Florida Department of Transportation
District 4

CONSTRUCTION MANAGER / GENERAL CONTRACTOR (CM/GC) REQUEST FOR PROPOSAL

For

Roosevelt Bridge Structural Monitoring, Martin County

Financial Projects Number(s): 447687-1-H2-01

Emergency Contract Number: E4V18

March 22, 2021

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ATTACHMENTS

The Attachments listed below are hereby incorporated into and made a part of the Contract as though fully set forth herein.

Notice to Contractor -
Open Book Cost Estimating Requirements
Letter of Interest of Selected CMGC (LOI)
Request for Proposal (RFP)
CPM Schedule SP00800302
Buy America Requirements
FHWA 1273- FL20200002 (Statewide) Heavy Dredging and FL20200124 (Martin County) Heavy
Form 575-060-13 Non-Collusion Declaration and Compliance with 49 CFR & 29
On the Job Training – Special Provisions

Proposal Forms:

- Minimum Requirements Statement
- Proposal of Proposer (375-020-08)
- DBE Forms (as applicable)
- Vendor Certification Regarding Scrutinized Companies List (375-030-60)

REFERENCE DOCUMENTS

The following documents are not provided with this RFP. Except as specifically set forth in the body of this RFP, these documents are being provided for reference and general information only. They are not being incorporated into and are not being made part of the RFP, the contract documents or any other document that is connected or related to this Project except as otherwise specifically stated herein. No information contained in these documents shall be construed as a representation of any field condition or any statement of facts upon which the Construction Manager/General Contractor can rely upon in performance of this contract. All information contained in these reference documents must be verified by a proper factual investigation. The CM/GC agrees that by accepting copies of the documents, any and all claims for damages, time or any other impacts based on the documents are expressly waived.

Reference Documents - To be provided as available, after selection

As-Built Plans
Repair Plans
Condition Report
Survey Data
White Paper: Structural Monitoring of the US1 (SR 5) Roosevelt Bridges 890151 and 890152

I. Introduction.

The State of Florida Department of Transportation (hereinafter called the DEPARTMENT) has issued this Request for Proposal (RFP) to request proposals from Proposers for pre-construction, construction services, and operation/maintenance for structural monitoring of the NB and SB Roosevelt Bridges. The Roosevelt Bridges carry U.S. Route 1 (SR 5) over the St. Lucie River, in Stuart, Florida. The bridge consists of twin structures, the northbound bridge and southbound bridge. The bridge was constructed in the middle 1990's and dedicated on November 1, 1997.

The northbound and southbound structures are both precast segmental bridges, built using the balanced cantilever method of construction. The northbound bridge has a length 4,565 feet and contains four, 5-span continuous units (20 spans total). The southbound bridge has a length of 4,487 feet and also contains four, 5-span continuous units and one simple span (21 spans total). Each of the bridge superstructures consists of a single-cell, precast segmental box girder with a width of 61'-0 ½".

On June 16, 2020, during a routine biennial inspection period, and based upon feedback from local partners, the DEPARTMENT'S inspectors found cracks in the closure joint in Span 1 of the southbound bridge. This span is made continuous through the closure joint by ten, 15-strand post-tensioning tendons. Subsequent inspections in this span revealed that the five bottom slab tendons adjacent to the east web of the box girder had completely failed as a result of excessive corrosion. These have since been repaired. Additionally, the damage to Span 1 SB has led to inspections of the other spans of the northbound and southbound bridges. Limited invasive inspections in the other spans of the northbound and southbound bridge revealed varying degrees of corrosion of some post-tensioning ducts and strands. For further information regarding the condition of the bridge and the actions taken by the Department, visit the DEPARTMENT'S website: https://www.fdot.gov/info/roosevelt

Due to the tendon failures, extent of corrosion discovered, and criticality of the post tensioning system for safe operation of the bridge, long term structural monitoring (SM) solutions were investigated as means to supplement routine bridge inspections. Of the current technologies available, acoustic emission (AE) and sensor arrays (strain, tilt, acceleration, displacement) show the greatest potential to properly monitor the structure. AE will be used to capture future wire breaks. Additional monitoring sensor arrays comprising a Supplemental Device Monitoring system (SDM) are desired to establish the normal behavioral response of the structure and to notify the DEPARTMENT of deviations from that pattern.

The DEPARTMENT is seeking to solicit proposals to hire a Construction Manager/General Contractor (CM/GC) to assist the DEPARTMENT with pre-construction services including constructability reviews, material availability analysis, cost estimates and other associated tasks, to arrive at recommendations for the design, procurement, and installation of a SM system, and monitoring of the structure as determined by the DEPARTMENT and the Project Team. It is envisioned that the SM system will encompass both the SB and NB structures with both AE and SDM components. It is also envisioned that the contractor will provide monitoring, maintenance, and reporting services for the duration of 5 years.

CM/GC is an innovative contracting method in which the Contractor works with the DEPARTMENT and the DEPARTMENT's designer, forming a Project team, to perform design and other preconstruction services. If the DEPARTMENT determines that the Construction Manager/General Contractor has been successful in meeting the goals of the project, the Construction Manager/General Contractor may be given an opportunity to prepare and submit official price proposal(s) for construction and operation/monitoring/maintenance potentially before final design is complete. The Construction Manager/General Contractor will be required to share pricing information with the project team to facilitate price discussions and to help ensure the DEPARTMENT is receiving a fair price for the work. The

DEPARTMENT will utilize an engineer's estimate and may utilize an Independent Cost Estimator (ICE) to evaluate the Construction Manager/General Contractor's Lump Sum (LS) Price Proposal. If the DEPARTMENT is satisfied with the performance of the Construction Manager/General Contractor, their approach to building and operating the SM system, and their price, the DEPARTMENT anticipates executing supplemental agreement(s) with the Construction Manager/General Contractor. The DEPARTMENT may choose to implement the work through one Supplemental Agreement or a series of separate Supplemental Agreements to expedite the overall completion. The Department may also request that the Construction Manager/General Contractor procure materials that require long lead times as part of a separate Supplemental Agreement.

If the DEPARTMENT is not satisfied with the performance of the CM/GC, or if their prices are not acceptable, the DEPARTMENT reserves the right to terminate the CM/GC process, and/or procure the project by some other method and retain all the information/materials developed or procured. Any materials purchased by the CM/GC through a Supplemental Agreement, at the request of the DEPARTMENT, would be reimbursed by the DEPARTMENT in the event the DEPARTMENT terminates the CM/GC process.

