baxter, Bobby Jamieson, Ron Hoogland, Anna Zhang.*	$13M	●		●			●		●	●	●	●	●
	Veterans Expressway Widening, FTE, 2018 | *GAI (P), UES (S)* *Key Staff: GAI: Steve Boylan, Sylvester Asiamah, Judson Fohr, Lloyd Gurr, Bobby Jamieson, Randy Miner, Kevin Leadbetter, Ali Noorollahi, Jim Schlottman.*	$51M	●	●	●	●		●	●	●	●	●	●	●
	I-95 & Viera Blvd. Diverging Diamond Interchange, FDOT D5, 2017 *TCC (P)* *Key Staff: TCC: Eric Wooley, Quang Le, Donna Zhao, Sinan Buyukaksakal.*	$17M			●	●				●	●	●	●	●
	I-75/SR 64 Interchange Reconstruction, FDOT D1, 2019 | *TCC (P)* *Key Staff: TCC: Eric Wooley, Donna Zhao, Quang Le, Sinan Buyukaksakal. UES: David Hoff.*	$44M			●	●		●		●	●	●	●	●
	I-10/I-110 Interchange, FDOT D3, 2008, CPPR 96 *AW (P)* *Key Staff: AW: Kevin McGlinchey, Daniel Madden.*	$90M			●	●		●	●	●	●	●	●	●
	Veterans Memorial Bridge, FDOT D4, 2014, CPPR 104 *AW (P)* *Key Staff: AW: Jeff Hutchinson, Brian Sparks, Kevin McGlinchey, Jamie Rogers.*	$64M	●		●		●	●		●		●	●	●
	Gateway Expressway, FDOT D7, Completion 2021, CPPR 100 *AW (P), UES (S)* *Key Staff: AW: Brian Sparks, Kevin McGlinchey. UES: Jeff Pruett*	$545M	●	●	●	●	●	●	●	●	●	●	●	●
	I-295 East Beltway at UNF Drive, FDOT D2, 2006 *GAI (P)* *Key Staff: GAI: Sylvester Asiamah, Kevin Leadbetter.*	$33M	●		●	●	●	●		●	●	●	●	●
	Turnpike Widening (Atlantic to Boynton), FTE, Completion 2021 | *GAI (P)* *Key Staff: GAI: Steve Boylan, Sylvester Asiamah, Judson Fohr, Kevin Leadbetter, Randy Miner, Ali Noorollahi, Jim Schlottman, DJ Silverberg, Anna Zhang.*	$51M		●	●	●		●		●	●	●	●	●

2.6 Environmental Record

The AW Team specializes in design and construction for FDOT, and has successfully completed numerous projects in Florida's most sensitive environments. We recently designed and constructed the complete replacement of the I-95 Bridges over Spruce Creek as part of our I-95/I-4/US 92 project. This work was performed over an Outstanding Florida Waterway, lies within a Riparian Habitat Protection Zone, and was completed with no violations. Field visits and proactive coordination between our environmental, engineering, and construction team members minimizes wetland and species impacts and achieves compliance. We will implement best management practices, environmental protection methods, and follow all NPDES stormwater permitting regulations. AW's track record of excellent Category 7 CPPR scores proves our dedication to environmental permit compliance.

2.7 Contractor Experience Modification Rating

Safety is an integral part of the AW culture. We emphasize safety at our daily, weekly, and monthly meetings, and provide a dedicated Safety Manager for each of our projects. AW has won the FTBA Safety Award of Superior Achievement for nine of the past ten years. Additionally, we have not received an OSHA violation in Florida in the last five years. Our National EMR is 0.81, demonstrating that we have 19% fewer worker's compensation claims than the industry average.

2.8 Design-Build Firm Organization

AW, pre-qualified with FDOT in accordance with FAC Rule 14-22 in all of the relevant Work Classes, will execute the prime contract for DB services with FDOT. AW is a subsidiary of The Walsh Group, currently ranked as the nation's largest bridge builder according to *Engineering News-Record* (ENR) 2016. We are a leader in alternative procurement construction, with a portfolio of over 300 DB projects ranging in value from $1M to over $3B.

AW's Florida region has successfully performed nearly $3B in construction projects for FDOT, including numerous high-profile, heavily traveled interstate and interchange projects. We are currently working on seven DB projects for FDOT with a combined value of over $1.4B.

Subcontractors include P&S, who will handle earthwork and paving aspects; and TMS, who will handle ITS, tolling, and electrical aspects of the project. These team members are successfully providing the same services on our current I-95/I-4/US 92 Interchange project.

GAI is the lead designer and will provide roadway, structures, and traffic design services. ***GAI has completed or is actively working on 32 DB projects for FDOT and 41 DB projects in Florida over the past 12 years with a total value of over $1.1B.*** GAI, and key subconsultant partners, TCC, Greenman-Pedersen (GPI), UES, Cardno, FR Aleman (FRA), and Hanson, are pre-qualified in all required design categories and offer FDOT unparalleled experience working together on DB projects. TCC and GPI will serve as major subconsultants to the project, with GPI providing structural design services, and TCC providing both roadway and structural design. FRA will provide ITS design services and Hanson will provide traffic studies.

2.9 Design-Build Firm Staffing Plan

The AW Team includes not only the same firms, but many of the same key design and construction staff members from the successful similar projects noted in Tables 2 and 3, including the I-95/I-4/US 92 project, scheduled for completion in Fall of 2018. These individuals have significant DB and limited access/interchange experience, including projects on I-4 and Wekiva Pkwy. They have demonstrated an excellent ability to work together to solve construction and design issues quickly. Our key personnel on this project are identified in Table 4, with detailed resumes accompanying this LOI.

DBE / SBE Participation

AW consistently meets FDOT's DBE utilization goals. We will employ local and DBE/SBE firms on this project, as we are committed to exceeding FDOT's goal of 10.65% DBE and 3% non-DBE/SBE utilization. Of note, the FDOT DBE Specialized Project Director sent an appreciation letter to AW for their work mentoring FDOT DBE contractors on Bridging the Gap, a mentor protégé program. We understand D5's commitment to DBE firms and desire to exceed the statewide goals, especially on larger, high-profile projects. AW's average FDOT DBE utilization for the last five years is 11.52%, and GAI's is 10.3%. On this project, we anticipate significant DBE participation in precast elements, trucking, barrier wall, rebar and stay-in-place form installation.

> *"Archer Western has always demonstrated true professionalism, responsiveness and commitment to the support of the FDOT DBE Specialized Development Program and the DBE Firms"*
>
> *– Thomas Huggins, FDOT DBE Specialized Project Director*

2.10 Design-Build Firm Coordination Plan

AW Team Internal Coordination

The key proposed AW/GAI/P&S/TCC staff for this project has been working together on the I-95/I-4/US 92 project since the LOI phase in 2013, continuously through construction today. They have also been working together preparing for this Wekiva Pkwy project for the past year. The continuity and experience of this team is unmatched, and FDOT can be assured our internal coordination will be seamless.

