Florida Department of Transportation
District 5

Addendum # 4
March 13, 2014

LOW BID
DESIGN-BUILD
REQUEST FOR PROPOSAL
For

The Sumter/Marion Intelligent Transportation Systems

Financial Projects Number(s):428213-1-52-01
Contract Number: E5W27

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ATTACHMENTS

The Attachments listed below are hereby incorporated into and made a part of this Request for Proposal (RFP) as though fully set forth herein.

Attachment 1: Project Advertisement
Attachment 2: MSP Preservation of Property
Attachment 3: Geotechnical Services Requirements/Specifications
Contractor Quality Control General Requirements (SP1050813DB)
Attachment 4: Structures Foundations (SP4550000DB)
Attachment 5: Division I Design-Build Specifications
Attachment 6: Maintenance Records

I. Introduction.

The Florida Department of Transportation (Department) has issued this Request for Proposal (RFP) to solicit competitive bids and proposals from Proposers for the Design/Build of the Sumter and Marion County Expansion of the ITS Network. The Expansion will run along I-75 from south of SR 44 to north of US 27.

Description of Work

This contract is a Design-Build Low Build. In the event that two firms bid the exact same amount for the max scope option and the TRC determines that both Firms are responsive, the Selection Committee will make the final decision. The selection process is contained in Section VII of this RFP. Sections VII.C and VII.D of this RFP describes in detail the evaluation, scoring and selection.

The ITS elements such as colored Dynamic Message Signs (DMS), Close Circuit Television Cameras (CCTV Cameras), Microwave Vehicle Detector Stations (MVDS) and Fiber Optic Cable are to be installed, replaced or maintained on I-75 as specified in the RFP. The project limits are approximately 1 1/2 mile South of SR 44 to ½ mile north of US 27 on Interstate 75.

A new 96 SM fiber optic cable shall be installed as FDOT's ITS Infrastructure Communication Network. The new backbone fiber shall be installed throughout the length of the project. The existing ITS infrastructure and sites to include but not limited to the cabinet, power, poles and pull boxes may be utilized. Additional ITS sites including CCTV, MVDS, and DMS's shall be installed to meet the RFP requirements. Colored DMS's will be installed within the project limits to include high definition CCTVs and high definition MVDS. The fiber tie-in point on the south side shall remain the same with the Turnpike. The fiber tie-in point on the north side shall remain in a splice vault with an enclosure for future projects. Another tie-in point with the City of Ocala shall take place within the project limits with the city's recommendation. This project requires furnishing and installing all the necessary components for a fully functional ITS system. The existing ITS facilities are specified in the RFP

Ground mounted cabinets shall not be used within this project. New cabinets shall be pole mounted. The replacement or installation of new devices shall be integrated into the District 5 Intelligent Transportation System (ITS) and operation at the Regional Traffic Management Center (RTMC) via the Sunguide Software.

All devices shall be incorporated into the existing network for control through the Regional Traffic Management Center (RTMC) in Orlando. All field devices shall communicate directly to the RTMC, which already controls and operators the District 5 ITS network. The Design-Build Firm shall be responsible for integration to the existing network and communication scheme of the District 5 Central Software (SunGuide); however the Department retains the right to perform any maintenance activities on the central software, including but not limited to updated versions. The Design-Build Firm shall also be responsible for communicating with FL Turnpike and the City of Ocala with any technical coordination.

A. Design-Build Responsibility

The Design-Build Firm shall be responsible for survey, geotechnical investigation, design, preparation of all documentation related to the acquisition of all permits not acquired by the Department, preparation of any and all information required to modify permits acquired by the Department if necessary, maintenance

of traffic, demolition, and construction on or before the Project completion date indicated in the Proposal. The Design-Build Firm shall coordinate all utility relocations.

The Design-Build Firm shall be responsible for compliance with Design and Construction Criteria (Section VI) which sets forth requirements regarding survey, design, construction, and maintenance of traffic during construction, requirements relative to Project management, scheduling, and coordination with other agencies and entities such as state and local government, utilities and the public.

The Design-Build Firm is responsible for coordinating with the District Environmental Office any engineering information related to Environmental Reevaluations. The Design-Build Firm will not be compensated for any additional costs or time associated with Reevaluation(s) resulting from proposed design changes.

The Design-Build Firm may propose changes which differ from the approved Interchange Proposal Report (if applicable) and/or the Project Development & Environment (PD&E) Study. Proposed changes must be coordinated through the Department. If changes are proposed to the configuration, the Design-Build Firm shall be responsible for preparing the necessary analyses and documentation required to satisfy requirements to obtain approval of the Department and , if applicable, FHWA. The Design-Build Firm shall provide the required documentation for review and processing. Approved revisions to the configuration may also be required to be included in the Reevaluation of the National Environmental Policy Act (NEPA) document or State Environmental Impact Report (SEIR) Reevaluations, per Section M (Environmental Services/Permits/Mitigation) of the RFP. The Design-Build Firm will not be compensated for any additional costs or time resulting from proposed changes.

The Design-Build Firm shall examine the Contract Documents and the site of the proposed work carefully before submitting a Proposal for the work contemplated and shall investigate the conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished and as to the requirements of all Contract Documents. Written notification of differing site conditions discovered during the design or construction phase of the Project will be given to the Department's Project Manager.

The Design-Build Firm shall examine boring data, where available, and make their own interpretation of the subsoil investigations and other preliminary data, and shall base their bid on their own opinion of the conditions likely to be encountered. The submission of a proposal is prima facie evidence that he Design-Build Firm has made an examination as described in this provision.

The Design-Build Firm 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 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.

In accordance with 23 CFR 636.109 of the FHWA, in a Federal Aid project, the Department shall have oversight, review, and approval authority of the permitting process.

The Department will determine the environmental impacts and coordinate with the appropriate agencies during the preparation of NEPA or SEIR Reevaluations. For federal projects, the Department will coordinate and process Reevaluations with FHWA.

II. Schedule of Events.

Below is the current schedule of the remaining events that will take place in the selection 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 public. Proposers will be notified sufficiently in advance of any changes or alterations in 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
February 20, 2014	Mandatory Pre-Proposal meeting at 2:00 p.m. at the District Office 719 S. Woodland Blvd. Deland Fl, 32720
April 1, 2014	Final Deadline for Questions
April 3, 2014	Deadline for the Department to reply to Questions
April 7, 2014	Technical and Price Proposals Due at the same time. Must be submitted in two separate packages clearly marked with the RFP Number and either Price proposal or Technical Proposal
April 7, 2014	Price Proposal/ Bid Opening and Opening of the Technical proposal of the Lowest Bidder, 2:00PM at the District Office 719 S. Woodland Blvd. DeLand, FL 32720, in the Osceola County Conference room.
April 14, 2014	Technical Review Committee Responsiveness meeting Proposal No. 1
April 21, 2014	Selection Committee Meeting No.1 8:15AM at the District Office 719 S. Woodland Blvd. DeLand, FL 32720
April 22, 2014	Technical Review Committee Responsiveness meeting Proposal No 2 (If needed)
April 28, 2014	Selection Committee Meeting No. 2 (If needed)
April 21, 2014	Posting of the Department's intended decision to Award, Proposal No. 1
April 24, 2014	Anticipated Award Date, Proposal No.1
April 28, 2014	Posting of the Department's intended decision to Award, Proposal No. 2
May 1, 2014	Anticipated Award Date, Proposal No.2

III. Threshold Requirements.

A. Qualifications

Proposers are required to be pre-qualified in all work types required for the Project. The Technical qualification requirements of Florida Administrative Code (F.A.C.) Chapter 14-75 and all qualification requirements of F.A.C. Chapter 14-22, based on the applicable category of the Project, must be satisfied.

B. Joint Venture Firm

Two or more firms submitting as a Joint Venture must meet the Joint Venture requirements of Section 14-22.007, Florida Administrative Code. Parties to a Joint Venture must submit a Declaration of Joint Venture and Power of Attorney Form No. 375-020-18, prior to the deadline for receipt of Proposals.

If the Proposer is a Joint Venture, the individual empowered by a properly executed Declaration of Joint Venture and Power of Attorney Form shall execute the Proposal. The Proposal shall clearly identify who will be responsible for the engineering, quality control, and geotechnical and construction portions of the Work.

C. Price Proposal Guarantee

A Price Proposal guaranty in an amount of not less than five percent (5%) of the total bid amount shall accompany each Proposer's Price Proposal. 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. The Price Proposal guaranty of all Proposers' shall be released pursuant to 3-4 of the Division I Design-Build Specifications.

D. Pre-Proposal Meeting

Attendance at the pre-proposal meeting is mandatory. Any Proposer failing to attend will be deemed non-responsive and automatically disqualified from further consideration. The purpose of this meeting is to provide a forum for the Department to discuss with all concerned parties the proposed Project, the design and construction criteria, CPM schedule, and method of compensation, instructions for submitting proposals, design exceptions/variances, and other relevant issues. In the event that any discussions at the pre-proposal meeting require, in the Department's opinion, official additions, deletions, or clarifications of the Request for Proposal, the Design and Construction Criteria, or any other document, the Department will issue a written addendum to this Request for Proposals as the Department determines is appropriate. No oral representations or discussions, which take place at the pre-proposal meeting, will be binding on the Department. FHWA will be invited on oversight Projects, in order to discuss the Project in detail and to clarify any concerns. Proposers shall direct all questions to the Departments Question and Answer website:
https://www3.dot.state.fl.us/BidQuestionsAndAnswers/Proposal.aspx/SearchProposal

During and after the meeting, it is the responsibility of the Project Manager/Contracting Unit to ensure that each Proposer develops their technical proposal with the same information. If a Proposer receives information from the Department relating to the Project, the Department will ensure that all Proposers receive the same information in a timely fashion. The Project file will clearly document all communications with any Firm regarding the design and construction criteria by the Contracting Unit or the Project Manager.

E. Question and Answer

The Design-Build Firm shall submit questions to the Departments Q&A website in accordance with section 2-4 of the Division I Design-Build Specifications.

F. Protest Rights

Any person who is adversely affected by the specifications contained in this Request for Proposal must file a notice of intent to protest in writing within seventy-two hours of the posting of this Request for Proposals. Pursuant to Sections 120.57(3) and 337.11, Florida Statutes, and Rule Chapter 28-110, Florida Administrative Code, any person adversely affected by the agency decision or intended decision shall file with the agency both a notice of protest in writing and bond within 72 hours after the posting of the notice of decision or intended decision, or posting of the solicitation with respect to a protest of the terms, conditions, and specifications contained in a solicitation and will file a formal written protest within ten days after the filing of the notice of protest. The formal written protest shall be filed within ten days after the date of the notice of protest if filed. The person filing the Protest must send the notice of intent and the formal written protest to:

Clerk of Agency Proceedings
Department of Transportation
605 Suwannee Street, MS 58
Tallahassee, Florida 32399-0458

Failure to file a notice of protest or formal written protest within the time prescribed in section 120.57(3), Florida Statutes, or failure to post the bond or other security required by law within the time allowed for filing a bond shall constitute a waiver of proceedings under Chapter 120 Florida Statutes.

G. Non-Responsive Proposals

Proposals 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 (also included for Design-Build Projects are those Proposals wherein the same Engineer is identified in more than one Proposal), 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 Comptroller General's List of Ineligible Design-Build Firms for Federally Financed or Assisted Projects.

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

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.

H. Waiver of Irregularities

The Department may waive minor informalities or irregularities in Proposals received where such is merely a matter of form and not substance, and the correction or waiver of which is not prejudicial to other Proposers. Minor irregularities are defined as those that will not have an adverse effect on the Department's interest and will not affect the Price of the Proposals by giving a Proposer an advantage or benefit not enjoyed by other Proposers.

1. Any design submittals that are part of a Proposal shall be deemed preliminary only.

2. Preliminary design submittals may vary from the requirements of the Design and Construction Criteria.

3. In no event will any such elections by the Department be deemed to be a waiving of the Design and Construction Criteria.

4. The Proposer who is selected for the Project will be required to fully comply with the Design and Construction Criteria for the Price Bid, regardless that the Proposal may have been based on a variation from the Design and Construction Criteria.

5. Proposers shall identify separately all innovative aspects as such in the Technical Proposal. An innovative aspect does not include revisions to specifications or established Department policies. Innovation should be limited to Design-Build Firm's means and methods, roadway alignments, approach to Project, use of new products, new uses for established products, etc.

6. The Proposer shall obtain any necessary permits or permit modifications not already provided.

7. Those changes to the Design Concept may be considered together with innovative construction techniques, as well as other areas, as the basis for grading the Technical Proposals in the area of innovative measures.