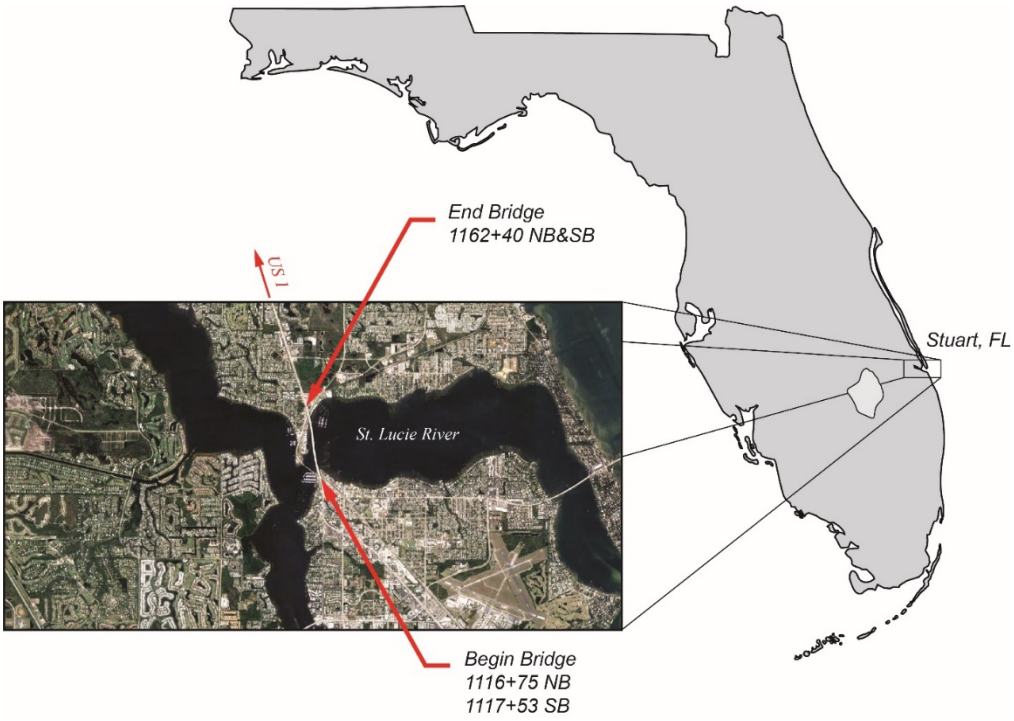

Figure 1 – Project Location Map

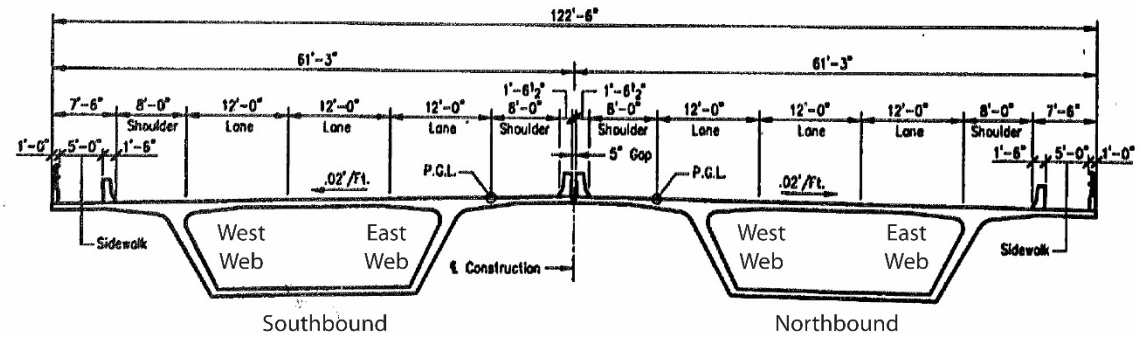

Figure 2 – Typical Cross Section Looking Up-Station

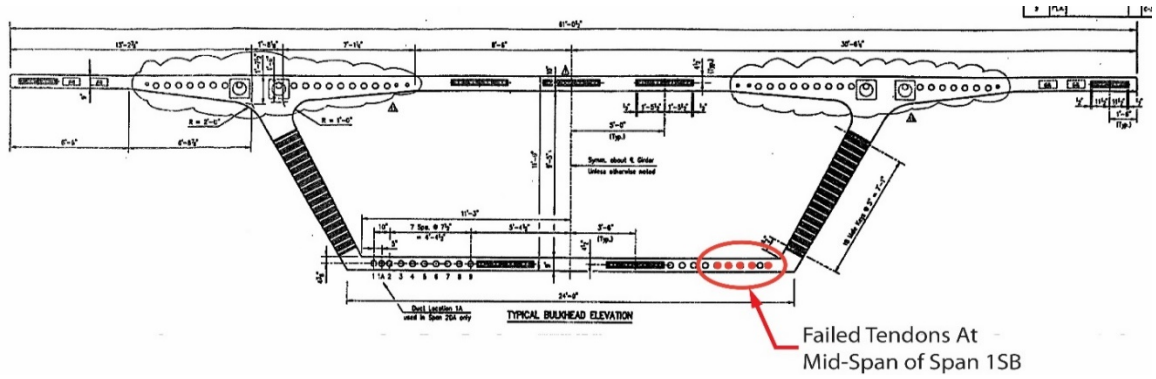

Figure 3 – Typical Segment Bulkhead Showing Location of Failed Tendons

Description of Work

There are three major phases of work associated with this RFP, the Preconstruction Phase Services (Phase 1), the Construction Phase Services (Phase 2), and the Operation/Monitoring/Maintenance Phase Services (Phase 3).

Scope of Pre-Construction Phase Services (Phase 1)

The objective of pre-construction and associated tasks is to create a teaming atmosphere that will allow the DEPARTMENT and the CM/GC to work jointly to deliver the highest-quality Project within the budget as determined by the DEPARTMENT. As part of the design team, the Construction Manager/General Contractor will provide input on schedule, phasing, constructability, materials availability, value engineering, cost estimating, preparation of reports, and related services and activities for the DEPARTMENT throughout the design of the Project under a firm fixed price for services outlined in this RFP. Pre-construction tasks to be performed by the Construction Manager/General Contractor shall include:

1. Provide a Project Manager and associated staff to consult with, advise, assist, and provide recommendations to the DEPARTMENT and the design team on all aspects of the planning, design,

and proposed installation of the SM system, as requested by the DEPARTMENT. The SM system shall be capable of detecting and reporting wire breaks within the post-tensioning tendons as well as monitoring overall bridge performance over time. This will be accomplished by the following:

a. Key Tracking:

   i. Acoustic Emission (AE) monitoring shall monitor and record wire breaks along the span. The initial system design shall capture, at a minimum, the number of wire breaks within a span.

   ii. A Supplemental Device Monitoring (SDM) system will use a combination of sensors consisting of one or more of strain, acceleration, tilt, displacement, or other monitoring devices. The SDM system shall be "off the shelf" equipment, readily purchasable and replaceable, and shall not be unproven or research-based. The SDM system will serve as a secondary tracking of the structural behavior, not react to individual wire losses, but will instead track normal and expected behavior of the bridge for conditions such as thermal response and live load response, and also be capable of alerting the DEPARTMENT of change in behavior that have been predetermined as indication of unacceptable behavior, such as excessive deflection or segment joint opening.

b. Key Locations:

   i. For the AE system, the entirety of both the NB and SB spans are of concern. Although previously executed NDE has determined that the PT tendons are in good condition, the potential for water and chemical ingress exists in all spans.

   ii. For the SDM system, noted conditions thus far include locations of substandard ratings at unreinforced segment joints (note, these substandard ratings are based on analytical load ratings and do not necessarily align with areas of corrosion concern). There are multiple locations along each structure. Therefore, the expectation is that the SDM system will also be required on both bridges. Based on the initial investigation of the structure, it is anticipated that the system will use strain-based sensing across these joints, at a minimum, with possible tilt and/or acceleration to supplement the strain sensors.

c. Key Data:

   i. The item of critical importance to the Roosevelt Bridge are wire breaks and the effect those have on the bridge's capacity to safely carry load. The number and location of wire breaks are to be monitored through an AE system. Additionally, the SDM system shall record data from all respective sensors and be trackable over time. All data shall be time stamped and searchable. Strain sensors shall be automatically correlated to, or be able to be correlated to, thermal response.

d. Expandability: The AE and SDM systems shall be expandable as necessary to enhance detection capability and provide more refined location information of wire breaks as directed

by the DEPARTMENT through supplemental agreements as necessary in Phase III.

e. Reporting: Requirements are set forth in Phase 3 for reporting such that important data is both actionable and relevant. To combine both safety needs and long-term tracking, alerts for key information and regular periodic reporting are necessary.

f. Proprietary items: Any and all proprietary systems required for data collection and reporting shall be clearly outlined including required terms and conditions for use. Cost associated with proprietary items will have an individual line item cost in the estimate. Requirements for renewal or changes to the licensing agreement at the termination of this contract shall be clearly stated. All data collected under the terms of this contract shall be sole property of the DEPARTMENT, regardless.

g. The SM system and instrumentation criteria provided herein shall be met for installation. The SM system shall be assembled in such a manner that the system acts in a coordinated manner, capturing structural behavior data, ambient temperature, and weather data, into a single database.

   The monitoring system shall be designed to be continuously online, collecting and analyzing data in near-real-time, with sufficient sampling rate to capture changes to the structure as set forth in this document. All hardware and software shall incorporate robust data logging and recovery capabilities. The system shall provide watchdog functionality for network connectivity and hardware status. In the event of hardware or software failure, the system should identify failures and provide provisions for recovery and trigger notifications to staff designated by the DEPARTMENT.

   The design team shall optimize the system for efficiency and cost effectiveness for the long-term goals of monitoring the structure. This Phase 1 AE and SDM system design shall include:

   i. Manufacturer Specifications: Sensor Instrumentation type and associated specifications, including all performance specifications demonstrating conformance with requirements for SM instruments and data communications type and location.

   ii. Installation Procedures:

      1. Coordinate installation of instrumentation with appropriate clearances to other devices and bridge operating equipment.

      2. Requirements for location of power source or sources and electrical requirements, including needs for a separate power source and system if required.

      3. Locations of relays and controllers

h. Installation drawings shall clearly indicate all details, arrangements, working and erection dimensions, and other information necessary for proper checking and installation of the

items, and shall include all information required for making any necessary connections to bridge components or other work.

i. Installation:

   i. Instruments shall be mountable per manufacturer instructions, or otherwise via mounting plates or brackets and mechanically affixed to the structure. Unless otherwise guaranteed by the manufacturer for performance, instruments shall be contained or otherwise installed in a durable, corrosion resistance rated and watertight housing. Watertight housing is required due to the presence of drainage pipes within the structure that could cause standing water. The interior of the bridge box girder is considered protective housing provided the system components are located so as not to be easily damaged by routine inspections or tendon repair or replacement procedures.

   ii. To the extent possible, all loose wires shall be placed in conduit.

   iii. The AE and SDM system shall be self-contained and not dependent on input or interaction from external sources. Proposed sensors must be approved by the EOR.

   iv. Instruments shall be placed in locations sufficient to capture the specified data designated to be monitored and must be affixed to the structure according to manufacturer instructions and in a manner such that the instrument cannot be easily dislodged, including during bridge inspection or minor repair operations. Installation of instrumentation shall not damage the existing structure except for the installation of instrumentation anchoring devices, as required.

j. Data Communications:

   i. Due to the secure and potentially sensitive nature of the data, all sensors shall be connected to the data collection systems by cable. Any transmission from the data collection unit to remote or web-based systems shall be fully secured and password protected.

   ii. Any and all cables shall be placed in conduit such that the cable cannot be easily damaged and is able to continuously transmit data while in operation.

k. Data Collection and Storage:

   i. The data collection and storage system shall be capable of receiving digital input from the monitoring devices and record the digital data in near-real-time. The system shall provide watchdog functionality for network connectivity and hardware status. In the event of hardware or software failure, the system shall identify failures and provide for automatic recovery and trigger notifications for corrective action. The systems shall be designed to always be online, collecting and analyzing data in near-real-time.

ii. The systems shall incorporate considerations for long term archiving of data in a non-proprietary, system-agnostic file format. The data collection system shall have a structured method for transferring data to a remote archive storage entity. The data collection system shall also have a structured method for identifying and storing data within the specified period of an Event (as defined in this document) such that the data is easily identifiable and copied to a separate Event Log database.

iii. All data shall all be time stamped and shall be synchronized within one data collection unit and database. All data collected shall immediately be considered property of the DEPARTMENT and the transfer mechanism to the DEPARTMENT shall be clearly stated.

iv. All continuously streaming data need not be permanently stored; however, the system shall be continuously reading and will record one periodic dataset per 4 hours for long term performance and archival purposes. The periodic data set shall include one minute of recorded data from each structural sensor (non-acoustic). This data will be presented as part of the monthly report. The system shall be capable of adjusting this period of record remotely and without physical changes to the SM system.

v. The data shall be available via remote access through a secure online portal that can be used to store and share all documents related to the monitoring project, including reports, and other useful information. The DEPARTMENT shall have unlimited access to the data. Viewable and printable options include data tables, trend plots, and alert notifications. The system will allow users to control access to the system by designating specific user levels, passwords, email addresses, and cellular phone numbers. All access to all data shall be maintained in a controlled and secure manner.

vi. Data records of wire breaks shall be incorporated and logged as permanent data and shall include sufficient duration of record showing the break. Wire break records shall be easily identifiable and copied to a separate wire break database.

l. Handover: At termination of this contract, all equipment, materials and miscellaneous items necessary for proper operation of the SM system shall remain property of the DEPARTMENT and exceptions shall be clearly stated, such as proprietary items. Knowledge transfer to the DEPARTMENT or their representatives to understand basic maintenance and operation of the SM system as well as sufficient understanding of the reported data to make engineering decisions shall be described; this may include recommended or required outside industry workshops and trainings. It is expected that this will occur both during the initial year of Phase 3 as well as the final year of Phase 3. An expected list of spare parts for future maintenance with associated costs will also be included.