Table 4 – Design-Build Team Staffing — Denotes Key Staff - Resume Included

Project Principals – Kevin McGlinchey (AW), Kevin Leadbetter, PE (GAI). These senior staff members of the AW Team will provide general direction and oversight, and be integrally involved in solving any significant project challenges, as they have on the on-going I-95/I-4/US 92 Interchange DB and every other DB project completed by the team of AW and GAI.

Construction Project Manager – Jeff Hutchinson, PE (AW). Mr. Hutchinson brings 30 years of construction experience managing major limited-access facility projects, including interchanges and major bridges in District 5. He has extensive FDOT project experience (both DB and conventional projects), particularly on major urban system to system interchanges. *Mr. Hutchinson is currently leading the successful $205M I-95/I-4/US 92 Interchange DB (District 5), and recent experience includes the $160M I-95/I-10 Interchange (District 2) and the $67M Veterans Memorial Bridge DB (District 4).*

Construction DB Coordinator – Brian Sparks (AW). Mr. Sparks led the firm's successful project development for the *$205M I-95/I-4/US 92 Interchange DB, the $545M Gateway Express DB, the $140M I-295 Express Lanes DB, and the $176M I-95/I-295 North Interchange.* He brings over 20 years of experience, primarily on FDOT projects. He will ensure close communication among all project team members to provide a successful project delivery for District 5. Mr. Spark's experience as DB coordinator on FDOT projects includes 13 projects valued over $2.5B. Additionally, he has constructed numerous interchange projects for FDOT.

Construction Roadway Superintendent – Daniel Madden (AW). Mr. Madden currently serves as the *Roadway Superintendent on the $205M I-95/I-4/US 92 DB project* and has more than 24 years of experience constructing FDOT limited access highways. He is well versed in all major roadway construction functions, implementing major traffic switches involving ramps, weaves, and interchanges. Mr. Madden has served as Roadway Superintendent on over $645M in construction projects including high volume, airports, and major interchange bridge structures.

Construction Structures Superintendent – Jamie Rogers (AW). Mr. Rogers is currently the structures superintendent on the *I-95/I-4/US 92 DB* project and brings 21 years of field transportation and construction experience. He is responsible for the completion of all field activities associated with structures construction. Mr. Roger's experience as structures superintendent includes nearly $1B in FDOT major interchange projects, including the *$420M I-4 Lee Roy Selmon Crosstown Connector Interchange in Tampa along; and the $160M I-95/I-10 Interchange and the $105M I-95/I-295 Interchange, both in Jacksonville.*

Construction ITS/Tolling (Specialty) Superintendent – Adam Voigt (TMS). Mr. Voigt has 17 years of experience in traffic signals, street lighting, and ITS. Mr. Voigt is well versed in Type I and Type II controllers and cabinets. His installation experience includes traffic signals; underground conduit; count stations and loops; setting of wood, concrete, and mast arm poles; wiring disconnect hangers to any application; all phases of service panels; pedestrian signal installation and terminating controllers; microwave detectors; and video detection. *Mr. Voigt's experience includes SR 429 Wekiva Tolling and I-95/I-4/US 92 DB for District 5.*

Design Project Manager – Steve Boylan, PE (GAI). Mr. Boylan has 24 years of experience in design and project management, specializing in the design of major limited access and arterial roadway reconstruction, roadway rehabilitation, and elements of traffic design. Mr. Boylan is widely experienced in the coordination that large projects require, including specific experience in managing DB projects, working with utilities, community stakeholders, and the public. *Mr. Boylan is Design Project Manager on the I-95/I-4/US 92 DB Project and was also Project Manager for the design of Wekiva Pkwy Section 6 for District 5.*

Design Roadway EOR – Robert Jamieson, PE, PTOE (GAI). Mr. Jamieson specializes in highway and traffic engineering and has 16 years of experience in conceptual analysis and final design of major highway projects around the state of Florida. He has developed numerous innovative solutions that improve design, expedite construction and reduce cost. His design experience includes roadway, drainage/stormwater, signalization, signing and pavement marking, and traffic control. *Mr. Jamieson was Roadway EOR for the I-95/I-4/US 92 DB Project for District 5, the I-10/I-95 Operational Improvements DB for District 2, and MOT EOR for the SR 589 (Veterans Expressway) Widening project for FTE.*

Design Structures EOR – Randy Miner, PE (GAI). Mr. Miner specializes in structural engineering and has 22 years experience. As Lead Designer and Production Manager, his primary responsibilities include project feasibility evaluation, design and analysis of bridge structures, bridge load rating analysis, preparation and checking of contract plans, and quality assurance. *Mr. Miner was Structures EOR for the SR 600/US 92 Pedestrian Improvements DB for District 5, as well as the SR 91 (Turnpike) at I-4 Interchange Improvements DB for FTE and the SR 115/21st Street Interchange DB for District 2.*

Design MOT (Specialty) EOR – John Saunders, PE (GAI). Mr. Saunders brings 30 years of highway design and project management experience on large multi-disciplined projects and specializes in limited-access highways design including system interchanges, AET conversions and express lanes. Mr. Saunders will use his knowledge and experience to manage the maintenance of traffic aspects on this project to execute a detailed and efficient MOT plan for the project duration. *Project experience includes QA/QC for the I-95/I-4/US 92 DB Project for District 5, Project Manager for Veterans Expressway Widening for FTE and the I-10/I-95 Interchange Phase 1 for District 2.*

Weekly progress meetings with GAI design and AW construction staff will be conducted through the proposal phase into final design and throughout construction. File sharing through our innovative "Newforma" system allows for daily mirroring of files on GAI's servers for access by all team members and FDOT's PM – providing a sole source of the latest information and CADD files in a simple, user-friendly portal.

Design and construction submittals will be prioritized based on our comprehensive design and construction schedule. Jeff Hutchinson (Construction PM), Brian Sparks (DB Coordinator), Steve Boylan (Design PM), and Bob Baxter (Construction Coordinator) have collaborated on several previous DB projects, including the I-95/I-4/US 92 project and will work together through procurement and the life of the project to ensure an efficient and constructible design. The high level of coordination on all of AW's and GAI's previous DB projects is evidenced by our resultant performance grades.

External Coordination

Coordination with FDOT: The AW Team has demonstrated our ability to effectively coordinate with District 5 on our I-95/I-4/US 92 project to resolve issues that arise during the design review process. Pre-submittal meetings, direct contact with FDOT plan reviewers, and open communication between key members of our design staff, the CEI, and the FDOT Design and Construction Project Managers has resulted in rapid resolution of even the most complex issues on our recent DB projects. Construction PM Jeff Hutchinson will continue his partnership with the CEI and FDOT Construction Staff, facilitating an effective flow of information and issue resolution. As we have done on previous projects with D5, we will hold regularly scheduled "5-on-5 Coordination Meetings" with FDOT senior management. Additionally, we propose to co-locate Mr. Hutchinson and his team with the CEI to facilitate communication and collaboration. This arrangement has proven extremely effective on AW's I-95/I-4/US 92 project.