I. Modification or Withdrawal of Proposal

Proposers may modify or withdraw previously submitted Proposals at any time prior to the Proposal due date. Requests for modification or withdrawal of a submitted Proposal shall be in writing and shall be signed in the same manner as the Proposal. Upon receipt and acceptance of such a request, the entire 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 Proposal provided the change is submitted prior to the Proposal due date.

J. Department's Responsibilities

This Request for Proposal does not commit the Department to make studies or designs for the preparation of any proposal, nor to procure or contract for any articles or services.

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.

K. Design-Build Contract

The Department will enter into a Lump Sum contract with the successful Design-Build Firm. In accordance with Section V, the Design-Build Firm will provide a schedule of values to the Department for their approval. The total of the Schedule of Values will be the lump sum contract amount.

The terms and conditions of this contract are fixed Price and fixed time. The Design-Build Firm's submitted Bid (time and cost) is to be a lump sum Bid for completing the scope of work detailed in the Request for Proposal.

IV. Disadvantaged Business Enterprise (DBE) Program.

A. DBE Availability Goal Percentage:

The Department of Transportation has an overall eight and six tenths percent (8.6%) race-neutral DBE goal. This means that the State's goal is to spend at least 8.6% of the highway dollars with Certified DBE's as prime Design-Build Firms or as subcontractors. Race-neutral means that the Department believes that the 8.6% overall goal can be achieved through the normal competitive procurement process. The Department has reviewed this Project and assigned a DBE availability goal shown on the bid blank/contract front page under "% DBE Availability Goal". Although not a contract requirement, the Department believes that this DBE percentage can realistically 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 8.6% 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 all of our Design-Build Firms 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. This information is being collected through the Anticipated DBE Participation Statement.

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 Design-Build Firms, who have been awarded contracts, to assist in identifying DBE's that are available to participate on the Project. The successful Design-Build Firm should meet with the DBE Supportive Services Provider to discuss the DBE's that are available to work on this Project. The current Provider for the State of Florida is serviced by Blackmon Roberts Group and can be reached at (863) 802-1280 in Lakeland or (305) 777-0231 in Coral Gables.

C. Bidders Opportunity List:

The Federal DBE Program requires States to maintain a database of all Firms that are participating, or attempting to participate, on DOT-assisted contracts. The list must include all Firms that bid on prime contracts or bid or quote subcontracts on DOT-assisted Projects, including both DBE's and Non-DBE's.

A Bid Opportunity List should be submitted through the Equal Opportunity Compliance system which is

available at the Equal Opportunity Office Website. This information should be returned to the Equal Opportunity Office within three days of submission.

V. PROJECT REQUIREMENTS AND PROVISIONS FOR WORK.

A. Governing Regulations:

The services performed by the Design-Build Firm 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 advertisement of this contract with the exception of the Standard Specifications for Road and Bridge Construction (Divisions II & III), Special Provisions and Supplemental Specifications, Manual on Uniform Traffic Control Devices (MUTCD), Design Standards and Revised Index Drawings. The Design-Build Firm shall use the edition of the Standard Specifications for Road and Bridge Construction (Divisions II & III), Special Provisions and Supplemental Specifications, Design Standards and Revised Index Drawings in effect at the time the bid price proposals are due in the District Office. The Design-Build Firm shall use the 2009 edition of the MUTCD (as amended in 2012). It shall be the Design-Build Firm's 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 Roadway Plans Preparation Manuals (PPM)
   http://www.dot.state.fl.us/rddesign/PPMManual/PPM.shtm

2. Florida Department of Transportation Design Standards
   http://www.dot.state.fl.us/rddesign/DesignStandards/Standards.shtm

3. Florida Department of Transportation Standard Specifications for Road and Bridge Construction (Divisions II & III), Special Provisions and Supplemental Specifications
   http://www.dot.state.fl.us/specificationsoffice/Default.shtm

4. Florida Department of Transportation Surveying Procedure
   http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/550030101.pdf

5. Florida Department of Transportation EFB User Handbook (Electronic Field Book)
   http://www.dot.state.fl.us/surveyingandmapping/doc_pubs.shtm

6. Florida Department of Transportation Drainage Manual
   http://www.dot.state.fl.us/rddesign/Hydraulics/ManualsandHandbooks.shtm

7. Florida Department of Transportation Soils and Foundations Handbook
   http://www.dot.state.fl.us/structures/Manuals/SFH.pdf

8. Florida Department of Transportation Structures Manual
   http://www.dot.state.fl.us/structures/DocsandPubs.shtm

9. Florida Department of Transportation Current Structures Design Bulletins
   http://www.dot.state.fl.us/structures/Memos/currentbulletins.shtm

10. Florida Department of Transportation Computer Aided Design and Drafting (CADD) Manual
    http://www.dot.state.fl.us/ecso/downloads/publications/Manual/default.shtm

11. Florida Department of Transportation Computer Aided Design and Drafting (CADD) Production Criteria Handbook
http://www.dot.state.fl.us/ecso/downloads/publications/CriteriaHandBook/

12. Florida Department of Transportation Production Criteria Handbook CADD Structures Standards
http://www.dot.state.fl.us/ecso/downloads/publications/CriteriaHandBook/

13. Instructions for Design Standards
http://www.dot.state.fl.us/structures/IDS/IDSportal.pdf

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

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

16. Safe Mobility For Life Program Policy Statement
http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/000750001.pdf

17. Traffic Engineering and Operations Safe Mobility for Life Program
http://www.dot.state.fl.us/trafficoperations/Operations/SafetyisGolden.shtm

18. Florida Department of Transportation American with Disabilities Act (ADA) Compliance – Facilities Access for Persons with Disabilities Procedure
http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/625020015.pdf

19. Florida Department of Transportation Florida Sampling and Testing Methods
http://www.dot.state.fl.us/statematerialsoffice/administration/resources/library/publications/fstm/disclaimer.shtm

20. Florida Department of Transportation Flexible Pavement Coring and Evaluation Procedure
http://www.dot.state.fl.us/statematerialsoffice/administration/resources/library/publications/materialsmanual/documents/v1-section32-clean.pdf

21. Florida Department of Transportation Design Bulletins and Update Memos
http://www.dot.state.fl.us/rddesign/Bulletin/Default.shtm

22. Florida Department of Transportation Utility Accommodation Manual
http://www.dot.state.fl.us/specificationsoffice/utilities/UAM.shtm

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

24. Florida Department of Transportation Flexible Pavement Design Manual
http://www.dot.state.fl.us/rddesign/PM/publicationS.shtm

25. Florida Department of Transportation Rigid Pavement Design Manual
http://www.dot.state.fl.us/rddesign/PM/publicationS.shtm

26. Florida Department of Transportation Pavement Type Selection Manual
http://www.dot.state.fl.us/rddesign/PM/publicationS.shtm

27. Florida Department of Transportation Right of Way Manual
http://www.dot.state.fl.us/rightofway/Documents.shtm

28. Florida Department of Transportation Traffic Engineering Manual
http://www.dot.state.fl.us/TrafficOperations//Operations/Studies/TEM/TEM.shtm

29. Florida Department of Transportation Intelligent Transportation System Guide Book
http://www.dot.state.fl.us/TrafficOperations/Doc_Library/Doc_Library.shtm

30. Federal Highway Administration Checklist and Guidelines for Review of Geotechnical Reports and Preliminary Plans and Specifications
http://www.fhwa.dot.gov/engineering/geotech/pubs/reviewguide/checklist.cfm

31. AASHTO Guide for the Development of Bicycle Facilities
https://bookstore.transportation.org/collection_detail.aspx?ID=116

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

33. Florida Department of Transportation Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways
http://www.dot.state.fl.us/rddesign/FloridaGreenbook/FGB.shtm

34. Florida Department of Transportation Project Development and Environment Manual, Parts 1 and 2
http://www.dot.state.fl.us/emo/pubs/pdeman/pdeman1.shtm

35. Florida Department of Transportation Driveway Information Guide
http://www.dot.state.fl.us/planning/systems/sm/accman/pdfs/driveway2008.pdf

36. AASHTO Highway Safety Manual
http://www.highwaysafetymanual.org/Pages/default.aspx

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

B. Innovative Aspects:

All innovative aspects shall be identified separately as such in the Technical Proposal.

An innovative aspect does not include revisions to specifications, standards or established Department policies. Innovation should be limited to Design-Build Firm's means and methods, roadway alignments, approach to Project, etc.

C. Geotechnical Services:

1. General Conditions:

The Design-Build Firm shall be responsible for identifying and performing any geotechnical investigation, analysis and design of foundations, foundation construction, foundation load and integrity testing, and inspection dictated by the Project needs in accordance with Department guidelines, procedures and specifications. All geotechnical work necessary shall be performed in accordance with the Governing Regulations. The Design-Build Firm shall be solely responsible for all geotechnical aspects of the Project.

D. Department Commitments:

The Design-Build Firm will be responsible for adhering to the project commitments identified below.

- Provide the IP scheme.
- Integrate any new devices to the SunGuide Software.

E. Environmental Permits:

1. Storm Water and Surface Water:

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

2. Permits:

The Design-Build Firm shall be responsible for modifying the issued permits as necessary to accurately depict the final design. The Design-Build Firm shall be responsible for any necessary permit time extensions or re-permitting in order to keep the environmental permits valid throughout the construction period. The Design-Build Firm shall provide 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 review and approval by the Department prior to submittal to the agencies.

All applicable data shall be prepared in accordance with Chapter 373 and 403, Florida Statutes, Chapters 40 and 62, Florida Administrative Code; 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 Design-Build Firm. Preparation of complete permit packages will be the responsibility of the Design-Build Firm. The Design-Build Firm is responsible for the accuracy of all information included in permit application packages. As the permitee, the Department is responsible for reviewing, approving, 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 approved the permit application, the Design-Build Firm is responsible for submitting the permit application to the environmental permitting agency. A 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 Design-Build Firm's responsibility to make whatever changes necessary to ensure the permit application is approved. The Design-Build Firm shall be responsible for any necessary permit extensions or re-permitting in order to keep the environmental permits valid throughout the construction period. The Design-Build Firm shall provide 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 extensions, for review and approval by the Department prior to submittal to the agencies.

The Design-Build Firm will be required to pay all permit fees. Any fines levied by permitting agencies shall be the responsibility of the Design-Build Firm. The Design-Build Firm shall be responsible for complying with all permit conditions.

Wetland mitigation is required in the issued permits, which are based on the Conceptual Design Plans, and

will be the responsibility of the Department. If any permit applications completed by the Design-Build Firm propose to increase the amount of wetland impact that requires mitigation, the Design-Build Firm shall be responsible for providing to the Department an update on the amount and type of wetland impacts as soon as the impacts are anticipated (including temporary impacts and/or any anticipated impacts due to construction staging or construction methods). The Department will direct the use of a mitigation site, private mitigation bank or the use of the water management district per 373.4137 F.S. The mitigation costs of any additional impacts proposed by the Design-Build Firm shall be the responsibility of the Design-Build Firm. If the Department directs use of a private mitigation bank, the Design-Build Firm shall pay the appropriate fee directly to the bank. If the Department directs use of 373.4137, F.S., the Design-Build Firm shall provide appropriate funds to the Department at the time of permit issuance and the Department will then transfer the mitigation funds to the SWFWMD.

The Design-Build Firm shall be solely responsible for all costs associated with these permitting activities and shall include all necessary permitting activities in their schedule.

However, notwithstanding anything above to the contrary, upon the Design-Build Firm's preliminary request for extension of Contract Time, pursuant to 8-7.3, being made directly to the District Construction Engineer, the Department reserves unto the District Construction Engineer, in their sole and absolute discretion, according to the parameters set forth below, the authority to make a determination to grant a non-compensable time extension for any impacts beyond the reasonable control of the Design-Build Firm in securing permits. Furthermore, as to any such impact, no modification provision will be considered by the District Construction Engineer unless the Design-Build Firm clearly establishes that it has continuously from the beginning of the Project aggressively, efficiently and effectively pursued the securing of the permits including the utilization of any and all reasonably available means and methods to overcome all impacts. There shall be no right of any kind on behalf of the Design-Build Firm to challenge or otherwise seek review or appeal in any forum of any determination made by the District Construction Engineer under this provision.

F. Railroad Coordination: N/A

G. Survey:

The Design-Build Firm shall perform all surveying and mapping services necessary to complete the Project. Survey services must also comply with all pertinent Florida Statutes and applicable rules in the Florida Administrative Code. All field survey data will be furnished to the District Surveyor in a Department approved digital format, readily available for input and use in CADD Design files. All surveying and mapping work must be accomplished in accordance with the Department's Surveying Procedure, Topic Nos. 550-030-101; Right-of-Way Mapping Procedure, Topic No. 550-030-015; Aerial Surveying Standards for Transportation Projects Procedure, Topic No. 550-020-002. This work must comply with the Minimum Technical Standards for Professional Surveyors and Mappers, Chapter 5J-17, F.A.C., pursuant to Section 472.027, F.S. This survey also must comply with Chapter 177, F.S.