2. Participate in an initial goal-setting session with the DEPARTMENT. The outcome of this session will be to review the DEPARTMENT goals to ensure that the Construction Manager/General Contractor understands these goals and to allow the Contractor to provide recommendations to the

DEPARTMENT regarding these goals.

3. Site assessment – Review the current condition of Roosevelt Bridge. Evaluate the structure for AE, including an attenuation test(s). Assess possible work laydown locations, onsite power availability sufficient to meet the total bridge needs, sensor attachment options, and data collection and transfer options. Assess the access holes located adjacent to Abutments with regard to delivery of personnel, materials, equipment, and the removal of debris. Assess safety considerations related to performing the work including existing utilities within the structure.

4. Provide constructability and SM system availability reviews, along with written reports and recommendations, of the conceptual drawings being prepared by the DEPARTMENT'S selected engineering consultant firm.

5. Participate in formal constructability and SM system availability reviews that will be conducted at up to two milestones for the entire Project limits. These formal reviews will focus on identifying revisions to improve clarity for pricing, identifying potential design revisions that would reduce construction costs, and identifying elements to improve the time performance for the Project.

6. Provide regular oversight on various specific elements of the Project and provide recommendations on staging, sequencing, equipment storage, traffic control, and construction techniques.

7. Participate in informal oversight constructability reviews with the DEPARTMENT's selected design firm on various specific elements of the Project and provide recommendations of such to the DEPARTMENT.

8. Submit written comments and recommendations to the DEPARTMENT regarding the development of the installation plans. These comments and recommendations shall address proposed construction staging and phasing; coordination with utility owners surrounding disruptions and relocations; methodology for protection of properties during construction; process to address known hazardous material and remediation measures; proposed work hour schedule (including number of shifts and weekends); strategy to address routine inspection traffic and standing water; methodology to provide public and worker safety protection; and procedures to maintain Project security during construction.

9. Identify any long lead items that may cause schedule impacts. A list of long lead items requiring early design consideration shall be submitted to the DEPARTMENT for consideration as soon as possible after execution so that the Project schedule is not modified.

10. The Construction Manager/General Contractor shall work with the DEPARTMENT to finalize their subcontracting plan for accomplishing all construction work while complying with the DBE opportunities.

    The Construction Manager/General Contractor shall provide the plan to manage any subcontract that is not performing in accordance with the Project's requirements for budget control, on-time schedule performance, safety, or quality control procedures. The Construction Manager/General Contractor shall identify a proposed management plan to oversee all subcontracting work efforts.

    The following subcontracting terms and conditions shall apply to the Contractor during the

preparation of the contracting plans:

a. The Construction Manager/General Contractor shall give advance written notification to the DEPARTMENT of any proposed sub consulting agreement or subcontract negotiated under the Contract. The DEPARTMENT shall have the right to approve all subcontract agreements and sub consulting agreements, including any change or amendment to any agreements.

b. No change, removal, or substitution shall be made in any of the subcontractor or sub consulting agreements without prior written approval from the DEPARTMENT.

c. The Construction Manager/General Contractor shall be responsible for directing all work performed by subcontractors. The DEPARTMENT shall not be responsible for or direct any subcontractor to perform services that have not been previously authorized in that subcontractor's subcontract. Neither the Construction Manager/General Contractor nor the DEPARTMENT shall have any liability to subcontractors for work performed by subcontractors that has not been previously authorized under the subcontracting plan.

d. No subcontract shall provide for further subcontracting of the Work to a lower tier unless the subcontracting plan allows for such subcontracting. Any such additional subcontractors shall meet all the requirements set forth in the Contract for subcontracts and, in addition, shall include such other provisions as the DEPARTMENT, at its discretion, shall deem appropriate.

11. As part of the ongoing cost estimating for the Project, the Construction Manager/General Contractor shall prepare and submit to the DEPARTMENT two (2) versions of a LS Price Proposal at various stages of design. The determination of when a LS Price Proposal shall be prepared is at the discretion of the DEPARTMENT and shall be in a written format that identifies the risks and assumption that will be assumed when preparing the LS Price Proposal. The LS Price Proposal shall include the Total Construction Cost Elements and the Total Operation/Monitoring/Maintenance Cost Elements for the DEPARTMENT's review and approval.

    On completion of the second LS Price Proposal, at an agreed design milestone, a final LS Price Proposal shall be prepared by the Construction Manager/General Contractor. If the final LS Price Proposal appears to be exceeding the DEPARTMENT's established engineer's estimate, the DEPARTMENT shall notify the Construction Manager/General Contractor accordingly and shall give the Construction Manager/General Contractor an opportunity to propose how to complete the Work within budget. If the DEPARTMENT and the Construction Manager/General Contractor cannot agree on a LS Price, the DEPARTMENT reserves the right to terminate the Contract and procure the Work in an alternative manner, as the DEPARTMENT deems appropriate.

12. Prior to development of the LS Price Proposal, the Construction Manager/General Contractor shall prepare a detailed baseline cost-loaded Critical Path Method (CPM) Schedule to serve as the Project Baseline Schedule, which identifies all activities and progress payment processing during construction. In addition to the CPM Schedule, the Construction Manager/General Contractor shall

submit a finalized budget and schedule control management plan to ensure completion of construction within budget and in accordance with the Project Baseline Schedule.

13. The Construction Manager/General Contractor shall help the DEPARTMENT coordinate with any Project stakeholders on an as-needed basis.

    The Construction Manager/General Contractor will not be delegated by the DEPARTMENT to act on the DEPARTMENT's behalf with Project stakeholders. However, the Construction Manager/General Contractor will be considered to be a member of the DEPARTMENT's Project team and will be requested to be a part of coordination meetings with the various Project stakeholders.

    The Construction Manager/General Contractor shall support the DEPARTMENT in developing of agreements with utility owners and other Project stakeholders, as necessary.

    The Construction Manager/General Contractor shall collect detailed information required to create the plans identified in the following list:

    a. Prepare and submit a Safety Plan in compliance with the DEPARTMENT's safety program.

    b. Prepare and submit an Environmental Compliance Plan (ECP) that identifies how environmental compliance will be achieved during construction as well as any mitigation measure to be implemented.

    c. Develop, implement, and maintain a Quality Control Plan that assures equipment and material conformance to the applicable requirements of every section of the specifications. The Quality Control Plan shall focus on providing continuing attention to producing and installing error-free work that complies with the Contract. The Quality Control Plan shall include, at a minimum, provisions for continued education and training, toolbox meetings, various meetings with subcontractors and suppliers, and other activities designed to accomplish the following:

        Emphasize the importance of high-quality work;
        Stress the concept that quality is best achieved during initial installation of the work;
        Enhance the exchange of technical and other information pertaining to quality throughout the Construction Manager/General Contractor's organization; and
        Eliminate non-complying work requiring rework or replacement.

    The Quality Control Plan shall include the Construction Manager/General Contractor assuring the quality of the work of the subcontractors at all levels.

    The DEPARTMENT will provide some quality control and all quality assurance for the Project. The DEPARTMENT or its designee will perform limited inspection and testing to audit and verify that all work and materials comply with the drawings, specifications, and all reference standards. Audits will be performed on a systematic basis and will be coordinated with the Quality Control Plan or as warranted by general quality trends.

    d. Prepare and submit a Hazardous Material Plan (HMP) that identifies how anticipated and unanticipated hazardous materials will be handled during construction. Also address appropriate mitigation measures.

Scope of Construction Phase Services (Phase 2)

Upon completion of the services listed above under the Scope of Pre-Construction Services and the DEPARTMENT's acceptance of a LS Price Proposal, the Construction Manager/General Contractor will enter Phase 2 construction services of the Contract. The tasks listed below are a representative list of tasks that may be requested of the Construction Manager/General Contractor. This list is not exhaustive, and tasks may be added or deleted during the negotiations of the Phase 2 construction services scope of work and LS Price. Prices for these services will be included in the negotiated Supplemental Agreement(s) as part of the LS Price Proposal(s).

The DEPARTMENT may choose to implement the system installation through a series of separate Supplemental Agreements to expedite the overall completion, The DEPARTMENT may also request that the CM/GC procure materials that require long lead times as part of a separate Supplemental Agreement(s).

Probable Work Elements:

The overall duration anticipated for Phase 2, Construction Services is 120 Days. The work may include, but not be limited to:

1. Hold a pre-construction conference before beginning any construction work on the Project.

2. Install SM system in accordance with the preconstruction plans and specifications.

    a. Any local and National codes and regulations that are applicable to electrical and mechanical work local to this project shall be fully enforced. Conflicts between local codes and the requirements herein shall be brought to the attention of the DEPARTMENT.

    b. Omissions or the incomplete description of details of work, evidently necessary to carry out the intent of the project in providing a fully functional bridge monitoring system, or which are customarily performed in conjunction with the work described herein, shall not relieve the Contractor from performing such work. All such work shall be performed as if fully and correctly set forth and described in the drawings and specifications from Phase 1. In any case of discrepancy in figures, catalog numbers, or descriptions in the drawings or specifications, the matter shall be properly submitted to the DEPARTMENT who shall promptly make a determination in writing. Any adjustment in the plans or specifications by the Contractor without written approval shall be at the Contractor's own risk and expense.