Coordination with Permitting Agencies: The AW Team will promptly and thoroughly engage all environmental agencies, including St. Johns River Water Management District (SJRWMD), Florida Department of Environmental Protection (FDEP), and the Florida Fish and Wildlife Conservation Commission (FFWCC). We will leverage our strong relationships with these agencies and FDOT's environmental permitting staff to efficiently coordinate throughout all phases of design and construction.

Coordination with Other Adjacent Department and Local Projects: Our Team will coordinate with the following projects that are identified as having potential overlapping activity either through or adjacent to the Project:

- Wekiva Pkwy Section 7A (under construction concurrently).
- I-4 Ultimate Project (under construction concurrently).
- Wekiva Pkwy Section 7B (under construction concurrently starting FY 2019).
- I-4 Hard Shoulder Running Project (under construction concurrently starting FY 2020).
- FDOT Regional Traffic Management Center (RTMC) Project (expected to be complete prior to construction of this project).
- I-4 BTU Section 3 (construction not funded).

Coordination with Utility Agency Owners (UAOs): Vinnie LaVallette (Cardno) will serve as the Utility Coordination Manager for this project, relying on her years of experience with the affected UAOs to help develop seamless utility coordination strategies. Our focus will be on utility conflict avoidance where possible and practical, using detailed utility conflict matrices to clearly define potential issues and identify preliminary resolutions.

There are currently nine UAOs identified as having active facilities on this project. While most impacts to these stakeholders will be avoided, each will be heavily coordinated with throughout design and construction to assure no costly or schedule-impacting "surprises" are encountered.

SECTION 3 – DESIGN-BUILD PROJECT REQUIREMENTS, IDENTIFICATION OF CRITICAL ISSUES AND OUTLINE TO ADDRESS CRITICAL ISSUES

Wekiva Pkwy Section 8 represents not only the final link of the Wekiva Pkwy, but the completion of the 20-year plus effort to construct a beltway for the rapidly growing Orlando metropolitan area. While Section 8 brings this project to a close, it launches new efforts to maximize mobility through express lanes and intelligent transportation technology. In addition to providing a full systems interchange between I-4, SR 417, and Wekiva Pkwy, the Wekiva Section 8 project also:

- Accommodates future express lanes along I-4, including direct access ramps from those express lanes to SR 417 and Wekiva Pkwy.
- Provides for local access to SR 46, CR 46A, and International Pkwy.
- Uses CD systems and braided ramps so that local access points do not compromise mobility on I-4.
- Extends the aesthetics of the Wekiva Pkwy and I-4 projects.

Innovative Project Enhancements

The AW Team has already developed a number of innovative alternatives which will be presented during the ATC process that kicks off on January 11, 2018:

ATC #1 – Wekiva Pkwy to EB I-4 Ramp

The AW Team's concept eliminates the RFP's serpentine ramp serving the movement from Wekiva Pkwy to EB I-4 and replaces it with a more sweeping alignment that can operate at higher speeds and is more comfortable to drivers. Rather than introducing a complex flyover whose straddle piers would conflict with any future widening of Wekiva Pkwy, the ramp is tucked underneath using short beams angled perpendicular to the ramp, allowing for simple inside widening in the future. As shown in **Figure 2,** this approach eliminates the visual clutter of a complex flyover, providing a parkway "feel" with increased landscape opportunities.