H. Verification of Existing Conditions:

The Design-Build Firm shall be responsible for verification of existing conditions, including research of all existing Department records and other information.

By execution of the contract, the Design-Build Firm specifically acknowledges and agrees that the Design-Build Firm is contracting and being compensated for performing adequate investigations of existing site conditions sufficient to support the design developed by the Design-Build Firm and that any

information is being provided merely to assist the Design-Build Firm 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.

I. Submittals:

1. Plans:

Plans must meet the minimum contents of a particular phase submittal prior to submission for review. The particular phase of each submittal shall be clearly indicated on the cover sheet. Component submittals must be accompanied by sufficient information for adjoining components or areas of work to allow for proper evaluation of the component under review.

Submittals for Category I bridges are limited to the following component submittals: foundation, substructure, and superstructure. Bridge component submittals must be accompanied by all supplemental information required for a complete review. Submittals for individual component elements (i.e. Pier 2, Abutment 1, Span 4, etc.) and incomplete submittals will not be accepted.

Category I bridge component submittals shall contain the following:

- Plan sheets for the component under review developed to the specified level of detail (i.e. 90% plans, Final plans, etc.),
- A complete set of the most developed plan sheets for all other major elements of the bridge. These sheets shall be marked "For Information Only" on the index sheet. In no case shall a plan sheet be less than 30% complete.
- Design documentation including a complete set of calculations, geotechnical reports, pertinent correspondence, etc. in support of the 90% and final component submittals.

The Design-Build Firm shall provide copies of required review documents as listed below.

<u>90% Component Plans</u>

- 8 sets of 11" X 17" roadway plans
- 5 sets of 11" X 17" structure plans
- 4 sets of 11" X 17" each component set
- 5 copies of Final Geotechnical Report
- 2 set of documentation - structures
- 2 copy of Technical Special Provisions

<u>Final Component Plans</u>

- 8 sets of 11" X 17" roadway plans
- 5 sets of 11" X 17" structure plans
- 2 sets of 11" X 17" ITS plans
- 4 sets of 11" X 17" each component set, except ITS plans
- 2 sets of final documentation
- 1 signed and sealed copy of Specifications Package
- 2 sets of electronic copies of Technical Special Provisions on CD

Construction Set:

- 1 set of 11"X 17" copies of the signed and sealed plans for the Department to stamp "Released for construction"

Final signed and sealed plans will be delivered to the Department's Project Manager prior to construction of any component. The Department's Project Manager will send a copy of final signed and sealed plans to the appropriate office for review and comment. Once all comments have been satisfactorily resolved as determined by the Department, the Department's Project Manager will initial, date and stamp each submittal as "Released for Construction". Only signed and sealed plans which are stamped "Released for Construction" by the Department's Project Manager are valid and all work that the Design-Build Firm performs in advance of the Department's release of Plans will be at the Design-Build Firm's risk. To work at risk, the Design-Build Firm must submit signed and sealed plans and can begin working prior to the Department's Project Manager providing stamped "Release for Construction" plans. The Design-Build Firm shall notify the Department five (5) days prior to starting work at risk. All work that the Design-Build Firm performs in advance of the Department's release of Plans will be at the Design-Build Firm's risk.

Record Set:

The Design-Build Firm shall furnish to the Department, upon Project completion, the following:

- 1 set of 11" X 17" signed and sealed plans
- 2 sets of 11 "X 17" copies of the signed and sealed plans
- 1 signed and sealed copy of the Bridge Load Rating based on as-built conditions
- 1 sets of final documentation (if different from final component submittal)
- 2 (two) Final Project CD's

The Design-Build Firm's Professional Engineer in responsible charge of the Project's design shall professionally endorse (signed and sealed and certified) the record prints, the special provisions and all reference and support documents. The professional endorsement shall be performed in accordance with the Department Plans Preparation Manual.

The Design-Build Firm shall complete the record set as the Project is being constructed. The record set becomes the as-builts at the end of the Project. All changes shall be signed/sealed by the EOR. The record set shall reflect all changes initiated by the Design-Build Firm or the Department in the form of revisions. The record set shall be submitted on a Final Project CD upon Project completion.

The CEI shall perform a review of the record set prior to final acceptance in order to complete the record set.

The CEI shall certify the final plans as per Section 4.5.7 of Chapter 4 of the Preparation and Documentation Manual (TOPIC No. 700-050-010).

2. Milestones:

Component submittals, in addition to the plan submittals listed in the previous section will be required. In addition to various submittals mentioned throughout this document the following milestone submittals

will be required.

- 90% Design Submittals
- 100% Design Submittals
- DMS Shop Drawings
- System Acceptance Test Plan Submittal

a. The Work Breakdown Structure shall be submitted to the FDOT PM prior to the first day of field work.
b. The integration and test plans shall be submitted to the FDOT PM 30 days prior to the testing of any subcomponent.

3. Railroad Coordination: N/A

J. Contract Duration:

The Department has established a Contract Duration of 386 calendar days for the subject Project.

K. Project Schedule:

The Design-Build Firm shall submit a Schedule, in accordance with Subarticle 8-3.2 (Design-Build Division I Specifications). The Design-Build Firm's Schedule shall allow for up to fifteen (15) calendar days (excluding weekends and Department observed Holidays) review time for the Department's review of all submittals.

The Department will perform the review of Foundation Construction submittals in accordance with Section 455.

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

- Anticipated Award Date
- Design Submittals
- Shop Drawing Submittals
- Design Survey
- Submittal Reviews by the Department and FHWA
- Design Review / Acceptance Milestones
- Materials Quality Tracking
- Geotechnical Investigation
- Start of Construction
- Clearing and Grubbing
- Construction Mobilization
- Embankment/Excavation
- Environmental Permit Acquisition
- Foundation Design
- Foundation Construction
- Substructure Design
- Substructure Construction

- Superstructure Design
- Superstructure Construction
- Walls Design
- Walls Construction
- Roadway Design
- Roadway Construction
- Signing and Pavement Marking Design
- Signing and Pavement Marking Construction
- Signalization and Intelligent Transportation System Design
- Signalization and Intelligent Transportation System Construction
- Lighting Design
- Lighting Construction
- Maintenance of Traffic Design
- Permit Submittals
- Maintenance of Traffic Set-Up (per duration)
- Erosion Control
- Holidays and Special Events (shown as non-work days)
- Additional Construction Milestones as determined by the Design-Build Firm
- Final Completion Date for All Work

L. Key Personnel/Staffing:

The Design-Build Firm's work shall be performed and directed by key personnel identified in the Technical Proposal by the Design-Build Firm. Any changes in the indicated personnel shall be subject to review and approval by the Department's Project Manager. The Design-Build Firm shall have available a professional staff that meets the minimum training and experience set forth in Florida Statute Chapter 455.

M. Meetings and Progress Reporting:

The Design-Build Firm 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
- Permit agency coordination
- Local government agency coordination
- Scoping Meetings
- ITS Pre-Integration Meeting

The ITS Pre-Integration Meeting shall be scheduled at the Department's facility at least thirty (30) calendar days before beginning ITS Integration activities. The purpose of these meetings shall be to verify the Design-Build Firm's Integration Plans by reviewing proposed splicing diagrams, integration plans, IP addressing schemes and other network design issues. In addition, at these meetings the Design-Build Firm shall identify any concerns regarding the Integration and provide detailed information on how such concerns will be addressed and/or minimized.

The Design-Build Firm must coordinate with the Department to schedule the Pre-Integration Meeting and must provide all documentation as required to support the meeting to include detailed functional narrative

text, system and subsystem drawings and schematics.

The Pre-Integration Meeting shall address, at a minimum, the following items:

- The site surveys performed by the Design-Build Firm
- Troubleshooting of any Design-Build Firm installed hardware issues, both field or RTMC (if applicable) that affect the integration work.
- Design-Build Firm to provide a list of ITS IP addressable field devices to the ITS Network Administrator. The Design-Build Firm shall allow a 5 day review period for the ITS Network Administrator to update the provided list with the Department's selected IP address for each device.
- Design-Build Firm configuration of the ITS field devices for integration with the SunGuide® software, including link, lane, roadway, and device configurations. As part of SunGuide integration, the Design-Build Firm shall supply the following information for each new ITS device as needed:

Latitude in minutes
Longitude in minutes
DMS Number
Location (Route and description)
Manufacturer
Number of Lines (Pixels)
Number of Columns (Pixels)
Day Brightness Level
Night Brightness Level
IP Address
Port Server Type (if applicable)
Drop Address (if Applicable)
Port Server Port number (if Applicable)

The Department will integrate the new ITS devices into SunGuide.

All action items resulting from the Integration Meeting must be satisfactorily addressed by the Design-Build Firm and reviewed and accepted by the Department before granting final acceptance of the Integration Plan. Integration shall not commence until all actions have been resolved.

All items reviewed at the Integration Meeting shall be in accordance with the RFP to ensure contract compliance with all items. Acceptance of the Integration Plan does not release the Design-Build Firm's overall responsibility for ensuring that all design requirements, as specified, have been achieved in the final design and implementation.

During design, the Design-Build Firm shall meet with the Department's Project Manager on a monthly basis and provide a month look ahead of the activities to be completed during the upcoming month.

During construction, the Design-Build Firm shall meet with the Department's Project Manager on a weekly basis and provide a one-week look ahead for activities to be performed during the coming week.

The Design-Build Firm shall, on a monthly basis, provide written progress reports that describe the items of concern and the work performed on each task.

N. Quality Management Plan (QMP):

1. Design:

The Design-Build Firm shall be responsible for the professional quality, Technical accuracy and coordination of all surveys, designs, drawings, specifications, geotechnical and other services furnished by the Design-Build Firm under this contract.

The Design-Build Firm shall provide a Design Quality Management Plan, which describes the Quality Control (QC) procedures to be utilized to verify, independently check, and review all design drawings, specifications, and other documentation prepared as a part of the contract. In addition the QMP shall establish a Quality Assurance (QA) program to confirm that the Quality Control procedures are followed. The Design-Build Firm shall describe how the checking and review processes are to be documented to verify that the required procedures were followed. The QMP may be one utilized by the Design-Build Firm, as part of their normal operation or it may be one specifically designed for this Project. . The Design-Build Firm shall submit a QMP within fifteen (15) working days following issuance of the written Notice to Proceed. A marked up set of prints from the Quality Control review will be sent in with each review submittal. The responsible Professional Engineers or Professional Surveyor that performed the Quality Control review, as well as the QA manager will sign a statement certifying that the review was conducted.

The Design-Build Firm shall, without additional compensation, correct all errors or deficiencies in the surveys, designs, drawings, specifications and/or other services.

No fabrication, casting, or construction will occur until all related design review and shop drawing review comments are resolved.

2. Construction:

The Design-Build Firm 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 Design-Build Firm 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 Design-Build Firm shall use appropriate material details from the STRG to report sampling and testing. Refer to the "Access Instruction for LIMS" for more information on how to gain access to the Department's databases: http://www.dot.state.fl.us/statematerialsoffice/quality/programs/qualitycontrol/contractor.shtm

Prepare and submit to the Engineer a Job Guide Schedule (JGS) using the Laboratory Information Management System (LIMS) in accordance with Section 105 of Standard Specifications.

The Department shall maintain its rights to inspect construction activities and request any documentation from the Design-Build Firm to ensure quality products and services are being provided in accordance with the Department's Materials Acceptance Program.

O. Liaison Office:

The Department and the Design-Build Firm will designate a Liaison Office and a Project Manager who shall be the representative of their respective organizations for the Project.

Q. Schedule of Values:

The Design-Build Firm will be responsible for invoicing the Department based on current invoicing policy and procedure. Invoicing will be based on the completion or percentage of completion of major, well-defined tasks as defined in the schedule of values. Final payment will be made upon final acceptance by the Department of the Design-Build Project. Tracking DBE participation will be required under normal procedures according to the CPAM. The Design-Build Firm must submit the schedule of values to the Department for approval. No invoices shall be submitted prior to Department approval of the schedule of values.

Upon receipt of the invoice, 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.

R. Computer Automation:

The Project shall be developed utilizing computer automation systems in order to facilitate the development of the contract plans. Various software and operating systems were developed to aid in assuring quality and conformance with Department of Transportation policies and procedures. Seed Files, Cell Libraries, User Commands, MDL Applications and related programs developed for roadway design and drafting are available for the MicroStation V8 format in the FDOT CADD Software Suite. However, it is the responsibility of the Design-Build Firm to obtain and utilize current Department releases of all CADD applications.

