



D5 Construction Design Build Training

August, 2009

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D5 Construction
Design Build Training
Agenda
August 13, 2009

1. Introductions
2. Design Build Guidelines
 - a. Project Selection
 - b. Definitions
 - c. D/B Firm Selection Process
 - d. Soils and Foundations
 - e. Contract Administration
 - f. Materials Acceptance Program (MAP)
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3. Flowchart for the Development Process
 - a. Pass the Torch
 - b. RFP Development – construction’s role
 - c. Bid Questions
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 - e. Scope Commitment and Coordination – after award (in house & EOR)
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 - e. Schedule of Values
 - f. Invoicing
 - g. Monthly Quantity Update
 - h. Plan Revisions
 - i. Final Acceptance
 - i. As built drawings
 - ii. Final Estimate
 - iii. Warranties
 - iv. Final Load Ratings

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The following documents are attached and can also be found at
http://www.dot.state.fl.us/construction/DistrictOffices/d5web/design_build.shtm :

Design Build Guidelines
D/B Process Flowchart – Prior to Contract
D/B Bid Questions Flowchart
D/B Process Flowchart – After Letting
D/B Shop Drawing Submittal Flowchart
Design Kickoff Meeting Agenda
Preconstruction Conference Meeting Agenda

The following documents are attached:

Example Request for Proposal (RFP)
Example Schedule of Submittals
Example Plans Transmittal List
Example Schedule of Values

Just for Fun:
D/B Crossword Puzzle

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**Florida
Department of Transportation**



Design-Build Guidelines

DESIGN-BUILD GUIDELINES

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*Example of Projects- See Construction Web Page-Alternative Contracting-Project List

ABBREVIATIONS

Design-Build	(DB)
Florida Department of Transportation	(FDOT)
Federal Highway Administration	(FHWA)
Project Manager	(PM)
Construction Engineering Inspection	(CEI)
Adjusted Score Design-Build	(ASDB)
Letters of Interest	(LOI)
Low Bid Design-Build	(LBDB)
Request for Proposal	(RFP)
Technical Review Committee	(TRC)
Quality Control	(QC)
Quality Assurance	(QA)
Critical Path Method	(CPM)
Laboratory Information Management System	(LIMS)
Trustees of Internal Improvement Trust Fund	(TIITF)
Utility Agreement	(UA)
Project Engineer	(PE)
Resident Engineer	(RE)
Fixed Capital Outlay	(FCO)
Project Scheduling System	(PSS)
National Environmental Policy Act	(NEPA)
Project Development and Environment	(PDE)
Independent Assurance	(IA)
State Materials Office	(SMO)
Qualified Product List	(QPL)

CHAPTER ONE**INTRODUCTION****1.1 PURPOSE**

To establish the Department's process for procuring and administering the design, construction, and Construction Engineering and Inspection (CEI) services, within one contract.

1.2 AUTHORITY

Section 337.11(7), FS, Design-Build Statute; Rule 14-22, Contractors' Qualifications Rule; Rule 14-91, Design-Build Rule.

Section 287.055, FS, Consultants Competitive Negotiation Act; Rule 14-75, Consultants Qualification Rule.

Section 337.025, FS, Innovative Statute

Section 339.135(2), FS, Work Program (LBR) Statute

23 CFR Part 636, Design-Build Contracting

1.3 SCOPE

This procedure affects all offices associated with the design and construction of transportation or building projects.

1.4 BACKGROUND

Design-Build combines into a single contract the design, construction and right-of-way services (if necessary). All in accordance with standard Florida Department of Transportation (FDOT) Design Standards and criteria, specifications, and contract administration practices. However, construction activities may not begin on any portion of such projects until title to the necessary rights-of-way and easements for the construction of that portion of the project has vested in the state or a local governmental entity and all railroad crossing and utility agreements have been executed. These projects allow the Design-Build Firm to participate in the design in an effort to reduce costs and expedite construction.

In 1995, the Florida Legislature authorized the Department to use the Design-Build process (Design-Build Major: **Section 337.11(7) Florida Statutes**) and in 1996, this authority (Design-Build Minor: **Section 337.025 Florida Statutes**) was further expanded to include all project types as a part of the "innovative" practices package. The Department is required to comply with the annual contracting monetary cap set by the statute for Innovative Contracting. Section 337.11(7) of the Florida Statutes currently allows for all project types, except for a resurfacing or minor bridge project. These types of projects may be authorized under section 334.025 of the Florida Statutes.

The Design-Build contracting process and contract administration will follow standard FDOT practices, unless differences are otherwise identified. Districts are responsible for conducting the Design-Build contracting process for projects within the managing District; whereas, Central Office Contracts Administration, in coordination with the appropriate office, is responsible for contracts originating in the Central Office.