Figure 2 – ATC #1 - EB Wekiva Pkwy to I-4 Ramp

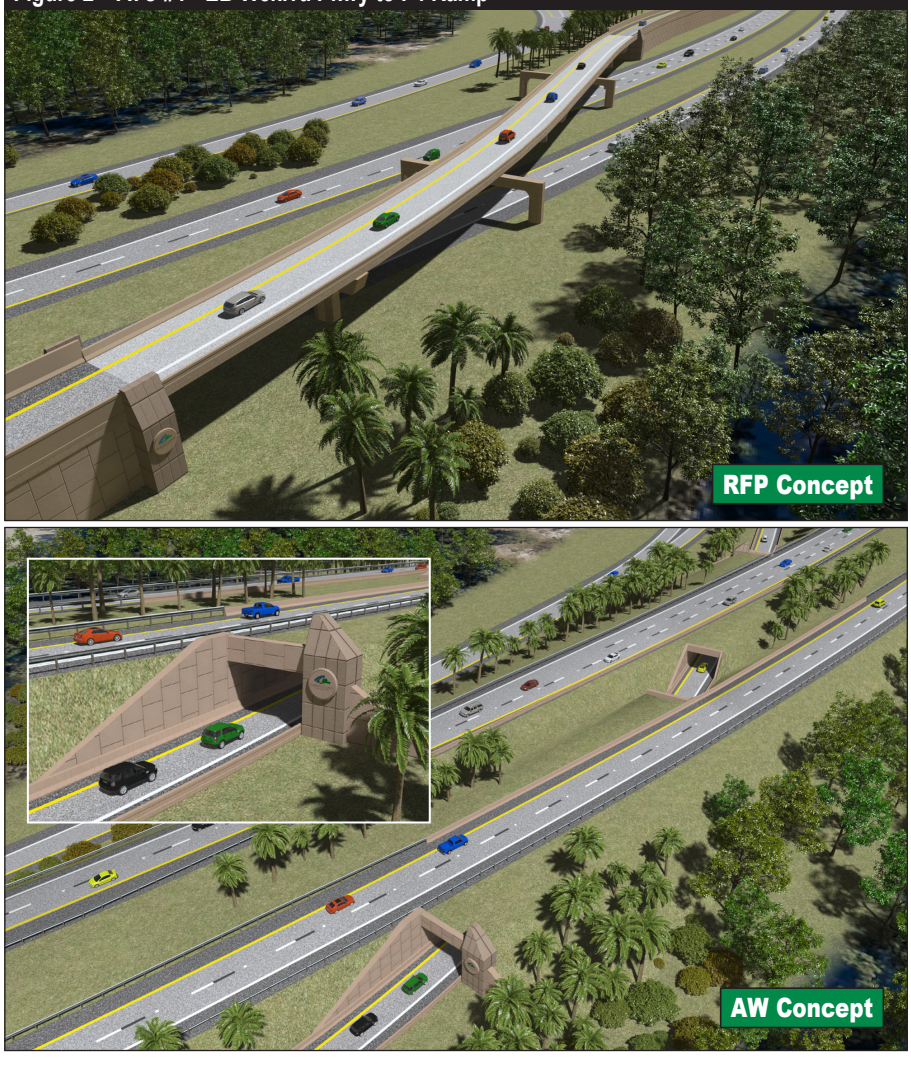


Figure 3 – ATCs #2, #3, and #4

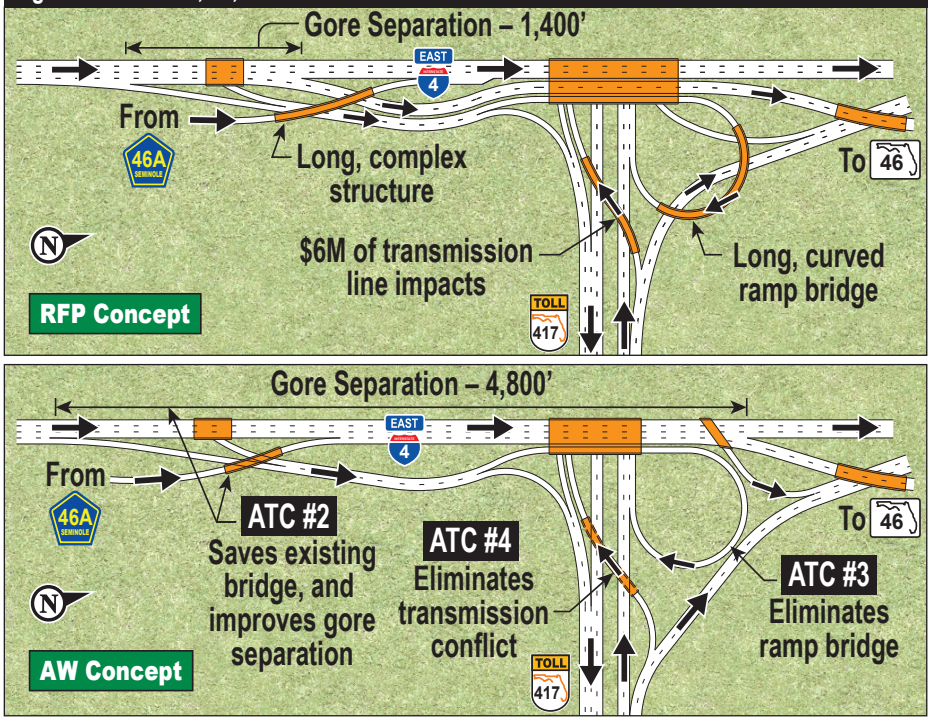
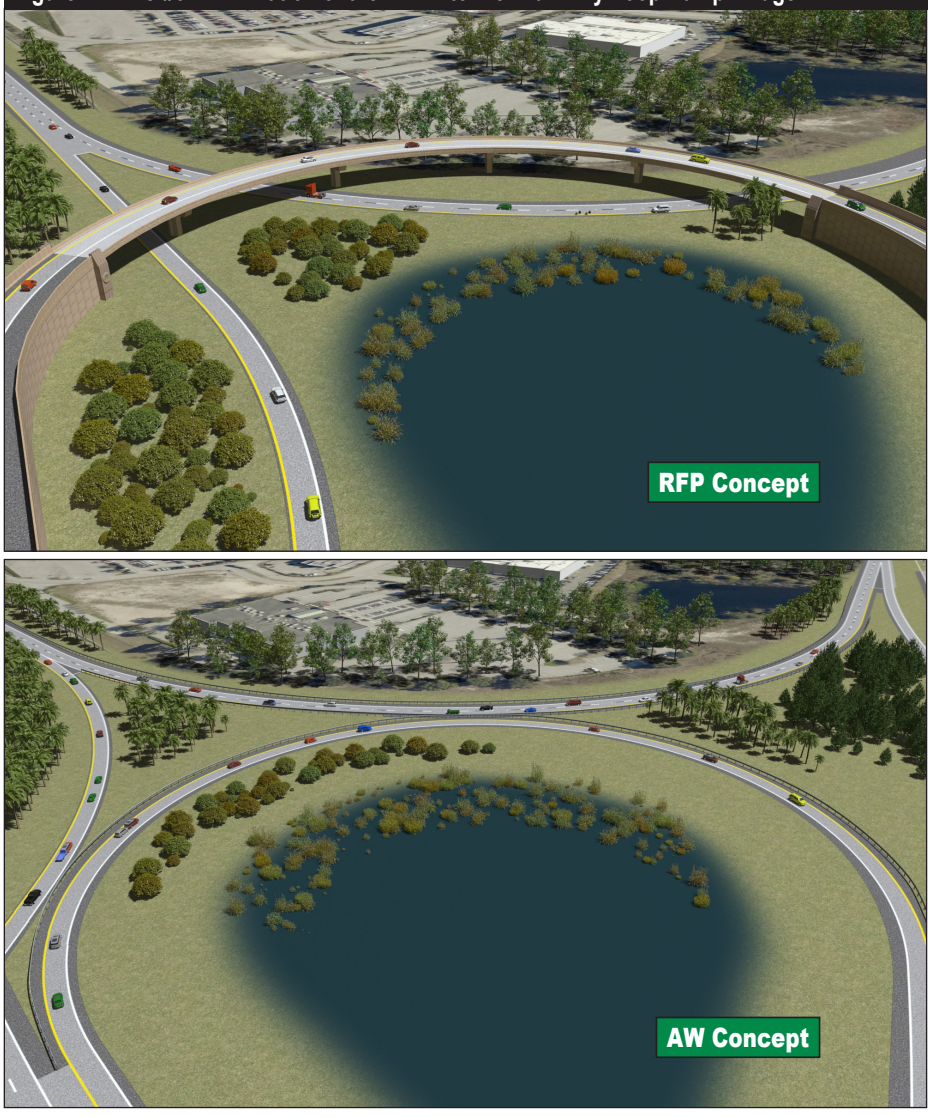


Figure 4 – ATC #3 - Elimination of the EB I-4 to Wekiva Pkwy Loop Ramp Bridge



ATC #2 – Retention of the Existing CR 46A to I-4 EB Ramp Braid Bridge

The RFP Concept replaces the existing braided ramp bridge for the EB I-4 on-ramp from CR 46A with a longer and more complex structure. The AW Team has developed a preliminary concept that preserves the existing and relatively new CR 46A ramp bridge (built 2002) by bringing the traffic from CR 46A directly onto I-4 (similar to the existing condition) and moving the exit for SR 46 to well north of SR 417. The AASHTO minimum terminal spacing requirements are easily met, and a preliminary review of the traffic model indicates no adverse impacts to I-4 traffic. This solution separates local traffic for SR 46 from the systems traffic for SR 417 and the Wekiva Pkwy (see **Figure 3**). The AW Team will complete a traffic analysis demonstrating this alternative's performance compared to the RFP Concept as part of the ATC process.

The AW Team's solution also allows drivers to move from CR 46A to SR 46 – a movement not currently allowed in the existing condition or within the RFP Concept. This enhancement removes traffic from the local roadway system – specifically Rinehart Road and International Pkwy – by allowing for direct connection between this major systems movement and the heavy commercial SR 46 corridor.

ATC #3 – Elimination of the EB I-4 to Wekiva Pkwy Loop Ramp Bridge

Application of geometric changes associated with the retention of the existing CR 46A ramp braid bridge (ATC #2) has an added benefit of creating enough space in the NE quadrant of the interchange to eliminate the long trestle ramp bridge required by the RFP layout. This removes this difficult-to-construct curved bridge from the project, replacing it with a conventional roadway built atop embankment without any additional R/W needs (see **Figures 3 and 4**).