The Design-Build Firm's role and responsibilities are defined in the Department's CADD Manual. The Design-Build Firm will be required to submit final documents and files which shall include complete CADD design and coordinate geometry files in Intergraph / Micro station format, as described in the above referenced document.

The archived submittal shall also include either a TIMS database file, CADD Index file (generated from RDMENU) or documentation that shall contain the Project history, file descriptions of all (and only) Project files, reference file cross references, and plotting criteria a (e.g. batch, level symbology, view attributes, and display requirements). A printed directory of the archived submittal shall be included.

S. Construction Engineering and Inspection:

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

The Design-Build Firm is subject to the Department's Independent Assurance (IA) Procedures.

T. Testing:

The Department or its representative will perform verification and resolution sampling and testing activities at both on site, as well as, off site locations such as pre-stress plants, batch plants, structural

steel and weld, fabrication plants, etc. in accordance with the latest Specifications.

U. Value Added:

The Design-Build Firm may provide Value Added Project Features, in accordance with Article 5-14 of the Specifications for the following features:

- Any products or features the Design-Build Firm desires.

The Design-Build Firm shall develop the Value Added criteria, measurable standards, and remedial work plans in the Design-Build Firm's Technical Proposal for features proposed by the Design-Build Firm.

V. Adjoining Construction Projects:

The Design-Build Firm shall be responsible for coordinating 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, or other regional and state agencies.

W. Design Issue Escalation:

The Department has established the issue escalation process for design questions and conflict resolution that the Design-Build Firm shall follow unless revised by the Partnering agreement. All issues are to be directed to the Department Project Manager. If the issue cannot be resolved at this level the Department Project Manager shall forward the issue to the next level in the process. The escalation process begins with the District Design Engineer, followed by the Director of Transportation Operations, and finally to the District Secretary. Each level shall have a maximum of three (3) calendar days (excluding weekends and Department observed holidays), to answer, resolve or address the issue. The three (3) calendar day (excluding weekends and Department observed holidays) period is a response time and does not infer resolution. Questions may be expressed verbally and followed up in writing. The Department Project Manager will respond in a timely manner but not to exceed three (3) calendar days (excluding weekends and Department observed holidays). The Design-Build Firm shall provide any available supporting documentation.

The Design-Build Firm shall provide a similar issue escalation process for their organization with personnel of similar levels of responsibility.

The District Secretary will have the final authority on design decisions.

X. Construction Clarification, Conflict Resolution, and Issue Escalation:

In the event that construction problems occur, the resolution of those problems will be processed in one of the following two ways unless revised by a Partnering agreement:

- If the resolution does not change the original intent of the technical proposal/RFP, then the Design-Build Firm Engineer of Record (EOR) will be responsible for developing the design solution to the construction problem and the Resident Engineer will be responsible for review and response within ten (10) calendar days (excluding weekends and Department observed holidays). The Resident Engineer will either concur with the proposed solution or, if the

Resident Engineer has concerns, the issue will be escalated as described in the process below.

- If the resolution does alter the original intent of the technical proposal/RFP then the EOR will develop the proposed solution, copy in the Resident Engineer, and send it to the District Construction Office for review and response through the Department Project Manager. The District Construction Office will respond to the proposed solution within ten (10) calendar days (excluding weekends and Department observed holidays). The District Construction Office will either concur with the proposed solution or, if the Resident Engineer has concerns, the issue will be escalated as described in the process below. Changes to the original intent of the technical proposal/RFP will require a contract change order and FHWA approval.

- The Department has established the issue escalation process for construction questions and conflict resolution that the Design-Build Firm shall follow unless revised by the Partnering agreement. All issues are to be directed to the Department Project Manager. If the issue cannot be resolved at this level the Department Project Manager shall forward the issue to the next level in the process. The escalation process begins with the District Construction Engineer, followed by the Director of Transportation Operations, and finally to the District Secretary. Each level shall have a maximum of three (3) calendar days (excluding weekends and Department observed holidays) to answer, resolve or address the issue. The three (3) calendar day (excluding weekends and Department observed holidays) period is a response time and does not infer resolution. Questions may be expressed verbally and followed up in writing. The Department Project Manager will respond in a timely manner but not to exceed three (3) calendar days (excluding weekends and Department observed holidays). The Design-Build Firm shall provide any available supporting documentation.

The Design-Build Firm shall provide a similar issue escalation process for their organization with personnel of similar levels of responsibility.

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

VI. Design and Construction Criteria

A. General:

The Design-Build Firm shall be responsible for: detailed plan checking as outlined in the Plans Preparation Manual (PPM); as described in the RFP; and the Design and Construction criteria package. This includes a checklist of the items listed in the PPM for each completed phase submittal. Bridge submittals may be broken into foundation, substructure, superstructure, approach spans and main channel spans. Roadway submittals may be broken down into grading, drainage, walls, ITS, signing & pavement marking, signalization, lighting and final geometry components. The component design must be in conformity with the Design and Construction Criteria requirements, approved preliminary layout and concept as provided in the Technical Proposal.

Before construction activities can begin for a specific component, signed and sealed design plans and

calculations supporting the design for that component must be reviewed by the Department. Component submittals shall be complete submittals along with all the supporting information necessary for review. The work must represent logical work activities and must show impacts on subsequent work on this Project. Any modification to the component construction due to subsequent design changes as the result of design development is solely the Design-Build Firm's risk. Upon review by the Department, the plans will be stamped "Released for Construction" and initialed and dated by the reviewer. Any construction initiated by the Design-Build Firm prior to receiving signed and sealed plans stamped "Released for Construction" shall be at the sole risk of the Design-Build Firm.

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

B. Geotechnical Services

Driven Pile Foundations for Major Structures

The Design-Build Firm shall be responsible for the following:

1. Selection of pile type and size.
2. Selection of test pile lengths, locations and quantity of test piles.
3. Selection of pile testing methods.
4. Determining the frequency of such testing unless otherwise stated herein.
5. Performance of the selected test pile program, including dynamic load test personnel and equipment. The Department may observe the installation of test piles and all pile testing.
6. Selection of production pile lengths.
7. Development of the driving criteria.
8. Driving piles to the required capacity and minimum penetration depth.
9. Inspecting and Recording the pile driving information.
10. Submitting Foundation Certification Packages.
11. Providing safe access, and cooperating with the Department in verification of the piles, both during construction and after submittal of the certification package.

Drilled Shaft Foundations for Miscellaneous Structures

The Design-Build Firm shall be responsible for the following:

1. Evaluating geotechnical conditions to determine the drilled shaft diameter and length and construction methods to be used.
2. Performing the subsurface soils investigation.
3. Construct initial drilled shaft to establish satisfactory installation process performance and results, prior to continued production.
4. Providing all personnel and equipment to perform integrity evaluations and testing of drilled shafts, as required.
5. Determining the production shaft lengths.
6. Constructing all drilled shafts to the required tip elevation in accordance with the specifications.
7. Inspecting and documenting the construction of all drilled shafts in accordance with the specifications.
8. For drilled shafts for miscellaneous structures, perform CSL on any drilled shaft suspected of containing defects.

9. Process an Engineering Analysis Report (EAR, signed & sealed by Contractor's specialty engineer) to investigate, and disposition, suspected or confirmed drilled shaft defects. Provide access to in-process evaluation strategies (ex. testing, coring, etc.), proposed disposition (ex. repair, etc.), and associated repair procedure – to verify the final results will be satisfactory to the Department.
10. Providing safe access, and cooperating with the Department in verification of the drilled shafts, both during construction and after submittal of the Foundation Certification package.
11. Submit final Foundation Certification Packages in accordance with the specifications.

Spread Footings Foundations

The Design-Build Firm shall be responsible for the following:

1. Evaluating geotechnical conditions and designing the spread footing.
2. Constructing the spread footing to the required footing elevation, at the required soil or rock material, and at the required compaction levels, in accordance with the specifications.
3. Inspecting and documenting the spread footing construction.
4. Submitting Foundation Certification Packages in accordance with the specifications.
5. Providing safe access, and cooperating with the Department in verification of the spread footing, both during construction and after submittal of the certification package.

C. Utility Coordination:

The Design-Build Firm shall utilize a single dedicated person responsible for managing all utility coordination. This person shall be contractually referred to as the Utility Coordination Manager and shall be identified in the Design-Build Firm's Proposal. The Design-Build Firm shall notify the Department in writing of any change in the identity of the Utility Coordination Manager. The Utility Coordination Manager shall have the following knowledge, skills, and abilities:

1. A minimum of 4 years of experience performing utility coordination in accordance with Department standards, policies, and procedures.
2. Knowledge of the Department plans production process and utility coordination practices,
3. Knowledge of Department agreements, standards, policies, and procedures.

The Design-Build Firm's Utility Coordination Manager shall be responsible for managing all utility coordination, including, but not limited to, the following:

1. Ensuring that all utility coordination and activities are conducted in accordance with the requirements of the Contract Documents.
2. Identifying all existing utilities and coordinating any new installations. Reviewing proposed utility permit application packages and recommending approval/disapproval of each permit application based on the compatibility of the permit as related to the Design-Build firm's plans.
3. Scheduling utility meetings, preparing and distributing minutes of all utility meetings, and ensuring expedient follow-up on all unresolved issues.
4. Distributing all plans, conflict matrices and changes to affected Utility Agency/Owners and making sure this information is properly coordinated.

5. Identifying and coordinating the execution and performance under any agreement that is required for any utility work needed in with the Design-Build Project.
6. Preparing, reviewing, approving, signing, coordinating the implementation of and submitting to the Department for review and acceptance, all Utility Work Schedules.
7. Resolving utility conflicts.
8. Obtaining and maintaining all appropriate Sunshine State One Call Tickets.
9. Performing Constructability Reviews of plans prior to construction activities with regard to the installation, removal, temporary removal, de-energizing, deactivation, relocation, or adjustment of utilities.
10. Providing periodic Project updates to the Department Project Manager and District Utility Office as requested.
11. Coordination with the Department on any issues that arise concerning reimbursement of utility work costs.

The following Utility Agency/Owners (UA/O's) have been identified by the Department as having facilities within the Project corridor. The contractor shall avoid impacting all utilities. If during design of the project the Design/Build Firm discovers a utility impact that is unavoidable, the Design/Build Firm shall contact the Department Project Manager.

UA/O	Eligible for Reimbursement (Y/N)
AT&T Corp.	N/A
AT&T Local	N/A
Brighthouse Networks	N/A
Cablevision	N/A
CenturyLink	N/A
City of Ocala Water & Sewer	N/A
City of Wildwood Water & Sewer	N/A
Comcast Cable	N/A
Cox Cable	N/A
Florida Gas Transmission	N/A
Level 3	N/A
Marion County Utilities	N/A
Sumter Electric Cooperative - Transmission	N/A
Sumter Electric Cooperative – Distribution	N/A
TECO Peoples Gas	N/A
TransCore	N/A

"Buy America" Material Certification Requirements: The UA/O will only use steel and iron produced in the United States, in accordance with the Buy America provisions of 23 CFR 635.410, as amended. The UA/O will ensure that all manufacturing processes for this material occur in the United States. As used in this provision, a manufacturing process is any process that modifies the chemical content, physical shape or size, or final finish of a product, beginning with the initial melding and mixing and continuing through the bending and coating stages. A manufactured steel or iron product is complete only when all grinding, drilling, welding, finishing and coating have been completed. If a domestic product is taken outside the

United States for any process, it becomes foreign source material. These requirements are applicable to all steel and iron materials incorporated into the finished work, but are not applicable to steel and iron items that are not incorporated into the finished work. The UA/O will provide a certification from the producer of steel or iron, or any product containing steel or iron as a component, stating that all steel or iron furnished or incorporated into the furnished product was manufactured in the United States in accordance with the requirements of this specification and the Buy America provisions of 23 CFR 635.410, as amended. Such certification shall also include a statement that the product was produced entirely within the United States. The UA/O will furnish each such certification to the Florida Department of Transportation prior to incorporating the material into the project.

D. Roadway Plans: N/A

E. Geometric:

The Design-Build Firm shall design the geometric for the Project using the design standards that are most appropriate with proper consideration given to the design traffic volumes, adjacent land use, design consistency, aesthetics, ADA requirements, and this document.

The design elements shall include, but not be limited to, the horizontal and vertical alignments, lane widths, shoulder widths, median widths, cross slopes, borders, sight distance, side slopes, front slopes and ditches. The geometric design developed by the Design-Build Firm shall be an engineering solution that is not merely an adherence to the minimum AASHTO and/or Department standards.