3. Acceptance of the system:

    a. Once installed, the structural monitoring system shall be demonstrated to the DEPARTMENT for proof of performance. This evaluation shall include but not be limited to:

        i. Verification that all instruments are functional, properly positioned, and in proper working order. Actual monitoring data is to be shown at the user human-machine-interface in the graphical means described in this section that demonstrates the type and range of data being displayed and that it is in accordance with the requirements of this section. In the instance where raw data requires filtering, demonstration

using filtered data is acceptable.

ii. Verification that all data is being continuously recorded and time stamped. This may be done by evaluating the system database, or by creation of a sample data log report.

iii. Creation of a test event, in coordination with the DEPARTMENT, which triggers the recording of an event log in accordance with the requirements of this section. At a minimum, this demonstration shall include a simulated wire break per ASTM E2374.

b. Any nonfunctioning system components or those components that are demonstrated to not meet the requirements of this section, are grounds for rejection of the SM system and must be corrected before the installation of the SM system is considered completed.

4. Conduct weekly progress meetings with the DEPARTMENT. Prepare and distribute minutes of each meeting.

5. Assist in obtaining and complying with all necessary construction permits needed for the completion of the Project.

6. Maintain a qualified, full-time management staff comprised of the following Key Individuals: The key personnel identified in the Request for Letters of Interest.

7. Finalize a Baseline Critical Path Method (CPM) Schedule for the Project. Maintain and update the schedule on a monthly basis to monitor Project progress, manage all construction work effort, establish a progress payment and tracking system, and keep the DEPARTMENT fully advised of the work status through submission of a monthly progress report that identifies any delays or impacts to the Baseline CPM Schedule. Prepare for the DEPARTMENT review a weekly 2-week look-ahead work schedule that is consistent with the overall Baseline CPM Schedule.

8. Make available at all times cost and budget estimates (including supporting materials and records) to the DEPARTMENT for review. Provide monthly reports in a format agreed to by the DEPARTMENT showing actual costs and work progress as compared to estimated cost projections, as compared to scheduled work progress, and as a percent of Project completion. The Construction Manager/General Contractor shall explain significant variations and provide information as requested by the DEPARTMENT.

9. Maintain current, hard copies of all as-built drawings, including all subcontracted work, and submit as-built information on a monthly basis to the DEPARTMENT in hard copy and electronic formats. All CADD and electronic work effort shall be included as part of the LS price.

10. Develop a procedure for tracking, expediting, and processing all submittals, change orders, and requests for information (RFIs) to the DEPARTMENT's review and approval prior to implementation.

11. Support the DEPARTMENT's public outreach program during Construction by working with the

DEPARTMENT's Public Information Officers and providing regular and timely Project updates to the schedule and necessary construction notification as may be needed.

12. Maintain, protect, and implement an effective public and worker safety program in accordance with the Safety Plan developed during Pre-Construction. This program shall be enforced until Final Acceptance of all Work.

13. Implement the effective environmental compliance and mitigation measures in accordance with the Environmental Compliance Plan (ECP) developed during Pre-Construction.

14. Implement an effective quality management program for all construction work in accordance with the Quality Control Plan developed during Pre-Construction.

15. Implement an effective hazardous material handling program for all construction work in accordance with the Hazardous Material Plan (HMP) developed during Pre-Construction.

16. Implement the subcontracting plan in accordance with the plans developed during Pre-Construction. Provide quarterly subcontracting reports that identify compliance with the goals and objectives of the subcontracting plan.

Scope of Operation/Monitoring/Maintenance Phase Services (Phase 3)

The Construction Manager/General Contractor shall be responsible for activities pertaining to Operation, Monitoring, and Maintenance as outlined in, but not limited to, the requirements in the Project Introduction and this section. The Construction Manager/General Contractor shall coordinate any utilities impacted by maintenance and/or system modification or expansion. The Construction Manager/General Contractor shall be responsible for requirements related to project management, scheduling, and coordination with other agencies and entities such as state and local government, utilities, and the public, as necessary.

1. Operation:
    a. The Contractor shall be responsible for operating and maintaining the SM system for a minimum of 5 years, including the sensors, data collection units, and data transmission components.
    b. For each component of the system, furnish the Manufacturer's literature describing the equipment.
    c. It is important for the DEPARTMENT to understand the equipment, the signals output by the equipment, and how to interpret those signals or how they are being processed by the software. Prior to expiration of Phase 3, the contractor shall provide, at a minimum, a one-day (8 hour) workshop for DEPARTMENT personnel to include basic operation of the system and all of its components such that the individuals trained will have sufficient knowledge in understanding how the system operates and to properly interpret the data presented by the contractor's report. The DEPARTMENT will provide the meeting location and standard office audio-visual equipment; the manufacturer will provide workshop materials to be distributed at the meeting.
    d. Upon completion of this contract, the contractor shall leave the systems in a state of good repair, with a six (6) month warranty for all system components and proper operation of the data collection and reporting system.

2. Monitoring:

a. General: the contractor shall be responsible for monitoring the SM systems for the duration of Phase 3. The contractor shall clearly state what, if any, pre- or post-filtering and/or pre- or post-processing that has been performed on the raw data.
b. AE monitoring: All wire breaks shall be logged in a database. At a minimum, monthly summary reports will be submitted to the DEPARTMENT indicating the number and location of any wire breaks recorded, the average frequency of wire breaks per day reported for each span, and a running summary of all accumulated wire breaks for each span. Evidence of the wire break and location information shall be presented in both tabular form and graphically so as to be readily understood by any DEPARTMENT staff who have attended the workshop.

c. SDM monitoring: At a minimum, monthly summary reports will be submitted to the DEPARTMENT and are to include graphical representation of the SM data for the subject month, as devised in Phase 1. Comments on normal behavior or changes in behavior (if any) are to accompany the graphics.

   Thermal records are to be monitored in a manner so as to account for thermal expansion and contraction in the bridge and provide proper correlation between thermal behavior and structural response.

d. Automated Alerts:
   i. The type and frequency of automated reports is to be determined in Phase 1. Automated reports shall consist of text messages and email alerts to predetermined DEPARTMENT staff or delegates, and include the necessary information from this section.
   ii. In the event that any portion of the monitoring devices is damaged, fails, or otherwise goes offline, the system shall record the time of failure and duration of failure. The identification of the non-functioning item and time of malfunction shall be generated as an automated report to the DEPARTMENT.
   iii. The design of the AE data interface will include specific rules for what constitutes an event that will trigger automated messages to the Department and/or its delegates. This may include such scenarios as:
      1. A sharp increase in wire break frequency per span
      2. Any span that has experienced ten (10) cumulative wire breaks for a specified period.
   iv. The design of the SDM data interface should include specific rules for what constitutes an event that will trigger automated messages to the Department and/or its delegates. This may include such scenarios as:
      1. Change in Static (Dead Load, excluding thermal behavior) strain indicating the opening of a segment joint.
      2. Unanticipated change in or shift in normal behavior
      3. Exceptional external load event (e.g. pier impact)
   v. All Automated alerts shall be included in the monthly summary report and subject to refinement upon review.

3. Maintenance:
   a. All workmanship, installation materials and equipment shall be maintained and serviced throughout the Phase 3 contract and for the guarantee period at no additional cost. The entire system installed under this Contract shall be left to the DEPARTMENT in working order at the end of the Phase 3 period and any components that develop defects, including

other work damaged as a result of such defects, within the guarantee period shall be repaired or replaced without additional charge. This is applicable to:

i. Full initial installation
ii. Any sensor or other portion of the sensor system
iii. Data collection and data storage
iv. Transfer of data to the DEPARTMENT

b. The guarantee period shall be extended as follows:
   i. For any piece of equipment or system needing replacement during the initial guarantee period, which begins at the end of the Phase 3 period, the guarantee shall be extended one year from date of replacement.
   ii. The contractor shall warrant that the equipment which they have furnished is free from defects in material and workmanship. Obligations under this warranty shall be as follows:
      1. The equipment contractor or supplier shall provide and pay for all labor, parts, accessories, materials, freight and other services, to repair or replace any equipment or part thereof which, in the course of installation, start-up, testing, and operation, is found to be defective.
      2. For the period defined herein from date of acceptance by the DEPARTMENT, the contractor shall replace any defective equipment or part thereof; freight costs for parts replacement, are the responsibility of the installing contractor.
      3. The final acceptance of the equipment will be made after the contractor has adjusted his equipment, balanced the various systems, demonstrated that it fulfills the requirements of the specifications, and has furnished all the required certifications and approvals.

c. In the event that the monitoring system interferes with inspection, repair, or replacement procedures, the contractor shall be notified, and scheduling of relocation shall be coordinated with the DEPARTMENT. Relocation or reinstallation will be executed as a separate contract or supplemental agreement.

d. Random verification tests of the AE system will be performed by DEPARTMENT staff during the life of the Phase 3 contract. This demonstration shall include a simulated wire break per ASTM E2374. The DEPARTMENT will record the specific time and location of the random test and compare it against the reported data. Upon successful validation of the test, these false wire breaks will be removed from the wire break dataset and stored in a separate Validation dataset. Failure of the random verification tests during the contract service period requires immediate evaluation and repair of the system, if necessary, at no cost to the DEPARTMENT until such time that an additional random verification test is properly detected.

A. Construction Manager/General Contractor (CM/GC) Responsibility:

The Construction Manager/General Contractor may propose changes which differ from the approved design. Proposed changes must be coordinated through and approved by the DEPARTMENT. If changes are proposed to the configuration, the Construction Manager/General Contractor shall be responsible for preparing the necessary documentation required for the DEPARTMENT to analyze and satisfy requirements to obtain approval of the DEPARTMENT, The Construction Manager/General Contractor shall provide the required documentation for review and processing.

The DEPARTMENT may direct modification of the installed system, with or without recommendation

from the Construction Manager/General Contractor, in order to provide greater refinement and more precise wire break location data. The Construction Manager/General Contractor will prepare a Design for modification that is compatible with the installed system and a Price Proposal for implementation for review by the DEPARTMENT. Implementation of system modifications that expand the capability of the system at the direction of the DEPARTMENT will be performed through Supplemental Agreement.

The Construction Manager/General Contractor shall demonstrate good Project management practices while working on this Project. These include communication with the DEPARTMENT and others as necessary, management of time and resources, and documentation.