ATC #4 – Profile Optimization to Avoid Transmission Line Impacts

The AW Team recognizes the importance of avoiding impacts to the transmission lines crossing SR 417 on the eastern extent of the interchange – not only from a cost (+/- $6M) perspective, but also from schedule constraints and inconvenience for thousands of customers who rely on power fed from these lines.

In the development of this LOI, the AW Team obtained a LiDAR site survey detailing the vertical clearance of the existing transmission lines to assess the situation as it currently stands (see **Figure 5**). Time and temperature were recorded while taking these measurements, which will be coordinated with Duke Energy to help calculate the worst-case condition, which varies by time of year and line "load".

Figure 5 – LiDAR Site Survey

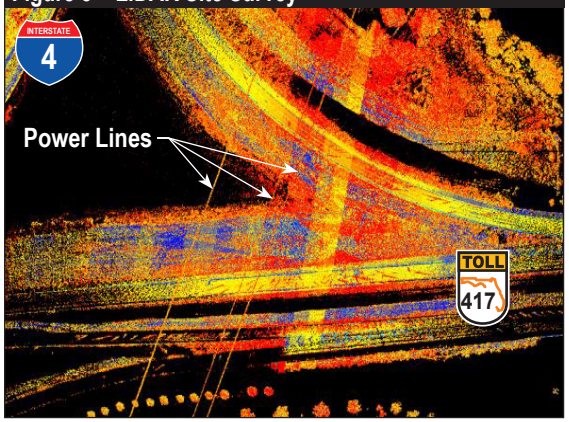
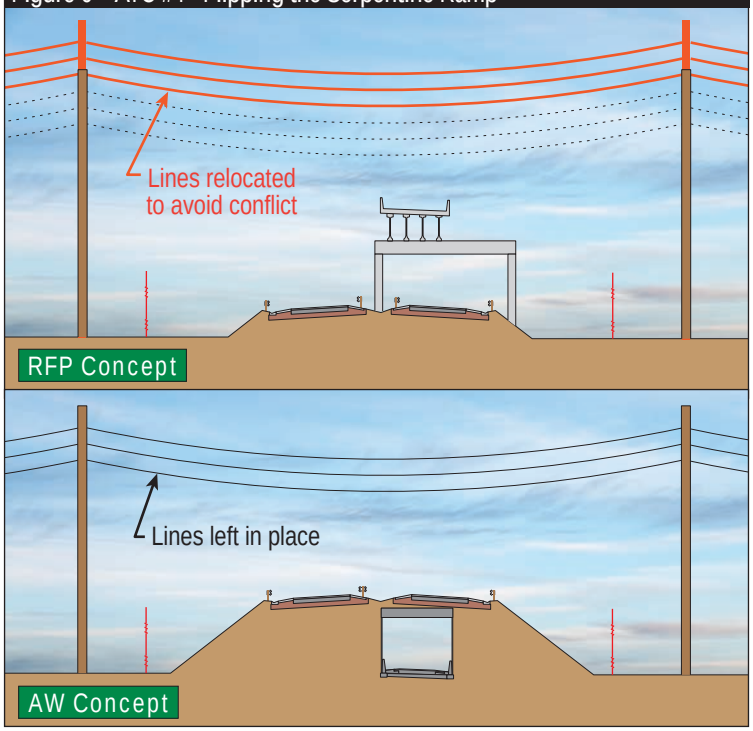


Figure 6 – ATC #4 - Flipping the Serpentine Ramp



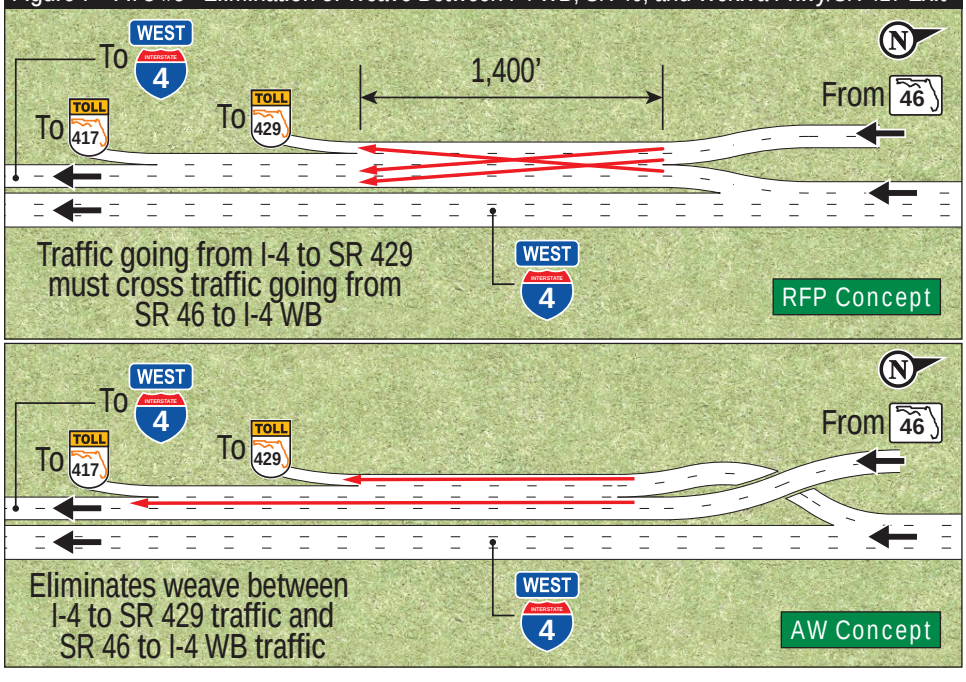
As can be seen in Figure 6, the AW Team's ATC eliminates all potential conflicts with the transmission lines by "flipping" the serpentine ramp, lowering the overall profile in this critical area.

ATC #5 – Elimination of Weave Between I-4 WB, SR 46 Entrance, and Wekiva Pkwy/SR 417 Exit

During our review of the RFP Concept, the AW Team noted a relatively short weave distance between the SR 46 EB to I-4 WB entrance ramp and the movements between I-4 and the Wekiva Pkwy/SR 417 CD system. Traffic from I-4 WB heading to Wekiva Pkwy must change lanes twice within 1,400' (see Figure 7).

The AW Team concept will alleviate this condition by introducing a braided system similar to what is shown in the other quadrants of this interchange (see Figure 7). This braid would allow seamless movements without congested interaction, improving safety and enhancing operations. The AW Team will continue to develop alternatives and present them during the ATC process to address this significant project issue.

Figure 7 – ATC #5 - Elimination of Weave Between I-4 WB, SR 46, and Wekiva Pkwy/SR 417 Exit



Roadway Design

Accommodation of Future Improvements

In order to ensure that future express lanes and direct connect ramps are fully accommodated, the AW Team will lay out the vertical and horizontal geometry for the full build-out of this facility, not merely for those features to be constructed under this project. We will analyze the full geometry for compliance with FDOT, FTE, and AASHTO design requirements, including vertical clearance, stopping sight distance, ramp terminal spacing, hydroplaning, and general tolling requirements. This effort will enable the AW Team to modify its design if necessary or recommend modifications to the ultimate design so that all design requirements may be met by the ultimate build-out. Having done so on several projects, such as the I-10/I-95 Operational Improvements (for future widening) and the I-95/I-4/US 92 Interchange (for two future rail corridors), the AW Team fully understands how to design interchanges so that future improvements are accommodated in accordance with FDOT design criteria.