F. Design Documentation, Calculations, and Computations:

The Design-Build Firm shall submit to the Department design documentation, notes, calculations, and computations to document the design conclusions reached during the development of the construction plans.

The design notes and computation sheets shall be fully titled, numbered, dated, indexed, and signed by the designer and the checker. Computer output forms and other oversized sheets shall be folded to a standard size 8½" x 11". The data shall be in a hard-back folder for submittal to the Department. At the Project completion, a final set of design notes and computations, signed by the Design-Build Firm, shall be submitted with the record set of plans and tracings.

The design documentation, notes, calculations and computations shall include, but not be limited to the following data:

1. Design Standards used for the Project
2. Geometric design calculations for horizontal alignments
3. Vertical geometry calculations
4. Documentation of decisions reached resulting from meetings, telephone conversations or site visits
5. Final quantities list

G. Structure Plans:

1. Design Analysis:

a. The Design-Build Firm shall submit to the Department final signed and sealed design documentation prepared during the development of the plans.

b. The Design-Build Firm shall insure that the final geotechnical and hydraulic recommendations and reports required for bridge design are submitted with the 90% bridge plans.

c. The Design-Build Firm shall "Load Rate" all bridges in accordance with the Department Procedure 850-010-035 and the Structures Manual. The bridge load rating shall be submitted to the Department for review with the 90% superstructure submittal. The as-Bid load rating (based on the 90% design plans) shall be provided to the Department before any traffic is placed on the bridge. The as-Bid load rating shall be signed and sealed by a Professional Engineer licensed in the State of Florida. A final, signed and sealed copy of the Bridge Load Rating, updated for the as-built conditions shall be submitted to the Department's Project Representative and the District Structures Maintenance Engineer with the as-built bridge plans.

d. The Design-Build Firm shall evaluate scour on all bridges over water using the procedures described in HEC 18.

e. Any erection, demolition, and any proposed sheeting and/or shoring plans that may potentially impact the railroad must be submitted to and approved by the railroad. This applies to areas adjacent to, within and over railroad rights of ways.

f. The Engineer of Record for bridges shall analyze the effects of the construction related loads on the permanent structure. These effects include but are not limited to: construction equipment loads, change in segment length, change in construction sequence, etc. The Engineer of Record shall review all specialty engineer submittals (camber curves, false works systems, etc.) to ensure compliance with the contract plan requirements and intent.

2. Criteria

The Design-Build Firm shall incorporate the following into the design of this facility:

a. All plans and designs are to be prepared in accordance with AASHTO LRFD Bridge Design Specifications, Department Standard Specifications, Structures Manual, Plans Preparation Manual, Department Standard Drawings, Supplemental Specifications, Special Provisions, and directions from the State Structures Design Engineer, Temporary Design Bulletins, Structures Design Office and / or District Structures Design Engineer.

b. Bridge Widening: In general, match the existing as per the Department

Structures Manual.

c. Critical Temporary Retaining Walls: Whenever the construction of a structural component (such as a wall, footing, or other such component) requires excavation that may endanger the public or an existing structure that is in use the Design-Build Firm must protect the existing facility and the public. If a critical temporary retaining wall is, therefore, required during the construction stage only, it may be removed and reused after completion of the work. Such systems as steel sheet pilings, soldier beams and lagging or other similar systems are commonly used. In such cases, the Design-Build Firm is responsible for designing detailing the wall in the set of contract plans. These plans must be signed and sealed by the Structural Engineer in responsible charge of the wall design.

d. For bridges over navigable waterways, establish the required pier strengths using the MathCadd program furnished by the Department if no specific pier strength is listed in the Design and Criteria Package. The MathCadd program furnished by the Department allows for the proposed bridge geometry to be input by the Engineer. Other parameters such as water traffic, waterway characteristics, etc. may not be changed. This assures that all Design-Build Firms are designing on the same assumptions other than the specific bridge layout that each is proposing.

H. Specifications:

Department Specifications may not be modified or revised. The Design-Build Firm shall also include all Technical Special Provisions, which will apply to the work in the Proposal. Technical Special Provisions shall be written only for items not addressed by Department Specifications, and shall not be used as a means of changing Department Specifications.

Before construction activities can begin, the Design-Build Firm shall prepare and submit a signed and sealed Construction Specifications Package for the Project, containing all applicable Division II and III Special Provisions and Supplemental Specifications from the Specifications Workbook in effect at the time the Bid Price Proposals were due in the District Office. The Specifications Package shall be prepared, signed and sealed by the Design-Build Firms Engineer of Record who has successfully completed the mandatory Specifications Package Preparations Training.

The website for completing the training is at the following URL address:

http://www2.dot.state.fl.us/SpecificationsEstimates/PackagePreparation/TrainingConsultants.aspx

Specification Workbooks are posted on the Department's website at the following URL address:

https://www2.dot.state.fl.us/SpecificationsPackage/Utilities/Membership/login.aspx?ReturnUrl=%2fspecificationspackage%2fDefault.aspx.

The signed and sealed Specifications Package shall also include individually signed and sealed Technical Special Provisions for any and all work not addressed by Department Specifications. Any Technical Special Provisions included in the signed and sealed Construction Specifications Package which had not been included in the Proposal phase, may require a contract cost modification as a condition of approval.

Upon review by the Department, the Construction Specifications Package will be stamped "Released for Construction" and initialed and dated by the reviewer.

Any subsequent modifications to the Construction Specifications Package shall be prepared, signed and sealed as a Supplemental Specifications Package, subject to the same process for submittal, review, and, release for construction, as described above, for the original Construction Specifications Package. Construction work affected by Supplemental Specifications Packages shall not begin until stamped "Released for Construction" Supplemental Specification Package is obtained.

To work at risk, the Design-Build Firm must submit signed and sealed specifications and can begin working prior to the Department's Project Manager providing stamped "Release for Construction" specifications. The Design-Build Firm shall notify the Department five (5) days prior to starting work at risk. All work that the Design-Build Firm performs in advance of the Department's release of Specifications will be at the Design-Build Firm's risk.

I. Shop Drawings:

The Design-Build Firm shall be responsible for the preparation and approval of all Shop Drawings. Shop Drawings shall be in conformance with the Departments Plans Preparation Manual when submitted to the Department and shall bear the stamp and signature of the Design-Build Firm's Engineer of Record (EOR), and Specialty Engineer as appropriate. The Department shall review the Shop Drawing(s) to evaluate compliance with Project requirements and provide any findings to the Design-Build Firm. The Departments procedural review of shop drawings is to assure that the Design-Build Firm's EOR has approved and signed the drawing, the drawing has been independently reviewed and is in general conformance with the plans. The Departments review is not meant to be a complete and detailed review. Upon review of the shop drawing, the Department will stamp "Released for Construction" or "Released for Construction as noted" and initialed and dated by the reviewer.

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.

J. Sequence of Construction:

The Design-Build Firm 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 Traffic Control Plan (TCP) 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. Proper coordination with adjacent construction Projects and maintaining agencies.

K. Stormwater Pollution Prevention Plans (SWPPP)

The Design-Build Firm shall prepare a Storm Water Pollution Prevention Plan (SWPPP) as required by the National Pollution Discharge Elimination System (NPDES). The Design-Build Firm 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 Department review and approval. Department approval must be obtained prior to beginning construction activities.

L. Temporary Traffic Control Plan:

1. Traffic Control Analysis:

The Design-Build Firm shall design a safe and effective Temporary Traffic Control Plan to move vehicular traffic during all phases of construction. Topics to be addressed shall include, but are not limited to, construction phasing, utility relocation, drainage structures, signalization, ditches, front slopes, back slopes, drop offs within clear zone, and traffic monitoring sites. Special consideration shall be given to the drainage system when developing the construction phases. Positive drainage must be maintained at all times.

The Temporary Traffic Control Plan shall address how to assist with maintenance of traffic throughout the duration of the contract.

The Temporary Traffic Control Plan shall be prepared by a certified designer who has completed the Department's training course, and in accordance with the Department's Design Standards and the Roadway Plans Preparation Manual.

Transportation Management Plans (TMPs) are required for significant Projects which are defined as:

1. A Project that, alone or in combination with other concurrent Projects nearby, is anticipated to cause sustained work zone impacts.

2. All Interstate system Projects within the boundaries of a designated Transportation Management Area (TMA) that occupy a location for more than three days with either intermittent or continuous lane closures shall be considered as significant Projects.

For significant Projects a TMP will consist of three components:

(1) Temporary Traffic Control (TTC) plan component;
(2) Transportation Operations (TO) component; and
(3) Public Information (PI) component

Additional information can be found in chapter 10 of the PPM.

2. Temporary Traffic Control Plans:

The Design-Build Firm shall utilize Index Series 600 of the Department's Design Standards where applicable. Should these standards be inadequate, a detailed Temporary Traffic Control Plan shall be developed. The Design-Build Firm shall prepare plan sheets, notes, and details to include the following: typical section sheet(s), general notes and construction sequence sheet(s), typical detail sheet(s), traffic control plan sheet(s).

The Design-Build Firm shall prepare additional plan sheets such as cross sections, profiles, drainage structures, retaining wall details, and sheet piling as necessary for proper construction and implementation of the Temporary Traffic Control Plan.

3. Traffic Control Restrictions:

There will be NO LANE CLOSURES ALLOWED between the hours of 6:00 AM to 9:00 PM. A lane may only be closed during active work periods. Pacing Operations will be allowed during the approved lane closure hours. All lane closures, including ramp closures, must be reported to the local emergency agencies, the media and the District Five information officer. Also, the Design-Build Firm shall develop the Project to be able to provide for all lanes of traffic to be open in the event of an emergency.

M. Environnemental Services/Permit/Mitigation:

The Design-Build Firm will be responsible for preparing designs and proposing construction methods that are permitable. The Design-Build Firm will be responsible for any required permit fees. All permits required for a particular construction activity will be acquired prior to commencing the particular construction activity. Delays due to incomplete or erroneous permit application packages, agency rejection, agency denials, agency processing time, or any permit violations, except as provided herein, will be the responsibility of the Design-Build Firm, and will not be considered sufficient reason for a time extension or additional compensation. As the permitee, Department is responsible for reviewing, approving, signing, and submitting the permit application package including all permit modifications, or subsequent permit applications.

The Department has conducted an investigation of the Project site and determined that potential gopher tortoise habitats could be impacted by the Project. All coordination by the Design-Build Firm with the Department regarding gopher tortoises will be completed through the District Environmental Management Office. If the Department has determined that suitable gopher tortoise habitat exists in the project area, then the Design-Build Firm shall be responsible for the potential gopher tortoise burrow survey that could be impacted by the Project including any areas to be used for construction staging. The Design-Build Firm shall be responsible for conducting the gopher tortoise burrow survey for the purpose of identifying potential gopher tortoise habitats that could be impacted by the Project including any areas to be used for construction staging. The habitat will be systematically surveyed according to the current Gopher Tortoise Permitting guidelines published by the Florida Fish and Wildlife Conservation Commission (FWC). The Department must verify the completeness and accuracy of the assessment prior to commencement of any permitting or construction activities. Any areas where the Design-Build Firm proposes to protect burrows to remain on-site with "exclusionary fencing" shall be reviewed and approved by the Department. The Design-Build Firm shall submit an "exclusionary fencing" plan for review prior to any "exclusionary fencing" installation. If there are unavoidable impacts to gopher tortoise burrows, the Design-Build Firm shall be responsible for preparing required documentation for the Department to obtain a FWC permit for the relocation of gopher tortoises and commensals from burrows which cannot be avoided. Preparation of complete permit packages will be the responsibility of the Design-Build Firm. As the "permitee", the Department is responsible for reviewing and approving 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 approved the permit application, the Design-Build Firm is responsible for submitting the permit application to FWC. A copy of the permit and any subsequent reports to FWC must be provided to the District Environmental Management Office or District Environmental Permit Office, as appropriate. If FWC rejects or denies the permit application, it is the Design-Build Firm's responsibility to make whatever changes necessary to ensure the permit application is approved. Once the permit is obtained, the Design-Build Firm shall notify

the Department at least one week prior to the relocation of gopher tortoises. If gopher tortoise relocations are phased throughout the construction, the Design-Build Firm shall notify the Department at least one week prior to each relocation phase. The Department will provide oversight of the relocations and ensure permit compliance. The Design-Build Firm shall be responsible for any necessary permit extensions or re-permitting in order to keep the relocation permit valid throughout the construction period. The Design-Build Firm shall provide the Department with draft copies of requests to modify the permits and/or requests for permit extensions, for review and approval by the Department prior to submittal to the Agencies. The Design-Build Firm shall provide the appropriate reports as required by the permit conditions, including closing out the permit. The Design-Build Firm shall note that permits for gopher tortoise relocation for areas outside of the Department owned right of way (i.e. utility easements; license agreements) cannot be obtained with the Department as the "permitee", per FWC requirements. Should permits in areas outside of the right of way be required, the Department will still perform the oversight of the process as described above. The Design-Build Firm will be required to pay all permit fees including any and all fees associated with the relocation of gopher tortoises. Any fines levied by permitting agencies shall be the responsibility of the Design-Build Firm.