B. DEPARTMENT Responsibility

The DEPARTMENT will review routine reports and alerts generated by the AE and SDM systems and provided by the Construction Manager/General Contractor, and will coordinate with the Construction Manager/General Contractor as necessary for clarification of data and findings. The DEPARTMENT will determine and implement courses of action necessary in response to results reported from the AE and SDM systems pertaining to the performance and condition of the bridge. In the event that the DEPARTMENT determines that refined data collection is necessary, it will coordinate with the Construction Manager/General Contractor to determine the appropriate modifications necessary to the system. As necessary, the DEPARTMENT will direct the Construction Manager/General Contractor to develop appropriate designs and price proposals for modifications to be performed under supplemental agreement.

The DEPARTMENT will provide Contract administration, management services, construction engineering inspection services, environmental oversight, and quality acceptance reviews of all work associated with the development and preparation of the contract plans, permits, and construction of the improvements. The DEPARTMENT will provide Project specific information and/or functions as outlined in this document.

II. Schedule of Events

Below is the current schedule of the events that will take place in the procurement process. The DEPARTMENT reserves the right to make changes or alterations to the schedule as the DEPARTMENT determines is in the best interests of the project. The requested Proposers will be notified sufficiently in advance of any changes or alterations to the schedule. Unless otherwise notified in writing by the DEPARTMENT, the dates indicated below for submission of items or for other actions on the part of a Proposer shall constitute absolute deadlines for those activities and failure to fully comply by the time stated shall cause a Proposer to be disqualified.

Date	Event
Monday, March 22, 2021	Official advertisement
Monday, March 29, 2021	Mandatory project meeting 11:00 AM local time
Monday, April 12, 2021	Letter of Interest (LOI) due to d4.designbuild@dot.state.fl.us. Via email by 11:00 AM local time
Monday, April 19, 2021	TRC LOI Ranking Meeting/Public meeting 9:00 AM local time

Wednesday, April 21, 2021	TRC submit ranking/write ups of LOIs it to Procurement Services office by 2:00 PM local time
Monday, April 26, 2021	Selection Committee Public Meeting
Monday, April 26, 2021	Posting of Intent to Award
Friday, April 30, 2021	Contract Award (Phase 1, Preconstruction Services)
Friday, May 7, 2021	Anticipated Execution Date CM/GC (Phase 1, Preconstruction Services)
Wednesday, June 2, 2021	90% plans available for review from designer
Tuesday, June 8, 2021	Contractor Submits Construction and Operation/Monitoring/Maintenance Cost Estimate with 90% plan review
Wednesday, June 30, 2021	Designer submits 100% plans for review
Friday, July 9 , 2021	Contractor submits Construction and Operation/Monitoring/Maintenance Cost with 100% plan review
Friday, July 16, 2021	Designer submits final signed and sealed plans
Friday, July 23, 2021	Execute Contract for Phase 2 Construction Services and Phase 3 Operation/Monitoring/Maintenance Services

III. Threshold Requirements.

A. Qualifications

Proposers are required to meet the minimum qualifications/requirements as stated in the Notice to Contractors.

B. Price Proposal Guarantee

For Construction Services, a Price Proposal guaranty in an amount of not less than five percent (5%) of the total price proposal amount shall accompany the Proposer's Price Proposal for Phase 2, Construction Services. The Price Proposal guaranty may, at the discretion of the Proposer, be in the form of a cashier's check, bank money order, bank draft of any national or state bank, certified check, or surety bond, payable to the DEPARTMENT. The surety on any bid bond shall be a company recognized to execute bid bonds for contracts of the State of Florida. The Price Proposal guaranty shall stand for the Proposer's obligation to timely and properly execute the contract and supply all other submittals due therewith. The amount of the Price Proposal guaranty shall be a liquidated sum, which shall be due in full in the event of default, regardless of the actual damages suffered. Price Proposal Guaranties shall be released pursuant to Section 3-4 of Division I, Design-Build Specifications.

C. Mandatory Project Overview

Attendance at the project overview meeting is mandatory. Any invited Construction Manager/General Contractor failing to attend will be deemed non-responsive and eliminated from further consideration. The purpose of this meeting is to provide a forum for the DEPARTMENT to discuss with all invited parties the proposed Project, the design and construction scope, Critical Path Method (CPM) schedule, and method of compensation, instructions for submitting proposals/LOI, Design Exceptions, Design Variations, and other

relevant issues. In the event that any discussions at the project overview meeting require official additions, deletions, or clarifications of the Request for Proposal or any other document, the DEPARTMENT will issue a written addendum to this Request for Proposal as the DEPARTMENT determines is appropriate. No oral representations or discussions, which take place at the project overview meeting, will be binding on the DEPARTMENT. Proposers shall direct all questions to the DEPARTMENT's Procurement Office using the email address below:

d4.designbuild@dot.state.fl.us

D. Non-Responsive Proposals/LOIs

Proposals/LOIs found to be non-responsive shall not be considered. Proposals may be rejected if found to be in nonconformance with the requirements and instructions herein contained. A proposal may be found to be non-responsive by reasons, including, but not limited to, failure to utilize or complete prescribed forms, conditional proposals, incomplete proposals, indefinite or ambiguous proposals, failure to meet deadlines and improper and/or undated signatures.

Other conditions which may cause rejection of proposals include evidence of collusion among Proposers, obvious lack of experience or expertise to perform the required work, submission of more than one proposal for the same work from an individual, firm, joint venture, or corporation under the same or a different name, failure to perform or meet financial obligations on previous contracts, employment of unauthorized aliens in violation of Section 274A (e) of the Immigration and Nationalization Act, or in the event an individual, firm, partnership, or corporation is on the United States Department of Labor's System for Award Management (SAM) list.

The DEPARTMENT will not give consideration to tentative or qualified commitments in the proposals. For example, the DEPARTMENT will not give consideration to phrases as "we may" or "we are considering" in the evaluation process for the reason that they do not indicate a firm commitment.

Proposals will also be rejected if not delivered or received on or before the date and time specified as the due date for submission.

Any proposal submitted by a Proposer that did not sign-in at the mandatory site visit meeting will be non-responsive.

E. Modification or Withdrawal of Technical Proposal/LOI

Proposers may modify or withdraw previously submitted Technical Proposals/LOIs at any time prior to the Technical Proposal due date. Requests for modification or withdrawal of a submitted Technical Proposal shall be in writing and shall be signed in the same manner as the Technical Proposal. Upon receipt and acceptance of such a request, the entire Technical Proposal will be returned to the Proposer and not considered unless resubmitted by the due date and time. Proposers may also send a change in sealed envelope to be opened at the same time as the Technical Proposal provided the change is submitted prior to the Technical Proposal due date.

F. DEPARTMENT's Responsibilities

The DEPARTMENT does not guarantee the details pertaining to borings, as shown on any documents

supplied by the DEPARTMENT, to be more than a general indication of the materials likely to be found adjacent to holes bored at the site of the work, approximately at the locations indicated.

G. Construction Manager/General Contractor Contract

The DEPARTMENT will enter into a Lump Sum (LS) contract with the successful Construction Manager/General Contractor for the Phase 1 Pre-Construction Services. The LS contract will include all costs associated with pre-construction services.

If the DEPARTMENT is satisfied with the performance of the Construction Manager/General Contractor during Phase 1, their approach to building the project, and their LS Price Proposal for Phase 2 and Phase 3, the DEPARTMENT anticipates executing supplemental agreement(s) with the Construction Manager/General Contractor.

If the DEPARTMENT is not satisfied with the performance of the Construction Manager/General Contractor, or if their LS Price Proposals are not acceptable, the DEPARTMENT reserves the right to terminate the CM/GC process, and procure the project by some other method.

All costs related to the preparation of the Proposal are the sole responsibility of the Proposer.

H. Construction Manager/General Contractor Method of Compensation

The DEPARTMENT will enter into a LS Contract with the selected Construction Manager/General Contractor for Phase 1, Preconstruction Services.

All compensation for Phase 1 Preconstruction Services is payable at completion of Phase 1, as determined by the Department, for all services rendered under this phase. The LS Price for all work and services provided during Phase 1 Preconstruction Services shall be $60,000.00.

Phase 2, Construction Services and Phase 3, Operation/Monitoring/Maintaining will be negotiated during the successful advancement/completion of the Phase 1 Services.

The Construction manager/General Contractor's submitted Phase 2 and Phase 3 Price Proposal (time and cost) is to be a LS Price Proposal for completing the scope of work detailed in the contract terms. Funds are contingent upon annual appropriation. This Contract is subject to Section 334.30, Florida Statutes.

Invoicing the DEPARTMENT:

1. For Phase 1 Pre-Construction Services, the invoicing will be processed for payment at the completion of the services as determined by the DEPARTMENT as defined in the Pre-construction Services Agreement between the CM/GC and the DEPARTMENT.

2. For Phase 2 Construction Services the CM/GC shall submit a Schedule of Values for review and approval by the DEPARTMENT, which will be used as a basis of progress payments in accordance to the current version of the State of Florida Standard Specifications for Road and Bridge Construction.

3. For Phase 3 Operation/Maintenance/Monitoring Services the CM/GC will submit documentation of successful days monitored each month for review and approval by the DEPARTMENT, which

will be used as a basis of monthly payments in accordance to the current version of the State of Florida Standard Specifications for Road and Bridge Construction.

4. Section 337.145 of the Florida Statutes, providing for offsetting payments, is not applicable to this Contract.

5. Nothing contained in this provision constitutes a waiver or release of the Construction Manager's/General Contractor's responsibility to properly perform all of its obligations under this Contract.

Extra Work Costs and Delay Costs:

For Phase 2 Construction Services, The DEPARTMENT shall compensate the Construction Manager/General Contractor for amounts due for Extra Work Costs or Delay Costs in accordance with the FDOT Standard Specifications for Road and Bridge Construction.