Design Criteria

Unique to this project is the introduction of the FDOT Design Manual (FDM) in the middle of its procurement. While the RFP requires application of criteria in place at the time of advertisement, the timing of the FDM's implementation in January 2018 (2019 for Design-Build Projects) makes it truly relevant to the design of this project. ***The AW Team proposes to develop designs in accordance with FDM requirements***, working with the Department through the ATC process to obtain Central Office Construction Office approval.

Pavement Design

The pavement designs proposed for the project are well defined within the RFP and its attachments and will be closely adhered to within final design. *To reduce* ***throw-away costs, temporary pavement needed for diversions, etc., will be designed to meet ultimate needs of the I-4 BTU Section 3 project and left in place - saving future construction costs.***

Drainage

GAI's experience on the Wekiva Pkwy Section 6 Project has provided us with a unique perspective of regional drainage basins and stormwater treatment requirements. Wekiva Pkwy Section 8 drainage design will focus on the following:

- Designing stormwater conveyance and management systems to accommodate the ultimate Wekiva Pkwy six-lane section.
- Complying with permit and floodplain requirements.
- Coordinating with the Wekiva Pkwy Section 7A and I-4 BTU projects to construct necessary drainage system interconnections.

The Wekiva Pkwy Section 8 project lies within diverse areas of drainage patterns, ranging from native vegetation along Wilson Road and rural home sites to major shopping centers such as Seminole Towne Center, auto dealerships, and SR 417. Existing floodplains are prominent around the west and northwest areas of the proposed interchange where FEMA recognizes two natural and four man-made floodplains. The AW Team will refine cup-for-cup floodplain compensation calculations to assure no additional storage is needed beyond the approved permit. Our final design will include cost saving ideas such as utilizing wall zones pipes instead of vertical drains, optimizing pipe sizes, and refining pond sizes. Coordination with the designers of Wekiva Section 7A will take place early (as was done on the Section 6 project) to provide seamless drainage connections. A similar approach will be taken with the I-4 BTU Section 3 project which overlaps the interchange, setting up for the future and avoiding throw-away costs. The AW Team will design ponds for future (ultimate) conditions, building capacity into the ponds and upsizing outfall structures and equalizer pipes to account for these planned improvements. Ponds will be built to harmonize with the surrounding environment and be "non-rectangular" shapes wherever possible to create a more natural look.

Environmental/Permitting

The project as currently designed proposes impact to approximately 33 acres of wetlands and other jurisdictional surface waters. All of the proposed impacts are jurisdictional to the state only, with no jurisdiction by the U.S. Army Corps of Engineers. Any proposed changes to the design will be reviewed for the effects on the permitted impacts. The project corridor will also be reviewed for the presence or potential utilization by state and federally listed species, particularly gopher tortoise and listed wading birds, as well as review of the state's database of documented bald eagle nest sites. The project corridor also has the potential for black bear interaction. While impacts to these protected species are not anticipated, care will be taken during design and construction to ensure that listed species are protected and where practicable excluded from the construction area for their protection. Bear-proof waste containers will be utilized wherever there is a potential for food waste to be disposed, with signage directing construction personnel to the container locations. Signage and training of construction personnel will be provided regarding Black Bear activity and awareness while driving to and from the construction site, particularly through densely vegetated areas.

Maintenance of Traffic (MOT)

Maintaining traffic flow is one of the principal focuses of this project, given that any disruption along this corridor may impact a number of primary transportation arteries, including I-4, SR 417, and SR 46. The AW Team will establish a traffic control plan that preserves the operational capacity of the I-4 and SR 417 mainlines and interchanges. Our MOT plan will be prepared with the following goals in mind:

- Coordinate final design geometry with MOT to facilitate construction outside the footprint of the existing roadways.
- Minimize the number of phases required to complete the project.
- Use temporary barrier walls to protect workers, inspectors, and the public.
- Maintain at least one 12' lane to accommodate oversized trucks and emergency vehicles in all mainline phases.
- Coordinate all lane closures, detours, and work zone activities through Mary Brooks, the Wekiva public involvement leader.
- Provide protected ingress/egress points for safe passage into work zones.
- Adhere to all lane closure and special event restrictions.

Traffic Management Plan (TMP)

Our TMP will address temporary traffic control plans, transportation operations, and public information. The TMP will provide District 5 a snapshot of activities for alleviating or minimizing work-related traffic delays by traditional traffic handling practices and an innovative combination of various strategies. These strategies encompass public awareness campaigns, motorist information, demand, incident, system management, and route planning.

Conflicting signage, striping and signalization will be promptly covered or corrected to avoid user confusion. Roadway shoulders will be clear and clean to allow for escape routes and improvised special detours and each traffic adjustment will be predicated by a pre-work briefing and coordination meeting.

The AW Team will incorporate use of the Waze App in order to leverage the ongoing relationship between FDOT and Waze by providing real-time traffic updates to alert users of construction activities and traffic shifts. This phone based application has an ever-increasing customer base, and its audible alerts and map information can supplement existing ITS systems to convey information through the work zone.

Proposed Traffic Control Phasing

The goal of the AW Team is to perform the work on I-4 as quickly as possible to alleviate impacts to commuters. This project can be completed with three primary construction phases (see Figure 8). Phase 1 and Phase 2 share some critical sub-phases; however, both phases can be started independently within the construction schedule. These phases are:

- Phase 1: Major construction activities include the construction of: New bridges on I-4 over SR 417, Ramp CR 46A EB braided bridge, Ramp 001 Bridge, Loop Ramp MM1 Bridge, Ramp MM3 braided bridge, and roadway approaches.
- Phase 2: Major construction activities include construction of Wekiva Pkwy roadway and bridges, widening of SR 417, widening of International Pkwy, and final connections to the EB and WB CD roads.
- Phase 3: Major activities include finalizing roadway widening, performing final milling and resurfacing, final friction course, striping, and incidentals.

Figure 8 – Traffic Control Phasing

Additional MOT

The required replacement of the four bridges carrying I-4 and its CD roads over the SR 417 ramps will require careful planning since the proposed bridges significantly overlap the existing. The RFP Concept allows for this construction in two phases, but will require partial demolition of several existing bridges to manage traffic and cause staged construction of new bridges. In addition, construction of the RFP Concept requires simultaneous work in multiple locations, resulting in increased impacts to motorists and lower efficiency. The AW Team's alternative layout shifts the proposed roadways to simplify MOT and significantly reduce the overlap between existing bridges and proposed bridges. As a result, the majority of the bridges and their approaches may be built without partial demolition or staged construction. Major construction activities are also consolidated to specific areas — enabling faster, less costly construction.