N. Signing and Pavement Marking Plans: N/A

O. Lighting Plans: N/A

P. Intelligent Transportation System Plans:

1. General

The Design-Build Firm shall prepare Intelligent Transportation Plans in accordance with Department criteria.

The Design-Build Firm shall prepare design plans and provide necessary documentation for the procurement and installation of the Intelligent Transportation System devices as well as overall system construction and integration. The construction plan sheets shall be in accordance with Department requirements and include, but not be limited to:

- Project Layout / Overview sheets outlying the locations of field elements
- Detail sheets on:
- DMS Structure, DMS Attachment, DMS Display/layout
- Fiber optic splice and conduit
- Power Service Distribution
- Wiring and connection details
- Conduit, pull box, and vault installation
- Communication Hub and Field Cabinets
- Electrical Power Services Field hub/router cabinet configuration details
- Fiber optic Splicing Diagrams
- System configuration/Wiring diagram/Equipment Interface for field equipment at individual locations and communications hubs
- HD CCTV and MVDS diagram

The Design-Build firm is responsible for ensuring project compliance with the Regional ITS Architecture and Rule 940 as applicable. This includes, but is not limited to, the development or update of a concept of operations, the development or update of a system engineering master plan (SEMP), and requirement traceability verification (RTVM) as well as coordination of document review.

The Design-Build Firm shall detail existing Intelligent Transportation System equipment and report which devices will be removed, replaced, or relocated by project work.

2. Design and Engineering Services:

All plans shall be accurate, legible, complete in design, and drawn to the scale as indicated in the Department's manuals, and furnished in reproducible form. ITS plans are to include wiring diagrams for cabinet layouts and wiring and pole attachment tables if applicable in addition to those items mentioned in the Plans Preparation Manual. Logical topology should be separate from plan sheets and should depict the scheme for all subsystems. Splicing plans shall be separate from plan sheets and shall include hub numbers, reference page numbers for plan sheets, buffer and strands references by number and color, approximate station and offset for the cabinets, end devices that connect to the cabinets, and enclosures in addition to depicting the splicing. A visual depiction is required for splicing diagrams. This may be augmented, but not substituted by a table.

3. Construction Services:

The Design-Build Firm shall be responsible for all ITS construction and integration services relating to the Project.

The communication equipment for the I-75 shall consist of fiber optic cable, a Layer III Switch that currently exists within the Master Hub Tower Site at I-75 and SR 44 that shall be reused, Layer II Switches, Terminal Servers, Remote Power Manager, Controllers, Encoders and Decoders as well as other required and necessary equipment (jumpers fiber/UTP, rack, parts or devices) to provide a full operational system. Lowering devices shall not be installed. All poles shall be concrete non lowering device type meeting Standard Index 18113 or utilized from existing ITS infrastructure within the project limtis. This Design-Build Project includes any parts or devices, connectors, jumpers needed at the RTMC to provide communication within the ITS network, including, but not limited to all Field Devices, Layer II Switches, Terminal Servers, Layer III switch, and other devices.

The conceptual communication scheme is to provide a 1 Gig-fiber connection between the proposed site equipment cabinets to the existing master hub on I-75. The existing master hub will provide communications back to the RTMC. Each site shall have a layer II switch that has 10/100 Mb copper ports for device communications and (2) gigabit fiber ports for backbone communications between sites to the master hub.

It is the responsibility for the Design-Build Firm to comply with the FDOT's standard fiber scheme. All local hub to master hub communications shall use the brown buffer tube. Each link will require 2 fibers. As there are only 12 fibers in the buffer this limits the number of direct connections between local hubs and the master hub to 6. The Design-Build Firm is responsible for distributing the number of cabinets evenly over the 6 available connections in order to minimize the number of cabinets lost due to hardware failure of a layer 2 switch. The Master Hub fiber termination and all other fibers shall remain untouched and shall be used for routing. Please reference Appendix A for the current fiber splice detail within the Master Hub Tower Site at SR 44 and I-75.

a. Fiber Optic Cable

The Design Build Firm shall install a 96 single mode fiber optic cable in accordance with Specification Section 633. The Design-Build Firm shall be required to investigate, identify and include their fiber

needs for this project in connecting all the required devices. No dark fibers shall be allowed unless approved by FDOT.

No bridge mount conduit shall be allowed unless FDOT Project Manager concurs. If FDOT manager does not concur conduit shall be directional bored at no additional cost. The conduits installed for power and fiber shall be within 10 feet of the Right of Way line. The conduit shall only be moved further than 10 feet so that it can be installed on higher ground to avoid flood zone areas.

Splice loss for Single Mode Fiber fusion splice shall not exceed a maximum bidirectional average of .10 decibel for any splice. The core diameter for Single Mode Fiber shall be 8.3 μm. The Design-Build Firm shall measure the link loss and summarize losses in a table once before and after installed. A table shall be provided to have splice loss for each direction on each fiber. The table shall be certified as matching the OTDR readings. Both the OTDR table shall be submitted to the Department. The ODTR can be submitted in paper or electronic format. It shall be compatible with Microsoft Excel.

b. Splice Enclosures

The Design Build Firm shall furnish and install splice enclosure in accordance with Specification section 633.

c. New Conduit

The new conduit installed along the Interstate shall be a minimum of 4 – 1 1/4 inch conduits. The conduits shall be colored; two orange conduits (fiber) and two red conduits (power). One orange conduit will be for the newly installed 96 SM fiber and the other orange conduit shall be for a fiber spare. One red conduit shall be for the power service wire and the other red conduit for power spare. The red conduits shall have the same diameter as the fiber conduits or greater. The size of the red conduit will depend on the power service wire requirements for long haul power runs, both the red use and the red spare shall be of the same diameter. If thicker gauged wire is required, the Design-Build Firm shall adjust the conduit size accordingly. The Design-Build Firm shall design and install the conduit in accordance with Specification Section 630 and Stand Index 17721.

The Design-Build Firm shall be allowed to connect conduit/inner duct (Interstate) from plow portions or underground conduit to bore portions if the connection method is concurred with by the FDOT Project Manager. The connection conduit method and material shall be submitted for concurrence to the FDOT Project Manager.

d. Splice Boxes

New splice boxes are not to be placed in a swale or drainage area. All splice boxes shall be in accordance with Specification Section 635 and meet the requirements of Standard Index 17700.

e. Pull Boxes

Pull boxes are not to be placed in a swale or drainage area. All splice boxes shall be in accordance with Specification Section 635 and meet the requirements of Standard Index 17700.

f. Locate Wire

A locate wire shall be continuous from pull box to pull box following the path parallel to the fiber. Any

splices to this wire shall only be done at a pull box, no in-conduit splicing shall be allowed. Splices at the pull box for the locate wire shall meet NEC requirements for continuity and in pull box splices. Locate wire and fiber optic cable shall always be placed in separate conduit. The Design Build Firm shall install a locate wire in accordance to Specification Section 630-2.2. The Design-Build Firm may use one of the spare conduits (orange or red) for the locate wire if approved by FDOT. Route markers will be required and will be designed in accordance with Specification 630-2.5.1.

g. Connectors

The Design Build firm shall use only Type SC connectors for patch panel connections and Layer II switches. The Design Build Firm shall use LC connectors for the Layer III switch that exist.

h. Jumpers

Provide jumpers for all connections and cross connections according to the plans. Furnish jumpers that are pre-connectorized by the factory with SC connectors. The Design Build Firm shall use jumpers to meet the appropriate length within the cabinets for cable management. Fiber jumpers shall have SC connectors for patch panels and Layer II switches while LC jumpers shall be used for the Layer III switch within the Master Hub Tower Site.

i. Splice Tray/Fiber Termination/Patch Panels

To avoid micro bending the Design Build Firm Shall meet the bend radius specification in accordance to Section 633-2.1.1.9.2. Splice trays, fiber terminations and patch panels shall meet requirements set in section 633-2.1. There shall be only one buffer tube per splice tray. All splice trays shall be capable of closing without the use of tape or other adhesive devices. No fiber optic strands shall enter more than one splice tray. Pre-terminated Connector Assembles shall be used. All patch panels shall be in accordance with 633-2.1.4 and have SC connectors.

j. Cross Connect Fields

All local hubs shall have a minimum of 6 fibers from each direction. The Master hub Tower Site shall stay with all fiber strands terminated in the patch panel. Any pigtails used shall match the color of the fiber strand that they are spliced to.

k. Master Hub Cabinet

The Design-Build Firm shall use Central Office's Tower Site located in Wildwood, Fl on SR 44 and I-75.

l. Local Hub Cabinet

The Design-Build Firm may use the existing Cabinet within the project limits.

If the Design-Build Firm chooses to use new cabinets, the Design-Build Firms shall furnish and install pole mounted cabinets unless otherwise approved by the Department's ITS Project Manager. Pole mounted cabinets shall be a type 336S and shall be designed in accordance with specification section 785

Local Hub cabinet shall contain a Layer II switch, any CCTV/DMS/MVD components, a remote power management system, an uninterruptable power supply and a pullout drawer strong enough to support at least 20 lbs. The top of the pullout shelf/drawer shall be located on the rack between approximately 3 and

4 feet from the pedestrian floor or ground level. The placement of equipment rack(s), equipment, wiring, and the pullout shelf/drawer shall be such that there is no interference or conflict between any devices, rack(s), pullout shelf, and/or wiring and in the use, removal, and installation of any equipment or wiring, or the use of rack(s) or pullout shelf/drawer. A laptop at least 20" in height, but no taller, shall be assumed to be placed on the shelf.

All wiring shall be neatly bundled and labeled no farther than four inches from the end. All power conductors shall be bundled separately.

One copy of the field cabinet-wiring diagram shall be provided with each cabinet. A heavy duty, resealable, waterproof, plastic, opaque pouch shall be mounted on the backside of the cabinet door for containing prints, cabinet layout of all components with references and parts list, block diagrams showing all components and the wiring harness between components, and other documentation that may be subject to damage by sunlight and moisture. The Local Hub cabinet manufacturer's serial number shall be prominently and permanently displayed on cabinet interior. The department will accept the current cabinets to be use if the Design-Build Firm chooses to utilize them within the plans. If the Design-Build Firm decides not to use the existing cabinets, they shall design the cabinets in accordance with Specification 785-4.

i. Cabinet Locking System

The Design-Build Firm shall furnish and install locks and keys that are compatible with the Department's existing Cyber lock programming equipment on all master hubs and local hubs cabinets. Cabinet keys shall be provided to the Department thirty days prior to the installation of any cabinets. The Department shall have twenty days from the time that all keys and locks are provided to program the keys and locks. At least two locks per cabinet on the job is to be provided. One key for CEI staff plus a sufficient number of keys are to be provided to the Design-Build Firm for maintenance. All keys and locks shall become the property of the Department at the end of the construction job. All keys shall be turned in to the Department's ITS Project Manager prior to final acceptance.

ii. Layer II Switches

Managed field Ethernet switches (MFES) shall be installed in the Local Hub cabinets within the project limits. The MFES shall be field hardened, conforming to the Department's environmental requirements. Network switches shall provide at minimum 2 fiber optical gigabit Ports (1000BaseX) and 8 Ethernet Ports (10/100BaseTX). The switches fiber optic connectors shall be SC. The layer II switch shall support bi-directional single strand fiber. The network switch supported protocols, at minimum, shall include:

- Advanced features including: private VLAN, VLAN, GVRP, QoS, IGMP snooping V1/V2/V3, rate control, port trunking, LACP, online multi-port mirroring.
- Comprehensive security features supporting IP security, port security, DHCP server, IP and MAC binding, 802.1x network access control.
- Advanced network redundancy, Multiple Gigabit rings (recovery time <5ms), STP, RSTP, MSTP, and Rapid Dual Homing.
- Multiple management methods; Command Line Interface using the console port or telnet/SSH, web (HTTP/HTTPS), or NetVision.
- Event notification by email, SNMP trap, syslog, digital input and relay output.
- Appropriate size optic to support the overall topography.

iii. Layer III Switch

The Design-Build Firm shall use the existing Layer III switch that currently resides within the Master Hub Tower Site at SR 44 and I-75.

iv. Patch Panel

All fibers strands shall be kept terminated in the patch panel of a Master Hub Tower Site. Only one buffer tube shall connect to each connector panel and the color of the buffer tube that connects to the connector panel. The connector panels shall be increment from left to right, 1 to 12. All strands of one fiber shall terminate on the patch before another fiber's strands are terminated. Color coded buffer tube fan out kits are accepted. The Design Build Firm shall comply with Specification Section 633. All pigtails shall match the color of the fiber strand that they are spliced to. Pigtails shall be used for all fiber terminations. All local hubs drop cables shall be terminated on the patch panel at each site in accordance with specification section 633-2. SC connectors shall be used.

m. Field Devices

The field devices shall consist of CCTV, MVDS, and DMS.