IV. Disadvantaged Business Enterprise (DBE) Program.

A. DBE Availability Goal Percentage:

The Florida Department of Transportation has an overall, race-neutral DBE goal. This means that the State's goal is to spend a portion of the highway dollars with Certified DBE's as prime contractors or as subcontractors. Race-neutral means that the DEPARTMENT believes that the overall goal can be achieved through the normal competitive procurement process. The DEPARTMENT has reviewed this Project and assigned a DBE availability goal shown in the Project Advertisement. The DEPARTMENT has determined that this DBE percentage can be achieved on this Project based on the number of DBE's associated with the different types of work that will be required.

Under 49 Code of Federal Regulations Part 26, if the overall goal is not achieved, the DEPARTMENT may be required to return to a race-conscious program where goals are imposed on individual contracts. The DEPARTMENT encourages CM/GC to actively pursue obtaining bids and quotes from Certified DBE's.

The DEPARTMENT is reporting to the Federal Highway Administration the planned commitments to use DBE's, as well as actual dollars paid to DBE's. This information is being collected through the DEPARTMENT's Equal Opportunity Compliance (EOC) system. Additional requirements of the Construction Manager/General Contractor may be found in Chapter 2 of the FDOT Equal Opportunity Construction Contract Compliance Manual.

B. DBE Supportive Services Providers:

The DEPARTMENT has contracted with a consultant, referred to as DBE Supportive Services Provider, to provide managerial and technical assistance to DBE's. This consultant is also required to work with prime CMGC's, who have been awarded contracts, to assist in identifying DBE's that are available to participate on the Project. The successful Construction Manager/General Contractor should meet with the DBE Supportive Services Provider to discuss the DBE's that are available to work on this Project. The current DBE Supportive Services Provider for the State of Florida can be found in the Equal Opportunity website at: http://www.fdot.gov/equalopportunity/serviceproviders.shtm

V. Project Requirements and Provisions for Work.

A. Governing Regulations:

The services performed by the Construction Manager/General Contractor shall be in compliance with all applicable Manuals and Guidelines including the DEPARTMENT, FHWA, AASHTO, and additional requirements specified in this document. Except to the extent inconsistent with the specific provisions in this document, the current edition, including updates, of the following Manuals and Guidelines shall be used in the performance of this work. Current edition is defined as the edition in place and adopted by the DEPARTMENT at the date of Project Notification of this contract with the exception of the Standard Specifications for Road and Bridge Construction, Special Provisions and Supplemental Specifications, Manual on Uniform Traffic Control Devices (MUTCD), and FDOT Standard Plans with applicable Interim Revisions. The Construction Manager/General Contractor shall use the edition of the Standard Specifications for Road and Bridge Construction, Special Provisions and Supplemental Specifications, FDOT Standard Plans and applicable Interim Revisions in effect at the time of Project Notification. The Construction Manager/General Contractor shall use the 2009 edition of the MUTCD (as amended in 2012). It shall be the CM/GC responsibility to acquire and utilize the necessary manuals and guidelines that apply to the work required to complete this Project. The services will include preparation of all documents necessary to complete the Project as described in Section I of this document.

1. Florida Department of Transportation Design Manual (FDM)
   http://www.fdot.gov/roadway/FDM/

2. Florida Department of Transportation Specifications Package Preparation Procedure
   http://www.fdot.gov/programmanagement/PackagePreparation/Handbooks/630-010-005.pdf

3. Florida Department of Transportation Standard Plans for Road and Bridge Construction
   http://www.fdot.gov/design/standardplans/

4. Standard Plans Instructions (Refer to Part I, Chapter 115, FDM)
   http://www.fdot.gov/roadway/FDM/

5. Florida Department of Transportation Standard Specifications for Road and Bridge Construction, Dated July 2020, Special Provisions and Supplemental Specifications
   http://www.fdot.gov/programmanagement/default.shtm

6. Florida Department of Transportation Surveying Procedure 550-030-101
   http://fdotwp1.dot.state.fl.us/ProceduresInformationManagementSystemInternet/FormsAndProcedures/ViewDocument?topicNum=550-030-101

7. Florida Department of Transportation EFB User Handbook (Electronic Field Book)
   http://www.fdot.gov/geospatial/doc_pubs.shtm

8. Florida Department of Transportation Drainage Manual
   http://www.fdot.gov/roadway/Drainage/ManualsandHandbooks.shtm

9. Florida Department of Transportation Soils and Foundations Handbook
   http://www.fdot.gov/structures/Manuals/SFH.pdf

10. Florida Department of Transportation Structures Manual
    http://www.fdot.gov/structures/DocsandPubs.shtm

11. Florida Department of Transportation Computer Aided Design and Drafting (CADD) Manual

http://www.fdot.gov/cadd/downloads/publications/CADDManual/default.shtm

12. AASHTO – A Policy on Geometric Design of Highways and Streets
https://bookstore.transportation.org/collection_detail.aspx?ID=110

13. MUTCD - 2009
http://mutcd.fhwa.dot.gov/

14. Safe Mobility for Life Program Policy Statement
http://www.fdot.gov/traffic/TrafficServices/PDFs/000-750-001.pdf

15. Traffic Engineering and Operations Safe Mobility for Life Program
http://www.fdot.gov/traffic/TrafficServices/SafetyisGolden.shtm/

16. Florida Department of Transportation American with Disabilities Act (ADA) Compliance – Facilities Access for Persons with Disabilities Procedure 625-020-015
https://fdotwp1.dot.state.fl.us/ProceduresInformationManagementSystemInternet/?viewBy=0&procType=pr

17. Florida Department of Transportation Florida Sampling and Testing Methods
http://www.fdot.gov/materials/administration/resources/library/publications/fstm/disclaimer.shtm

18. Florida Department of Transportation Design Bulletins and Update Memos
http://www.fdot.gov/roadway/Bulletin/Default.shtm

19. Florida Department of Transportation Utility Accommodation Manual
https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/programmanagement/programmanagement/utilities/docs/uam/uam2017.pdf?sfvrsn=d97fd3dd_0

20. AASHTO LRFD Bridge Design Specifications
https://bookstore.transportation.org/category_item.aspx?id=BR

21. Florida Department of Transportation Traffic Engineering Manual
http://www.fdot.gov/traffic/TrafficServices/Studies/TEM/tem.shtm

22. Florida Department of Transportation Intelligent Transportation System Guide Book
http://www.fdot.gov/traffic/Doc_Library/Doc_Library.shtm

23. Federal Highway Administration Hydraulic Engineering Circular Number 18 (HEC 18).
http://www.fhwa.dot.gov/engineering/hydraulics/library_arc.cfm?pub_number=17

24. Florida Department of Transportation Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways
http://www.fdot.gov/roadway/FloridaGreenbook/FGB.shtm

25. Florida Department of Transportation Project Development and Environment Manual, Parts 1 and 2
http://www.fdot.gov/environment/pubs/pdeman/pdeman1.shtm

26. Florida Department of Transportation Driveway Information Guide
http://www.fdot.gov/planning/systems/programs/sm/accman/pdfs/driveway2008.pdf

27. AASHTO Highway Safety Manual

http://www.highwaysafetymanual.org/

28. Florida Statutes
http://www.leg.state.fl.us/Statutes/index.cfm?Mode=View%20Statutes&Submenu=1&Tab=statutes&CFID=14677574&CFTOKEN=80981948

29. Florida Department of Transportation Equal Opportunity Construction Contract Compliance Manual
http://www.fdot.gov/equalopportunity/contractcomplianceworkbook.shtm

B. Innovative Aspects:

The DEPARTMENT seeks to solicit innovative aspects from the Construction Manager/General Contractor during both the Pre-Construction and Construction Phases

C. Environmental Permits:

1. **Storm Water and Surface Water:**

Plans will be prepared in accordance with Chapters 373 and 403 (F.S.) and Chapters 40 and 62 (F.A.C.).

2. **Permits:**

The Construction Manager/General Contractor shall be responsible for coordinating with the DEPARTMENT if modifications to the issued permits are necessary to accurately depict the final design. The Construction Manager/General Contractor shall be responsible for providing any necessary information if permit time extensions or re-permitting are required in order to keep the environmental permits valid throughout the construction period. The Construction Manager/General Contractor shall assist the DEPARTMENT with draft copies of any and all permit applications, including responses to agency Requests for Additional Information, requests to modify the permits and/or requests for permit time extensions, for re-submittal to the agencies. The CM/GC shall fully comply with all permit requirements and conditions and will be solely responsible for all fines and restrictions imposed by the regulatory permit agencies.

All applicable data will be prepared by the DEPARTMENT in accordance with Chapter 373 and 403, Florida Statutes, Chapters 40 and 62, F.A.C.; Rivers and Harbors Act of 1899, Section 404 of the Clean Water Act, 23 CFR 771, 23 CFR 636, and parts 114 and 115, Title 33, Code of Federal Regulations. In addition to these Federal and State permitting requirements, any dredge and fill permitting required by local agencies shall be prepared in accordance with their specific regulations. Preparation of all documentation related to the acquisition of all applicable permits will be the responsibility of the DEPARTMENT. Preparation of complete permit packages will be the responsibility of the DEPARTMENT. The Construction Manager/General Contractor is responsible for complying with all requirements included in permit application packages. As the permittee, the DEPARTMENT is responsible for preparing and signing, the permit application package including all permit modifications, or subsequent permit applications. This applies whether the Project is Federal or state funded. Once the DEPARTMENT has submitted the permit application, the Construction Manager/General Contractor is responsible for complying with requirements of the environmental permitting agencies and identifying any modifications required for construction operations as approved by the DEPARTMENT. A copy (electronic and hard copy) of any and all correspondence with any of the environmental permitting agencies shall be sent to the District Environmental Permits Office. If any agency rejects or denies the permit application, it is the

responsibility of the Project Team to make whatever changes necessary to implement the repairs to ensure the permit application is approved. The Construction Manager/General Contractor shall be responsible for assisting the DEPARTMENT in acquiring any necessary permit extensions or re-permitting in order to keep the environmental permits valid throughout the construction period.

The Construction Manager/General Contractor shall be responsible for complying with all permit conditions.