Detours

The location of this project allows for highly effective detours that can be utilized where appropriate to expedite construction overtop of travel lanes (see Figure 9). Rinehart Road and International Pkwy both closely parallel I-4 through this area, and each has access via high-capacity multilane roadways at adjacent interchanges. These low-impact detours that only minimally divert traffic will be presented during the ATC meetings to determine if off-peak use is amenable to FDOT. We used a similar approach on our I-95/I-4/US 92 project, and effectively utilized detours to reduce motorist impacts through expedited construction.

Figure 9 – Detours

Incident Management Plan (IMP)

Our IMP will be tailored to the Wekiva Pkwy Section 8 project and will address response procedures to traffic incidents, as well as a means for clearing disabled vehicles from travel lanes and assisting disabled motorists. Key elements include:

- Providing direct communications with FDOT's Transportation Management Center concerning all incidents, as well as coordinating with adjacent project

TCP supervisors along the corridor to expedite incident recovery and roadway clearance.

- Maintaining existing roadway guide signs, lighting, drainage, ITS components as well as any official median U-turn access for emergency and law enforcement vehicles throughout construction.
- Immediately removing all equipment and/or obstructions from the work zone along with the expeditious and safe opening of all travel lanes as necessary during an emergency.
- Coordinating hurricane preparedness/recovery plan activities with FDOT and their designated hurricane recovery contractors and Emergency Response Managers. This may include preparation of a suitable staging area within project limits for the specific purpose of facilitating FDOT's recovery efforts.

Structures

The AW Team will focus much of our structural design effort on optimization and efficiency – determining the best solution based on structure type, span configuration, and superstructure depth to achieve the project's goals. As part of our preliminary ATC development, we have investigated ways to deliver structural solutions that accommodate innovation, provide a safe traffic control plan, and result in attractive, low maintenance structures for FDOT. Some examples of these enhancements include evaluation of underpass configurations in lieu of braided ramp structures, enhanced finite element modeling capabilities, and use of precast post-tensioned concrete straddle bent caps. Our approach has factored in the effects of structure type, span arrangement, and alignment adjustments that minimize foundations in areas with challenging geotechnical conditions.

The AW Team will continue to identify opportunities to simplify construction such as shifting alignments to facilitate off-line single phase bridge construction to minimize MOT phases while enhancing safety for the workers and traveling public. This approach was instrumental in our success on past interchange projects such as the Team's I-95/I-4/US 92 project. As was done on that project, our proactive style of interdisciplinary coordination will keep the structure designers in sync with roadway alignment design, MOT development, geotechnical investigation results, drainage design, utility clearance and relocation efforts, and the many other considerations that are inherent to major systems interchange projects.

The AW Team will use consistent details and similar plan presentation to minimize review time and accelerate construction. Bridge structures determined to be on the critical path will be prioritized with component submittals combined when possible to reduce preparation efforts and streamline FDOT's review process.

The AW Team will develop bridge aesthetics based upon a blend of the Wekiva Pkwy Aesthetics Guidelines, I-4 Beyond the Ultimate at Wekiva Pkwy Aesthetics Guidelines, and the enhancements used on Wekiva Section 7A. Our approach will meet all commitments made by FDOT for a visually appealing, consistently themed project.

Special considerations include, but are not limited to:

Complex Interchange Geometry

- Structures will be designed to accommodate highly skewed alignments and multi-level grade separations.
- Review times for Category 2 structures will be accommodated within the schedule, allowing for independent peer reviews and FDOT's four-week review.
- Accelerated Bridge Construction techniques will be implemented where viable to reduce impacts on the traveling public.
- New structures will be eliminated or existing ones will be preserved where possible, such as the loop ramp bridge in the NE quadrant of the interchange and the existing CR 46A ramp braid structure.
- Designs that focus on simplification and shortening of structures, such as the Wekiva Pkwy NB to I-4 EB braided ramp bridge.

Challenging Geotechnical Conditions

- Deep foundations required in areas of deep organics and very low blow count materials.
- Pre-planned splices and special handling considerations will be required for very long piles.
- Significant soil-structure interaction.
- Utilize underpass structures to reduce the risks associated with adverse soil conditions at locations such as the Wekiva Pkwy to I-4 EB ramp.
- Maximize the use of reliable, trusted, and proven construction techniques combined with low maintenance concrete structures.

Aesthetics

- Apply two levels of enhanced bridge aesthetics involving architectural pylons at bridge ends, planter walls, cast stone medallion plaques, and MSE wall panel arrangements.
- Enhance bridge piers with curved sections and surface relief.
- Utilize weathering steel with certain locations receiving a high-performance coating system.
- Detail counter measures to avoid visible rust staining on substructure units from uncoated weathering steel.

Structures that will be Designed for I-4 Beyond the Ultimate

- Design bridges to accommodate vertical clearance requirements over future I-4 and Wekiva Pkwy lanes.
- Develop ATC concepts that improve constructability for future widening, such as our innovative underpass concepts.
- Design MSE walls to support future median widening accommodating future pile installation.

In addition to the 25 proposed new bridges and bridge widening over Rinehart Road, the team will also design and detail the expansion joint replacement and crack sealant work at Rinehart Road, numerous overhead sign and ITS structures, temporary and permanent retaining walls, and sound barrier walls. The RFP does not allow perched walls and limits MSE wall heights to 40 feet. We have noted several locations in the concept plans where this criteria does not appear to have been met, and we will revisit these locations to satisfy all structures criteria.

Signing & Pavement Markings

Signing will be done in accordance with the master signing plan provided by FDOT, with special attention paid to overlapping projects – such as I-4 BTU Section 3 and the Hard Shoulder Running project. As both of these projects remain under development, close, continuous coordination will take place during plans development to assure compatibility and proper sizing of sign structures to manage ultimate improvements.

Lighting

Expansion and replacement of the existing high mast system within the interchange limits is proposed by the RFP, supplemented with standard "cobrahead" fixtures where necessary and appropriate. The RFP dictates that LED fixtures shall be used in all conventional light fixtures, but makes no mention of illumination type for high mast lights. ***As a value-added enhancement, the AW Team intends to use LED fixtures for all high mast lighting as well, enhancing longevity and assuring a consistent "color" of light used throughout the interchange.*** All lighting east of Towne Center Blvd. will meet Turnpike Plans Preparation and Practices Handbook (TPPPH) requirements as stated within the RFP.

The use of conventional lighting throughout the interchange area will also be considered, as development along International Pkwy has lately been more residential in nature. Homes in developments such as the Ballantrae Apartments, Colonial Grande Apartments, and Savannah Park are far more susceptible to negative impacts from light pollution. By installing a conventional lighting solution, these properties would receive less glare while still meeting illumination requirements.

ITS

The DB team will design and construct a full-coverage, fully integrated Freeway Management System along the final section of the Wekiva Pkwy. This integration includes connections to previous sections of Wekiva Pkwy, the RTMC on Old Wilson Road, Department Master Hubs 5 and 6 on I-4, and the existing FTE network on SR 417 and its associated existing ITS devices. It will also connect the Wekiva Pkwy tolling system and accommodate future ITS and tolling infrastructure.