The CCTV locations shall be approximately 1 mile apart and meet the 100% coverage requirement. The MVDS shall be approximately half mile spacing to ensure a more accurate travel times system. There will be a total of 3 DMS's within this project. DMS locations shall be installed on northbound I-75 just south of the I-75/Fl. Turnpike interchange. Two southbound DMS's will be required; approaching the US 27 interchange and the SR 44 interchange. Any existing local hubs, to include but not limited to the cabinet components can be relocated to meet the RFP spacing requirements if necessary.

i. Camera (CCTV)

The CCTV camera shall be a HD Camera on the Approved Products List that is able to broadcast in MPEG2 and H.264. The MPEG2 must be compatible with the Department's ITS Video Wall infrastructure. Communication to the CCTVs will be accomplished by a direct fiber connection to the camera. CCTVs fiber communication shall be IEEE 802.3 compliant and shall be used for all remote PTZ and control of the camera. The CCTV's will be spaced and installed in such a manner that 100% coverage of the roadway is obtained to ensure that operators can detect and view all incidents. The maximum spacing on CCTVs shall be one mile. The CCTV cameras shall be wired for and have all necessary firmware to support the NTCIP version compatible to the Departments SunGuide Software. Whenever possible, camera poles shall be utilized. If new poles are to be added, they shall be placed in areas with enough room to allow future maintenance without lane closures.

ii. Digital Video Encoders

The Design-Build Firm shall furnish and install digital video encoders equivalent to or better than the existing ITS encoders located on I-75. The encoders must be capable of transmitting MPEG2 multicast streams and Source Announcement Protocol (SAP) broadcasts and must be compatible to the existing decoders and RTMC video wall.

The table below provides an approximate location of the existing CCTV locations that are to be replaced or relocated and replaced. All existing CCTV devices and components shall be retained and delivered to an FDOT inventory facility specified by the FDOT ITS Project Manager. It will be the responsibility of the Design-Build Firm to verify their location in the field and to provide final CCTV locations so as to

provide 100% coverage of Interstate 75 system from south of SR 44 to north of US 27.

I-75 NB at MM 329	I-75 SB at MM 336.4	I-75 SB at MM 346.2	I-75 NB at MM 352
I-75 NB at MM 331.1	I-75 NB at MM 337.3	I-75 NB at MM 347.5	I-75 NB at MM 352.7
I-75 SB at MM 332.1	I-75 SB at MM 340.3	I-75 SB at MM 349.2	I-75 SB at MM 354
I-75 NB at MM 333.9	I-75 NB at MM 342.7	I-75 NB at MM 351.0	I-75 SB at MM 355.7

iii. Microwave Vehicle Detection System (MVDS)

The Design-Build Firm shall be responsible for replacing the Microwave Vehicle Detection System (MVDS). All MVDS within the project limits shall be a side-fire dual radar High Definition MVDS and must have a range resolution of 4' or less and therefore use a bandwidth of 240 MHz or more. The MVDS shall be capable of automatically configuring a minimum of ten lanes of traffic by automatically determining lane boundaries, lane centers and detection thresholds. The MVDS shall be a non-intrusive device equivalent to the existing MVDS's currently installed within the Department's ITS infrastructure. These units shall be fully compatible and functional with the SunGuide Software. The MVDS shall be capable of providing accurate travel monitoring data in traffic traveling 10 mph or less at the standard established in Standard Specification in addition to meeting the Standard Specification requirements. The MVDS systems shall interface with the local hub via a terminal server.

The Design-Build Firm shall design the MVDS system in accordance with Specification Section 660.

A Table below shows the current MVDS locations.

I-75 NB at MM 329	I-75 NB at MM 335.3	I-75 NB at MM 342.7	I-75 NB at MM 351
I-75 NB at MM 330.3	I-75 SB at MM336.4	I-75 SB at MM 344.7	I-75 NB at MM 352
I-75 NB at MM 331.1	I-75 SB at MM 337.2	I-75 SB at MM 346.2	I-75 NB at MM 352.7
I-75 SB at MM 332.1	I-75 NB at MM 337.4	I-75 NB at MM 347.5	I-75 SB at MM 354
I-75 SB at MM 333.1	I-75 SB at MM 340.3	I-75 SB at MM 348.3	I-75 NB at MM 355
I-75 NB at MM 333.9	I-75 NB at MM 342.1	I-75 SB at MM 349.2	I-75 SB at MM 355.7

iv. Dynamic Message Sign (DMS)

The Design-Build Firm shall design the DMS subsystem in accordance with Specification 700-4 and Standard Index 18300. The work in this section specifies the type of Dynamic Message Signs that the Design-Build Firm shall be responsible for furnishing and installing. These items of work shall consist of furnishing and installing Dynamic Message Signs using Light Emitting Diode (LED) technology in accordance with these requirements and their respective structures and mounting hardware. The DMS shall be equipped with two controllers; one located in the DMS pole mounted maintenance cabinet and one to be located inside the ground mount cabinet (local hub).

The Design Build Firm will be responsible for placing the DMS's within the required locations. The proposed DMS structure shall have a line of sight distance of at least 1000 ft. The DMS shall provide a minimum vertical clearance as per the latest FDOT Plans and Preparation Manual. If the minimum vertical clearance cannot be obtained, the Design-Build Firm shall submit an alternative design within

their Technical Proposal.

v. DMS Enclosure:

The sign shall be a full LED matrix of 54 X 210 pixels, full color, walk-in type display enclosure. The display technology shall be composed of multiple red, green, and blue high resolution LEDs and shall not rely on any mechanical components or other pixel technologies, such as fiber optic, flip disk, combination flip disk-fiber optic, combination flip disk-LED, liquid crystal, LED Lenses or incandescent lamp. The display panel shall be 100% solid state with no moving parts except for the environmental control fans and thermostats. The DMS shall be able to display messages composed of graphic images across multiple frames.

No field hardware modifications or programming modifications shall be required to exchange or replace individual display panels. The DMS shall contain LED display modules that include an LED pixel array and LED driver circuitry. These modules shall be mounted adjacently in a two-dimensional array to form a continuous LED pixel matrix. The failure of one LED shall not affect the operation of the other LED's in that string. The display enclosure shall contain the LED Display Modules, Dynamic Message Sign (DMS) Driver, electronics, electrical and mechanical devices required.

Sign enclosures placed on cantilever structures shall be mounted on a fifty foot arm and shall not require the placement of additional guardrail or other protective device. The DMS structure shall not be located within clear zone. If in some cases the mounting requirements cannot be achieved, then the Design-Build Firm shall submit an alternative solution within their Technical Proposal.

n. Power

Power shall be the responsibility of the Design-Build Firm. The Design-Build Firm shall be responsible for all design, permits, fees and requirements, including but not limited to power hookup fees and monthly bills as stated by the local power company, to provide electrical power service for this system. FDOT shall assume the monthly service fee after final acceptance of the project. Solar Power shall not be allowed. All power connectors shall have an epoxy sealed connector to ensure no water enters the splices.

A separate grounded branch circuit from the main service disconnect panel shall be terminated on a Local Hub cabinet power distribution panel providing all power required for the CCTV camera assembly as well as cabinet lights, GFCI duplex receptacle, and cabinet ventilation. The main circuit breaker shall turn off all power to the hub cabinet, CCTV assembly and DMS assembly, as required. Another branch circuit with a circuit breaker mounted to the power board / panel shall provide all power required for the DMS including its associated DMS controller, communications interface equipment, display modules, power supplies, fans, maintenance lighting, and GFCI duplex outlets.

The Design-Build Firm shall determine the maximum and typical load of the ITS equipment furnished for this project to support the power distribution system design. All calculations and drawings shall be signed and sealed by a State of Florida PE. The Design-Build Firm shall provide all electrical calculations and the determined loads to the FDOT. The Design-Build Firm shall design the power services in accordance with Standard Index 17736 and follow Section 639.

A three-wire, 120 VAC, GFCI duplex receptacle shall be mounted to the power distribution panel. The current rating of the main circuit breaker shall be between 1.5 to 2 times the accumulated maximum power requirements for all equipment in the cabinet, CCTV assembly and the DMS assembly or as

specified in the ITS Statewide Standards, whichever is greater. All circuit breakers shall be listed by UL and shall have the trip and frame size plainly marked on the breaker. The trip ampere rating shall be visible from the front of the breaker. All wiring coming in or out of the DMS controller cabinet, the CCTV and cabinet except for the 120/240 VAC power lines and short coaxial cable runs shall be non-metallic fiber optic cable. All conductors shall be in accordance with the state specification for electrical power service assembles section 639.

4. Integration

The logical topology for integration is to include all Layer II switches and the Layer III switch within the project limits. The Design-Build Firm shall setup an integration meeting with the Department, allowing minimally 2 weeks of notice and review time of the logical topology. During the integration meeting the Department will provide an IP Scheme, Standard Port Utilization for all Layer II Devices (including which ports are to be disabled), VLAN Tagging Scheme for all subnets, and information on the Layer III, if necessary, and higher protocols to be run on the switches.

It is the Design-Build Firms responsibility to setup all tagging, disable all applicable ports, setup all IP addresses, physically connect all devices per plan (except where loops would be formed), and to verify Layer II connectivity. The Design-Build Firm shall not place any Layer III or higher protocols on the switches at this time. The Design-Build Firm shall contact the Department for configuring the management software (currently SunGuide) to control the devices. The Design-Build Firm shall supply the Department with addresses and all other needed information for the configuration of SunGuide. The Design-Build Firm shall allow 2 weeks for FDOT to enter the information into the management software. The Design-Build Firm shall troubleshoot with the Department's assistance any issues that arise from configuring the central software.

Once the local devices have been entered into the central software (SunGuide) the Department shall inspect the network for issues from a remote location. The Design-Build Firm shall provide any assistance necessary to provide the Department with IP addresses, port status (tag, if any device is plug into the port, if so what device), and auto negotiation speeds for all switches that cannot be acquired from the remote location.

Inability of the Department to access the information remotely will constitute failing the inspection. If the inspection is failed the Design-Build Firm shall reconfigure the devices and again work with the Department to get the devices into the central management software. After this is complete the switches shall again be inspected. Failure will result in a repeating the earlier step until the integration inspection is successfully completed.

Once the test is completed the Design-Build Firm shall start placing all protocols on the switch, but only while under the supervision of District 5 ITS. Under no circumstance shall the Design-Build place anything greater than a Layer II protocol on the switch without District 5 ITS supervision. Once all protocols are in place the Design-Build Firm shall verify their functionality under District 5 ITS supervision.

5. Testing and Acceptance:

ITS elements such as Dynamic Message Signs (DMS)/components, Close Circuit Television Cameras (CCTV Cameras)/components, Remote Power Management device (RPM), and Microwave Vehicle Detector Stations (MVDS)/components, Layer II shall be installed on I-75. The designer shall design the optimum system as described by this RFP.

The project shall consist of a new interstate DMS installed approximately 1 ½ miles south of SR 44 interchange for northbound I-75 travelers and two DMS's for southbound travelers approaching SR 44 and US 27. A new backbone fiber shall be installed throughout the length of the project while utilizing the existing ITS sites. The fiber tie-in point shall remain the same with the Turnpike and is to be left uninterrupted. Another tie-in point with the City of Ocala shall take place within the project with the city's recommendation.

All new devices shall be incorporated into the existing network for control through the Regional Traffic Management Center (RTMC) in Orlando. All field devices shall communicate directly to the RTMC, which already controls and operators the District 5 ITS network. The Design-Build Firm shall be responsible for the integration to the existing network and communication scheme of the District 5 Central Software (SunGuide); however the Department retains the right to perform any maintenance activities on the central software, including but not limited to updated versions. The Design-Build Firm shall also be responsible for communicating with FL Turnpike and the City of Ocala with any technical coordination when or if necessary.