D. Railroad Coordination:

The Department will conduct the required railroad contract negotiations and plans review coordination. All required Railroad Reimbursement Agreements will be between the railroad and the Department. Copies of the approved Agreements will be made available to the CM/GC. The CM/GC must comply with the terms of these agreements. The CM/GC must make the necessary arrangements with the railroad prior to encroachments into the railroad rights-of-way. The CM/GC will make any recommendations to the DEPARTMENT for any special conditions, such as train operating speed, for the railroad during construction for the DEPARTMENT to coordinate with the railroad.

E. Survey:

The DEPARTMENT will perform all surveying (Terrestrial, Mobile and/or Aerial) and mapping services necessary to complete the Pre-Construction Phase of the Project.

F. Verification of Existing Conditions:

The Construction Manager/General Contractor shall be responsible for verification of existing conditions, including research of all existing DEPARTMENT records and other information.

By execution of the contract, the Construction Manager/General Contractor specifically acknowledges and agrees that the Construction Manager/General Contractor is contracting and being compensated for performing adequate investigations of existing site conditions sufficient to support the design developed by the Project Team and that any information is being provided merely to assist the Construction Manager/General Contractor in completing adequate site investigations. Notwithstanding any other provision in the contract documents to the contrary, no additional compensation will be paid in the event of any inaccuracies in the preliminary information.

G. Submittals:

1. Component Submittals:

The Construction Manager/General Contractor may be required to review components of the contract plans set instead of the entire contract plan set; however, sufficient information from other components will be provided to allow for a complete review. In accordance with the FDOT Design Manual, components of the contract plans set are roadway, signing and pavement marking, signalization, lighting and structural.

2. Phase Submittals:

The Construction Manager/General Contractor will provide design reviews for each phase submittal listed below to the DEPARTMENT's Project Manager. The particular phase will be clearly indicated on the documents. The DEPARTMENT's Project Manager will send the documents to the CM/GC office for

review and comment. All comments requiring a response from the Construction Manager/General Contractor will require satisfactory resolution as determined by the DEPARTMENT.

90% Phase Submittal

1 copy of 11" X 17" plans (all required components)
1 copy of design documentation
1 copy of Technical Special Provisions
All of the information above shall be submitted electronically in .pdf format.
All QC plans and documentation for each component submittal shall be electronic in .pdf format

The DEPARTMENT will designate in the review comments if the next submittal will be a resubmittal of the 90% phase submittal or if the plans and supporting calculations are significantly developed to proceed to the Final Submittal. If the DEPARTMENT requires more than 2 resubmittals a submittal workshop between the DEPARTMENT and the Construction Manager/General Contractor must be held to resolve any outstanding issues or comments.

Final Submittal

1 set of signed and sealed 11" X 17" plans (all required documents)
1 copy of signed and sealed 11" X 17" plans
1 set of signed and sealed design documentation
1 copy of signed and sealed design documentation
1 set of final documentation
1 signed and sealed Construction Specifications Package or Supplemental Specifications Package
1 copy of signed and sealed copy of Construction Specifications Package or Supplemental Specifications Package
1 of electronic copy of Technical Special Provisions in .pdf format

All of the submittal review comments shall be submitted electronically in .pdf format.
All QC plans and documentation for each component submittal shall be electronic in .pdf format

The Construction Manager/General Contractor shall review a list of all changes made to the plans or specifications that were not directly related to the 90% plans review comments. Significant changes (as determined by the DEPARTMENT) made as a part of the Final submittal, that were not reviewed or provided in response to the 90% submittal comments, may require an additional review phase prior to stamping the plans or specifications

3. Requirements to Begin Construction:

Construction Services:

If the DEPARTMENT determines that the Construction Manager/General Contractor has been successful in meeting the goals of the project, the Construction Manager/General Contractor may be given an opportunity to prepare and submit official price proposal(s) for construction potentially before final design is complete. The Construction Manager/General Contractor will be required to share pricing information with the project team to facilitate price discussions and to help ensure the DEPARTMENT is receiving a

fair LS Price for the work. The DEPARTMENT may utilize an Independent Cost Estimator (ICE) and a Third-Party Estimator, to evaluate the Construction Manager/General Contractor's Construction and Operation/Monitoring/Maintenance price proposal. If the DEPARTMENT is satisfied with the performance of the Construction Manager/General Contractor, their approach to building the project, and their price, the DEPARTMENT anticipates executing the supplemental agreement with the CM/GC.

If the DEPARTMENT is not satisfied with the performance of the CM/GC, or if their prices are not acceptable, the DEPARTMENT reserves the right to terminate the CM/GC process, and/or procure the project by some other method.

As-Built Set:

For Phase 2, Construction Services, the Construction Manager/General Contractor shall assist the DEPARTMENT in completing the As-Built Plans as the Project is being constructed. All changes made subsequent to the "Released for Construction" Plans will be signed/sealed by the EOR. The As-Built Plans shall reflect all changes initiated by the Construction Manager/General Contractor or the DEPARTMENT in the form of revisions.

The DEPARTMENT will review the As-Built Plans prior to issuing Final Acceptance of the project in order to complete the As-Built Plans.

H. Contract Duration:

The Construction Manager/General Contractor shall work with the DEPARTMENT to finalize a project timeline for the Pre-Construction Phase Services and the Construction Phase services. Pre-Construction Services Estimated Duration 60 Days, Construction Services Estimated Duration 120 Days, and Operation/Monitoring/Maintenance Duration of 5 years following Construction Services Final Acceptance.

I. Project Schedule:

Construction Phase Services

The Construction Manager/General Contractor shall submit a CPM Schedule, in accordance with Subarticle 8-3.2 (Division I Specifications).

The minimum number of activities included in the Schedule shall be those listed in the Schedule of Values and those listed below:

- Shop Drawing Submittals
- Other Contractor-Initiated Submittals including RFI's, RFM's, RFC's, and NCR's
- Materials Quality Tracking
- Start of Construction
- Construction Mobilization
- Maintenance of Traffic Set-Up (per duration)
- Holidays and Special Events (shown as non-work days)
- Additional Construction Milestones as determined by the CM/GC
- Final Completion Date for All Work

J. Key Personnel/Staffing:

The Construction Manager/General Contractor work shall be performed and directed by key personnel identified in the response to the Request for Proposal or Technical Proposal by the Construction Manager/General Contractor. In the event a change in key personnel is requested, the Construction Manager/General Contractor shall submit the qualifications of the proposed key personnel and include the reason for the proposed change. Any changes in the indicated personnel shall be subject to review and approval by the District Construction Engineer. The DEPARTMENT shall have sole discretion in determining whether or not the proposed substitutions in key personnel are comparable to the key personnel identified in the response to the Request for Proposal or Technical Proposal. The Construction Manager/General Contractor shall have available professional staff meeting the minimum training and experience set forth in Florida Statute Chapter 455.

K. Meetings and Progress Reporting:

The Construction Manager/General Contractor shall anticipate periodic meetings with DEPARTMENT personnel and other agencies as required for resolution of design and/or construction issues. These meetings may include:

- DEPARTMENT technical issue resolution
- Local government agency coordination
- Maintenance of Traffic Workshop
- Permit agency coordination
- Scoping Meetings

During design, the Construction Manager/General Contractor shall meet with the DEPARTMENT's Project Manager on a Bi-weekly basis at a minimum and provide a two-week look ahead of the activities to be completed during the upcoming month.

During construction, the Construction Manager/General Contractor shall meet with the DEPARTMENT's Project Manager on a weekly basis and provide a two-week look ahead for activities to be performed during the coming week.

The Construction Manager/General Contractor shall, on a monthly basis, provide written progress reports that describe the items of concern and the work performed on each task.

L. Public Involvement:

1. **General:**

Public involvement is an important aspect of the Project. Public involvement includes communicating to all interested persons, groups, and government organizations information regarding the development of the Project. The DEPARTMENT, or its designated representative, will serve as the Public Involvement Consultant (PIC) to carry out an exhaustive Public Involvement Campaign and a marketing effort. The Construction Manager/General Contractor will assist the DEPARTMENT in the Public Involvement effort as described below.

2. **Community Awareness:**

The Construction Manager/General Contractor will review and comment on a Community Awareness

Program provided by the PIC for the Project.

3. **Public Meetings:**

The Construction Manager/General Contractor shall provide supporting materials necessary for various public meetings, which may include:

- Kick-off or introductory meeting
- Metropolitan Planning Organization (MPO) Citizens Advisory Committee Meetings
- Public Information Meetings
- Elected and appointed officials
- Special interest groups (private groups, homeowners associations, environmental groups, minority groups and individuals)
- Open Houses
- Virtual Public Meetings

The Construction Manager/General Contractor shall include attendance at two meetings per month for the term of the contract to support the public involvement program.

For any of the above type meetings the Construction Manager/General Contractor shall provide technical assistance, data and information, and information necessary for the day-to-day exchange of information with the public, all agencies, and elected officials in order to keep them informed as to the progress and impacts that the proposed Project will create. This includes workshops, information meetings, open houses, and public hearings.

The Construction Manager/General Contractor shall, as determined by the DEPARTMENT, attend the meetings with an appropriate number of personnel to assist the CEI/DEPARTMENT. The Construction Manager/General forward all requests for group meetings to the CEI/DEPARTMENT. The Construction Manager/General Contractor shall inform the CEI/DEPARTMENT of any meetings with individuals that occur without prior notice.

4. **Public Workshops, Information Meetings:**

The Construction Manager/General Contractor shall provide all the support services listed in No. 3 above. All legal/display advertisements announcing workshops, information meetings, and public meetings will be prepared and paid for by the DEPARTMENT.

The DEPARTMENT will be responsible for preparing and mailing (including postage) for all letters announcing the associated workshops and information meetings.

5. **Public Involvement Data:**

The Construction Manager/General Contractor is responsible for the following:

- Coordinating with the DEPARTMENT.
- Identifying possible permit and review agencies and providing names and contact information for these agencies to the DEPARTMENT.
- Providing required expertise (staff members) to assist the DEPARTMENT on an as-needed basis.
- Preparing color graphic renderings and/or computer-generated graphics to depict

the proposed improvements for coordination with the DEPARTMENT, local governments, and other agencies.

- Providing information to the DEPARTMENT to keep the DEPARTMENT website current.