The ITS on Wekiva Pkwy will consist of two new 96 SM FOC backbones, one on each side of the road, connecting the Section 7A backbone on the west to SR 417 FTE and I-4 Fiber Optic Network (FON) on the east end of the project. This will include drops to all new ITS device cabinets, toll plazas, RTMC, and a lateral cable to connect both EB and WB I-4 fibers. These connections will establish a 10 Gigabit Ethernet network using both separate FON backbones on the Wekiva

Pkwy. CCTV and MVDS coverage shall be 100% along the parkway, and all devices will be fully integrated into SunGuide.

Extensive coordination with current and future projects will be required to accommodate the various improvements to the area with minimal need for reconstruction. The DB team will coordinate with the Hard Shoulder Running project to provide continuous infrastructure for the future I-4 BTU Express Lane System within this project's limit. Lane Control DMS, including requisite power and communication infrastructure, will be installed along the inside shoulder of I-4 within project limits and fully integrated into SunGuide. The DB team will also coordinate with FTE to identify existing ITS equipment, replace any devices impacted, and upgrade the existing AVI antennas to Blue Tooth technology.

During construction, ITS deployment will be scheduled to ensure that there is no loss of communication to the existing ITS. Plans will be developed to show sequence of construction and a seamless integration with adjacent projects. Special care will be taken to locate ITS components outside clear zone or beyond protective barriers to maximize safety to the traveling public as well as provide safe and convenient future access for maintenance staff and their equipment.

The local power company will be consulted to designate locations to provide new and adjusted electrical service as required for the project. The proposed ITS will be designed for 20% future growth, UPS implementation with desired transfer time, DC and AC grounding, surge protection, and lightning protection in accordance with the specifications, NEC, UL 1449 listed SPDs and UL96A.

Utility Coordination

There are several utilities that have key involvement in this project:

- Duke Energy. Overhead electric transmission (230kV) crossings on east side of I-4 at the new interchange. Team to maintain adequate clearances above the roadway (24' per UAM) and ensure that impacts from pile driving and beam sets do not adversely impact the facility.
- Florida Power & Light (FPL) Distribution. FPL's aerial facilities include BrightHouse (Spectrum) attached along both Paseo Place and Wilson Road that will either need to be removed or placed underground. They have a single circuit overhead system with large self-supporting poles along International Pkwy that will need to be placed underground due to the new bridges.
- Seminole County Environmental Services. Their facilities include water and wastewater along Paseo Place feeding to/from Ligonier Court that will need to be modified. In addition, there is a 16" force main crossing I-4 at approximately station 1055+00 that may be impacted by the proposed ramp bridges.

Survey

Our survey team includes GPI (formally ACA), along with ground survey partner Cardno. GPI assembled the original surveys upon which the RFP Concept was based, and as a result is already aware of the different areas that may require supplemental ground surveys and updates. GPI will be responsible for managing the entire survey, incorporating elements from all survey partners into a single, combined survey file and DTM – assuring a consistent deliverable.

Tolling

There is a single mainline tolling gantry on the western approach to the interchange that will be constructed and brought into service in conjunction with the Wekiva Pkwy Section 7A project. This gantry will be designed and built in full accordance with FTE's General Tolling Requirements (GTR) and TPPPH guidelines, with time allocated in the schedule for installation of tolling equipment and testing.

Geotechnical

Our team will complete detailed geotechnical evaluations and confirmation borings in conformance to FDOT criteria for all of the components of this project in order to avoid the potential of unforeseen conditions and construction delays. We have carefully reviewed the geotechnical information provided by FDOT as well as the geotechnical requirements in the RFP, including minimum deep foundation tip elevations, and will design for a safe, long-lasting project considering the following challenges:

- Deep buried organic and highly organic soils on the southern end of the project that will require remediation using proven ground improvement techniques such as preloading, surcharging, rigid inclusions, etc.
- Deep minimum foundation tips (up to 190' below existing grade), which will factor in to the selection of foundations suitable for these depths and applicable environmental classifications such as steel pipe piles.
- Potential artesian conditions which will factor in to the selection of suitable foundation types and depths in these conditions such as driven piles.
- Excessive settlement due to deep poor soil conditions in high fill/wall areas that will require remediation using proven ground improvement techniques such as preloading, surcharging, rigid inclusions, etc.
- Near-surface organic and highly organic soils which will be excavated and replaced with suitable soils.

In addition to the geotechnical design, we will provide a ***Settlement and Vibration Monitoring Plan (SVMP)*** and monitor construction vibrations to reduce construction-related vibration and noise to prevent damage to adjacent structures.

Test Load Program

During the construction phase and as part of the test pile program, UES will provide PDA testing at each bent/pier location in accordance with FDOT requirements. Installation of the piles/drilled shafts will be supervised by the geotechnical foundation engineer-of-record. All foundation members (driven piles and drilled shafts) will be monitored by an FDOT-qualified CTQP inspector during installation.

Construction

While many projects have similar construction elements and requirements, this project brings several specific challenges that require a team with the foresight to identify those challenges and the proven experience to implement solutions. Located within a heavily traveled system to system interchange, safely moving motorists through the work zone will be the highest priority. This project includes constructing complex new bridges while meeting the project commitments. All of our key construction staff proposed for this project, including Project Manager Jeff Hutchinson and his structures and roadway superintendents, come from the I-95/I-4/US 92 DB project, which has many similar elements. Additionally, that project will be complete next year, allowing us to bring the labor (125 field staff) and equipment resources to Wekiva Pkwy Section 8. We will also bring the resources (60 field staff) from our Orlando Airport Guideway project finishing next year.

Safety

The safety of the traveling public, including pedestrians and bicyclists, is essential to a successful project. Our goal is to reduce impacts to the traveling public to the greatest extent possible, leading to a safer work zone and reducing complaints. We will coordinate all lane closures as required by the RFP, notifying the required agencies and adhering to the special closure and detour restrictions. MOT personnel will verify that all traffic control devices are properly installed and maintained, and will keep the travelways clear of debris. The crew will also make sure that access to all local facilities is maintained.

The safety of all project personnel is equally as important. AW's top priorities are training and educating our crews to produce high-quality work in the safest possible manner. Our crews will be actively involved in the work planning, safety awareness, and environmental requirements using processes that include initial orientation, site specific safety plans, pre-activity work plans, and weekly tool box meetings. Our Traffic Control Plan will separate construction vehicles and equipment from workers on foot within active work zones.

Quality

Quality construction means a well-built project with reduced future maintenance costs. The overall quality and lasting durability of the project is directly related to our material selection and skilled workmanship. AW's construction staff is well accustomed to working on complex interchange projects and knows what it takes to deliver a quality product. As a testament to our quality of design and construction, extensive warranties for both the bridge and roadway items will be provided.

THE AW TEAM

The AW Team thoroughly understands the issues involved and stands prepared to deliver this project to you successfully while meeting all of your goals and commitments. We will act as your partner to develop a cost-effective project, and engage stakeholders who are relying on the successful completion of this critical project, ahead of schedule. Our Team is excited to continue our partnership with FDOT District 5 on this important project!