The Design-Build Firm shall perform all tests. The testing includes, but is not limited to Pre-Installation Testing, FOC Installation Testing, Camera Observation Testing, Post-Installation Testing, System Integration Testing, Turn-on Inspection, and System Test. In the event of a conflict between this document and the ITS Statewide Specifications documents referenced herein the contents of this document will be considered the superseding requirement.

a. Fiber Optic Installation Testing/Camera Observation Testing/Pre-Installation Testing

The Design Build Firm shall make sure the fiber optic cable is tested before installation to ensure it does not exceed the allowable db loss in accordance with specification section 633-3. The Design Build Firm is required to provide the Department a document ensuring the CCTV placements have met the 1 mile spacing requirement along with meeting the 100% coverage requirement. The Design Build Firm shall test all devices prior to the installation of them within the cabinet to ensure the equipment is fully functional. If the device is non-functional, it will be the Design Build Firm's responsibility to replace with a functional device.

b. System Acceptance Test Plan (SATP)

The Design-Build Firm shall perform a System Acceptance Test Plan (SATP) on the entire I-75 system. The System Acceptance Test Plan shall consist of the following requirements; also found in Addendix B.

- Post Installation, System Integration Testing (5 days), Turn-On Test (10 days), System Test (30 days)
- System Test procedure will be reviewed and approved by FDOT.
- The testing schedule will be reviewed and approved by FDOT.

If during testing sessions, any ITS component fails to meet this RFP, or the ITS Statewide Specifications requirements, the Design-Build Firm shall correct the problem. If the problem is identified to be with the CCTVs, system integration testing shall start from the beginning once the problem is corrected. If a problem arises that delays system integration testing by more than 24 hours, then system integration testing shall be terminated and rescheduled to start anew at a future date. In the event that more than one system integration testing session is necessary, the Design-Build Firm shall be responsible for all costs associated with the extra test session(s).

6. Maintenance

The Design-Build Firm shall be responsible for repairing and replacing all components/software used on the project that have become defective from the completion of the Turn-On Inspection until the completion of the System Test. Repairs made shall conform to the Plans, this RFP, the ITS Statewide Specifications and the FDOT Standards.

The Design-Build Firm shall maintain the current ITS system on I-75 throughout construction until the project is ready to be cut over to the new system. The Design-Build Firm shall ensure the ITS Preservation of Property Specification is met.

Maintenance and repair is defined as all activities that shall be performed for the system to remain in, or return to, operation as specified in the Plans and Technical ITS Statewide Specifications. The work shall also include preventative/routine maintenance. The work shall not include repairs or replacements made necessary by defects resulting from a third party; vandalism, traffic accidents, or acts of God. In the event, that such repair or replacement is necessary, the FDOT'S Project Representative reserves the right to negotiate with the Design-Build Firm for such repair or replacement or reserves the right to use the current FDOT maintenance contractor to rectify the third party damage. Maintenance shall include repair and replacement of the current system components and new system components. The Design-Build Firm shall maintain a maintenance staff of adequate size to respond to any and all maintenance requirements of the project at all times from NTP to Final Acceptance. If the Design-Build Firm damages fiber optic cable, the fiber shall be replaced from hub to hub, as approved by FDOT. The fiber replacement shall be at Design-Build Firm's expense.

The need for maintenance shall be detected by a number of sources including but not limited to operator observation, Design-Build Firm personnel, FDOT maintenance personnel, Florida Highway Patrol, citizen reports, etc. When maintenance activities are being performed by the Design-Build Firm, the Design-Build Firm shall notify the FDOT'S Project Representative as soon as possible of the location and the work activity being performed, and shall provide the FDOT'S Project Representative with an anticipated schedule for completion of the work. This shall be in accordance with the Preservation of Property Spec.

FDOT shall make the final determination of whether a defective component/software shall be repaired or replaced. If repair is permitted, the FDOT'S Project Representative shall determine if the repair shall be made in the field, or if the component/software shall be removed (and replaced with a replacement component/software) and repaired elsewhere. The costs of removal, shipping, and related activities are to be borne by the Design-Build Firm and are considered incidental to the System Testing.

Given software or hardware system or subsystem shall be considered defective if either of the following conditions occurs within the System Test period:

Above the normal frequency of maintenance: For all components furnished within the project the Design-Build Firm shall furnish the FDOT with manufacturer supplied and certified test results indicating the mean time between failure (MTBF) for that component on or before the date of construction Final Acceptance. If a component fails prior to its MTBF, the Design-Build Firm shall either repair or replace the component at the FDOT'S discretion at the Design-Build Firm's expense. If the same component fails again prior to its MTBF, it shall be replaced by the Design-Build Firm at the Design-Build Firm's expense.

Failure of system or subsystem components/software to perform: Components/software that fails to operate in the manner described in the Plans, this RFP and the ITS Statewide Specifications, shall be replaced by the Design-Build Firm at Design-Build Firm's expense with components/software that meet the requirements of the Plans, this scope of services, and the Technical ITS Statewide Specifications. The FDOT'S Project Representative shall make the sole determination of whether or not a given system/subsystem has failed to perform.

The Design-Build Firm shall maintain a log of all response maintenance and repair activities performed during the Burn-in period by the Design-Build Firm. The log shall be kept in a database management system utilizing FDOT-approved database software, and include, as a minimum, the following information:

- Date and time defect reported
- Entity reporting the defect
- Description of the reported defect
- Arrival time at the site of the reported defect
- Technician performing defect repair or replacement
- Corrective actions taken
- Model and serial number of any component repaired or replaced
- Date and time defect rectified.

The Design-Build Firm shall maintain records to show the itemized material, equipment, and labor cost incurred to provide maintenance during the burn-in period. These records shall be provided to the FDOT within 10 working days after the 30-day burn-in period. The purpose of this requirement is to provide the FDOT with information to estimate the maintenance budget needed for the system after the burn-in period. These records shall not be used as a basis of payments to the Design-Build Firm. The Design-Build Firm shall assure that these cost records are complete and accurate. The FDOT may perform an audit to verify the accuracy of the cost records.

When performing maintenance activities, the Design-Build Firm shall use appropriate traffic control measures. The traffic control procedures implemented shall be based on and conform to the traffic control plan contained in the project Plans and the current FDOT Roadway and Traffic Design Standards. All lane closures required to perform work shall be consistent with current FDOT maintenance of traffic requirements. Approval for lane closures shall be obtained from the FDOT'S Project Representative prior to the implementation of any lane closure. The costs of any and all activities relating to maintenance of traffic are to be borne by the Design-Build Firm and are considered incidental to the work. No lane closures shall be allowed from 6:00AM to 9:00PM.

If the Design-Build Firm fails to perform any maintenance within the time frame for component-related defects or central system defects, the FDOT shall either perform the corrective work itself or contract with a third party to perform the necessary corrective work. Corrective work necessary due to non-performance by the Design-Build Firm shall be deducted from any payments due the Design-Build Firm. Consistent non-performance on the part of the Design-Build Firm shall result in attachment of the supplemental performance bond.

FDOT or FDOT representative's performance of corrective work under this provision shall have no effect on the Design-Build Firm's warranty obligations.

The Design-Build Firm shall be responsible for all locates throughout the duration of the project from the

Notice to Proceed to Final Acceptance. The Design-Build Firm shall be provided with locates at the beginning of the project by FDOT. After initial locates are provided to the Design-Build Firm by FDOT, they shall add their name to Sunshine One Call and be responsible for all locates at no cost to FDOT.

7. Training

The Design-Build Firm shall meet all training requirements set forth in the "ITS Equipment and Network Device Subsystem Training" documentation for all applicable subsystems prior to final acceptance

8. Spare Parts

All spare parts shall be handed back to the Department upon final acceptance.

9. Inventory Control

Upon installation of the ITS equipment, the Department requires all installed components, to include fiber, to be documented in a form for inventory control. The following information is required:

- Record the manufacturer, model and serial number of all equipment within the cabinet.
- Record all fiber buffers and fiber strands used.
- The sequential footages from the cable sheaths where fiber enters and exits the vault/pull boxes.
- Record each cable footage at the splice enclosure, to include where each cable enters and/or exits the vault.
- Record cable stealth footage entering the cabinet.
- Record all fibers that are terminated and landed on the patch panel.
- Record type of termination within the cable.
- Record a splice diagram or a spreadsheet of each splice location.
- Record patches between all equipment and patch panels.
- Record the GPS parameters associated with all pull boxes, splice vaults and cabinets within 1 meter of their location.

10. Labeling Standards

The Design-Build Firm shall be responsible for furnishing and installing the District 5's ITS labeling standard to be mounted on a sign on every cabinet. The sign shall include, but not be limited to:

- Color: Green/white
- Grade: HIP
- Border: No
- Hole: ¼" Diam. ½" in – Centered on L&R side.
- Corner: Square
- Material: Alum
- Gauge: 0.80
- Number of sides: 1
- Confirmed sign with proof

11. As-built Information

As-built information shall be submitted to the FDOT Project Manager within 5 business days of the completion of construction. Submittal of the As-build information and concurrence by the FDOT Project Manager are both conditions precedent of the Department's issuance of Final Acceptance. The FDOT Project Manager shall have 5 business days from the submission of the As-built information to review and determine concurrence for each submittal. As-built information consists of an electronic submittal.

VII. Technical Proposal Requirements:

A. General:

Each Design-Build Firm being considered for this Project is required to submit a Technical Proposal. The Proposal shall include sufficient information to enable the Department to evaluate the capability of the Design-Build Firm to provide the desired services for the Project.

B. Submittal Requirements:

The Technical Proposal and required attachments shall be submitted electronically in adobe.pdf format (unzipped) and attached to a single email. The Department has a 5MB limit on email. Emails that exceed this 5MB email server limit may be rejected by the Department's email server. It is solely the Design-Build Firm's responsibility to ensure that the Technical Proposal is received by the Department's server by the due date and time. No macros will be allowed. Minimum font size of ten (10) shall be used. Times New Roman shall be the required font type.

Mr. Roger Masten
Roger.Masten@dot.state.fl.

The minimum information to be included:

Section 1: Written Technical Proposal

- Approach and Understanding of the Project:

  Present a plan for completing the specified work. The plan should address all significant design and construction issues and constraints and should demonstrate efficient use of manpower, materials, equipment, construction schemes, and techniques for completing the project. Coordination with the Department on public involvement, railroad encroachments, and affected utilities shall also be discussed in this section.

- Staffing:

  - Contractor Name & Applicable Prequalification Work Classes:
  - Construction Project Manager:
  - Construction Superintendent:
  - Consulting Engineer Name and Applicable Prequalified Work Types:
  - Sub-consultant Name(s) and Applicable Prequalified Work Types:
  - Design project Manager"

- Design Engineer of Record:
- MOT Certified Designer:
- Specification Package Technician

- Responsible Office

Design-Build Firms being considered for this Project may have more than one office location. The office assigned responsibility for the work shall be identified in the Technical Proposal. If different elements of the work will be done at different locations, those locations shall be listed.

Paper size: 8½" x 11". The maximum number of pages shall be 2 single-sided, typed pages including text, graphics, tables, charts, and photographs. Double-sided 8½" x 11" sheets will be counted as 2 pages. Larger sheets are prohibited.

C. Evaluation Criteria:

The Department shall open all Bids received at a public Bid opening on the date found in Section II of this RFP. The Technical Review Committee will review the Technical Proposal of the Lowest Bidder. The Technical Review Committee will then establish if the Technical Proposal of the Lowest Bidder is responsive or non-responsive based on the criteria described in this RFP. If the Proposal is responsive, that Design-Build Firm will be awarded the Project. If the Proposal is found to be non-responsive, the Technical Review Committee will review the Technical Proposal of the next Lowest Bidder and establish if the Technical Proposal is responsive or non-responsive based on the criteria described in this RFP, and so on.

D. Final Selection Process:

The Project shall be awarded to the responsive Bidder with the lowest Price Proposal.

VIII. BID PROPOSAL REQUIREMENTS.

A. Bid Price Proposal:

Bid Price Proposals shall be submitted using Bid Express only and shall include one lump sum Price for the Project. No other means of submission of Bid Price Proposals will be accepted. For more information on Bid Express, refer to the Contracts Administration Website at: http://www.dot.state.fl.us/cc-admin The lump sum price shall include all costs for all design, geotechnical surveys, architectural services, engineering services, Design-Build Firms quality plan, construction of the Project, and all other work necessary to fully and timely complete that portion of the Project in accordance with the Contract Documents, as well as all job site and home office overhead, and profit, it being understood that payment of that amount for that portion of the Project will be full, complete, and final compensation for the work required to complete that portion of the Project. The package shall indicate clearly that it is the Bid Price Proposal and shall identify clearly the Proposer's name, and Project description.