The Construction Manager/General Contractor shall provide records of all public correspondence, written or verbal, to the DEPARTMENT throughout the life of the Project.

The Construction Manager/General Contractor may be asked by the CEI/DEPARTMENT to prepare draft responses to any public inquiries as a result of the public involvement process.

6. **Design:**

The Construction Manager/General Contractor shall provide a Design Review Plan which describes the procedures to be utilized to verify, independently check, and review all design drawings, specifications, and other documentation prepared as a part of the contract. The CM/GC will follow and implement this Design Review Plan as part of the preconstruction services.

7. **Construction Phase Services:**

The Construction Manager/General Contractor shall be responsible for developing and maintaining a Construction Quality Control Plan in accordance with Section 105 of Standard Specifications which describes their Quality Control procedures to verify, check, and maintain control of key construction processes and materials.

The sampling, testing and reporting of all materials used shall be in compliance with the Sampling, Testing and Reporting Guide (STRG) provided by the DEPARTMENT. The Construction Manager/General Contractor will use the DEPARTMENT's database(s) to allow audits of materials used to assure compliance with the STRG. The DEPARTMENT has listed the most commonly used materials and details in the DEPARTMENT's database. When materials being used are not in the DEPARTMENT's database list, the Construction Manager/General Contractor shall use appropriate material details from the STRG to report sampling and testing. Refer to the State Materials Office website for instructions on gaining access to the DEPARTMENT's databases:
http://www.fdot.gov/materials/quality/programs/qualitycontrol/contractor.shtm

Prepare and submit to the Engineer a Job Guide Schedule (JGS) using the DEPARTMENT database in accordance with Section 105 of Standard Specifications.

The DEPARTMENT shall maintain its rights to inspect construction activities and request any documentation from the Construction Manager/General Contractor to ensure quality products and services are being provided in accordance with the DEPARTMENT's Materials Acceptance Program.

M. Liaison Office:

The DEPARTMENT and the Construction Manager/General Contractor will designate a Liaison Office and a Project Manager who shall be the representative of their respective organizations for the Project.

N. Schedule of Values:

The Construction Manager/General Contractor is responsible for submitting estimates requesting payment. Estimates requesting payment will be based on the completion or percentage of completion of tasks as defined in the schedule of values. Final payment will be made upon final acceptance by the DEPARTMENT of the Project. Tracking DBE participation will be required under normal procedures according to the Construction Project Administration Manual. The Construction Manager/General Contractor must submit the schedule of values to the DEPARTMENT for approval. No estimates requesting payment shall be submitted prior to DEPARTMENT approval of the schedule of values.

Upon receipt of the estimate requesting payment, the DEPARTMENT's Project Manager will make judgment on whether or not work of sufficient quality and quantity has been accomplished by comparing the reported percent complete against actual work accomplished.

The Schedule of Values approved by the DEPARTMENT will be the basis for determining each monthly progress estimate and the final estimate. The quantities will be compared with the Project schedule to determine the percentage earned. The percentage shall be that portion of the work completed as compared to the total work contracted. The Construction Manager/General Contractor shall assign the Schedule of Values to the activities in the CPM schedule. The assignment of values to scheduled activities must be approved by the DEPARTMENT prior to the first monthly progress estimate and prior to any invoicing by the Construction Manager/General Contractor pursuant to the Cash Availability Schedule for the Project. The monthly progress estimates cut-off date shall be determined after award.

Prompt Payment Law:

Participants providing goods and services to the DEPARTMENT should be aware of the following time frames. The DEPARTMENT has five (5) working days from the date the monthly progress estimate is created to inspect and approve the goods and services. The DEPARTMENT has twenty (20) days to deliver a request for payment (voucher) to the Department of Financial Services. The twenty (20) days are measured from the latter of the date the invoice is received or the goods or services are received, inspected and approved.

If a payment is not available within forty (40) days of the DEPARTMENT's receipt of an invoice payable pursuant to the Cash Availability Schedule for the Project, a separate interest penalty at a rate as established pursuant to **Section 55.03(1), F.S.**, will be due and payable, in addition to the payable invoice amount, to the Design-Build Firm. Interest penalties of less than one (1) dollar will not be enforced unless the Construction Manager/General Contractor requests payment. Invoices that have to be returned to a Construction Manager/General Contractor because of Construction Manager/General Contractor preparation errors will result in a delay in payment. The invoice payment requirements do not start until a properly completed invoice pursuant to the Cash Availability Schedule is provided to the DEPARTMENT.

A Vendor Ombudsman has been established within the Department of Financial Services. The duties of this individual include acting as an advocate for contractors/vendors who may be experiencing problems in obtaining timely payment(s) from a state agency. The Vendor Ombudsman may be contacted at (850) 413-5516 or by calling the Department of Financial Services Division of Consumer Services, 1-877-693-5236.

O. Construction Engineering and Inspection:

The DEPARTMENT is responsible for providing Construction Engineering and Inspection (CEI) and Quality Assurance Engineering.

The Construction Manager/General Contractor is subject to the DEPARTMENT's Independent Assurance

(IA) Procedures.

P. Adjoining Construction Projects:

The Construction Manager/General Contractor shall be responsible for coordinating all construction activities with other construction Projects that are impacted by or impact this Project. This includes Projects under the jurisdiction of local governments, the DEPARTMENT, other regional and state agencies, or private entities.

Q. Issue Escalation:

In the event issues arise during prosecution of the work, the resolution of those issues will be processed as described below unless revised by a Project Specific Partnering Agreement:

The escalation process begins with the Construction Project Manager. All issues are to be directed to the Construction Project Manager. If the issue cannot be resolved by the Construction Project Manager in coordination with the Resident Engineer and Design Project Manager as applicable, the Construction Project Manager shall forward the issue to the District Construction Engineer who will coordinate with the District Design Engineer, and the District Utility Administrator, as applicable. Each level shall have a maximum of five (5) calendar days (excluding weekends and DEPARTMENT observed holidays) to answer, resolve, or address the issue. The Construction Manager/General Contractor shall provide all supporting documentation relative to the issue being escalated. The five (5) calendar day period (excluding weekends and DEPARTMENT observed holidays) begins when each level in the issue escalation process has received all required supporting documentation necessary to arrive at an informed and complete decision. The five (5) calendar day period (excluding weekends and DEPARTMENT observed holidays) is a response time and does not infer resolution. Questions asked by the DEPARTMENT may be expressed verbally and followed up in writing within one (1) calendar day (excluding weekends and DEPARTMENT observed holidays). Responses provided by the Construction Manager/General Contractor may be expressed verbally and followed up in writing within one (1) working day. Once a response is received from the District Construction Engineer, the Construction Project Manager will respond to the Construction Manager/General Contractor in a timely manner but not to exceed three (3) calendar days (excluding weekends and DEPARTMENT observed holidays).

The Construction Manager/General Contractor shall provide a similar issue escalation process for their organization with personnel of similar levels of responsibility.

Should an impasse develop, the Statewide Structures or Regional Dispute Review Board shall assist in the resolution of disputes and claims arising out of the work on the Contract.

VI. Additional Construction Criteria

A. General:

All construction work completed under the Contract shall be in accordance with the United States Standard Measures.

B. Shop Drawings:

The Construction Manager/General Contractor shall be responsible for the preparation and approval of Shop Drawings in accordance with the Standard Specifications, Section 5-1.4. Shop Drawings shall be in

conformance with the FDM. Shop drawing submittals must be accompanied by sufficient information for adjoining components or areas of work to allow for proper evaluation of the Shop Drawing(s) submitted for review. When required to be submitted to the DEPARTMENT, Shop Drawings shall bear the stamp and signature of the Record (EOR), and Specialty Engineer, as appropriate. All "Approved" and "Approved as Noted" Shop Drawings submitted to the DEPARTMENT for review shall also include Engineer of Record QA/QC Shop Drawing check prints along with the EOR stamped set(s). The DEPARTMENT shall review the Shop Drawing(s) to evaluate compliance with Project requirements and provide any findings to the Construction Manager/General Contractor. The DEPARTMENTs procedural review of Shop Drawings is to assure that the EOR has approved and signed the drawing, the drawing has been independently reviewed and is in general conformance with the plans. The DEPARTMENT's review is not meant to be a complete and detailed review. Upon review of the Shop Drawing, the DEPARTMENT will initial, date, and stamp the drawing "Released for Construction" or "Released for Construction as Noted".

C. Sequence of Construction:

The Construction Manager/General Contractor shall construct the work in a logical manner and with the following objectives as guides:

1. Maintain or improve, to the maximum extent possible, the quality of existing traffic operations, both in terms of flow rate and safety, throughout the duration of the Project.
2. Minimize the number of different Temporary Traffic Control Plan (TTCP) phases, i.e., number of different diversions and detours for a given traffic movement.
3. Take advantage of newly constructed portions of the permanent facility as soon as possible when it is in the best interest of traffic operations and construction activity.
4. Maintain reasonable direct access to adjacent properties at all times, with the exception in areas of limited access Right-of-Way where direct access is not permitted.
5. Coordinate with adjacent construction Projects and maintaining agencies.

D. Stormwater Pollution Prevention Plans (SWPPP):

The Construction Manager/General Contractor shall assist the DEPARTMENT to prepare a Storm Water Pollution Prevention Plan (SWPPP) as required by the National Pollution Discharge Elimination System (NPDES). The Construction Manager/General Contractor shall refer to the DEPARTMENT's Project Development and Environment Manual and Florida DEPARTMENT of Environmental Protection (FDEP) Rule 62-621.300(4)(a) for information in regard to the SWPPP. The SWPPP and the Design-Build Firm's Certification (FDEP Form 62-621.300(4) (b) **NOTICE OF INTENT (NOI) TO USE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES)** shall be submitted for the DEPARTMENT's review and approval. DEPARTMENT approval must be obtained prior to beginning construction activities.

E. Transportation Management Plan:

The Construction Manager/General Contractor must assist in the development and implementation a Transportation Management Plan in accordance with the DEPARTMENT's FDOT Design Manual.