1.5 SECTION 337.11(7)(A), F.S. – DESIGN-BUILD MAJOR

This statute applies to any Design-Build project, except for a resurfacing or minor bridge project. A minor bridge project is defined as a bridge project less than \$10 million.

This statute applies to Design-Build projects. **Section 337.11(7), Florida Statutes** provides: “If the head of the department determines that it is in the best interests of the public, the department may combine the right-of-way services and design and construction phases of any project into a single contract, except for a resurfacing or minor bridge project, the right-of-way services and design and construction phases of which may be combined under s. 337.025. Such contract is referred to as a design-build contract. Design-build contracts may be advertised and awarded notwithstanding the requirements of paragraph (3)(c). However, construction activities may not begin on any portion of such projects until title to the necessary rights-of-way and easements for the construction of that portion of the project has vested in the state or a local governmental entity and all railroad crossing and utility agreements have been executed. Title to rights-of-way vests in the state when the title has been dedicated to the public or acquired by prescription.”

These types of Design-Build contracts are NOT calculated in the \$120 million cap.

1.6 SECTION 337.025, F.S. – DESIGN-BUILD MINOR

This statute applies to Design-Build minor projects that include resurfacing projects and minor bridge projects under \$10 million.

Minor - The “minor” Design-Build contracts are defined as bridges under \$10 million and other transportation projects (Resurfacing) not allowed under **Section 337.11(7), Florida Statutes**. The “minor” Design-Build contracts are allowed under **Section 337.025, Florida Statutes** and are calculated in the \$120 million cap. Therefore, Design-Build Minor contracts must be submitted and approved by the **Quality Initiatives Office** for statutory compliance.

1.7 PROJECT SELECTION

1.7.1 ALL PROJECTS EXCEPT LOW BID RESURFACING

Design Build (D-B) contracting should be considered on the following types of projects:

- 1) Projects that demand an expedited schedule and can be completed earlier.
- 2) Projects that require minimum Right of Way acquisition and utility relocation.
- 3) Projects that can have a well defined scope for all parties (Design & Construction)
- 4) Projects that have room for innovation in the design and/or construction effort.
- 5) Projects with low risk of unforeseen conditions.
- 6) Projects with low possibility for significant change during all phases of work.

Examples of projects that may be good DB contracting candidates:

- 1) Major Bridges
- 2) Minor Bridges
- 3) ITS (computer signalized traffic)
- 4) Intersection improvement (with known utilities)
- 5) Buildings-office building, rest areas, welcome stations, pedestrian overpass, etc.
- 6) Interstate widening
- 7) Rural Widening
- 8) Fencing
- 9) Landscaping
- 10) Lighting
- 11) Sidewalks
- 12) Signing
- 13) Signalization
- 14) Guardrail

Examples of projects that may not be DB contracting candidates are listed below. Use of DB contracting on these type projects requires written approval by the State Construction Office:

- 1) Major bridge rehab/repair with significant unknowns
- 2) Rehab of movable bridges
- 3) Urban construction/reconstruction with major utilities, major subsoil, R/W or other major unknowns
- 4) Mill and resurfacing

1.7.2 LOW BID RESURFACING PROJECTS

- 1) The project should be confined to resurfacing as much as practical. There should be minimal roadway or shoulder widening that could create front slope or clear zone issues (ex. Added Turn Lane).
- 2) The project should not have environmental issues that require significant permitting or agency coordination.
- 3) The project should only have minor utility adjustments or none at all.

1.8 REFERENCES

FDOT Procedure No. 375-000-001, District Contracts Procedure
FDOT Procedure No. 375-030-002, Acquisition of Professional Services
FDOT Procedure No. 575-000-000, Right of Way Procedures Manual
FDOT Procedure No. 350-020-200, Contract Funds Approval
FDOT Procedure No. 625-020-010, Design-Build Procurement and Administration
FDOT Form No. 375-020-12, Design-Build Proposal
FDOT Form No. 375-020-13 Design-Build Contract
FDOT Form No. 375-020-14 Design-Build Contract Bond
FDOT Standard Specifications for Road and Bridge Construction & Implemented modifications

CHAPTER TWO

DEFINITIONS

For purposes of this procedure, the following definitions apply:

- 2.1 Adjusted Score Design-Build (ASDB)** means the contract award is based on the lowest adjusted score, which is determined by dividing the price proposal by the technical proposal score.
- 2.2 Advertisement** is the standard advertisement for professional services (*Internet*). Additionally, the Department may utilize other forms of communication to announce the project.

The advertisement will include the requirements stated in the procedures, any additional technical qualifications desired, the criteria on which Letters of Interest will be evaluated for the short-listing process and time frames for Letters of Interest and submitting bid proposals.

- 2.3 Bid Proposal** means a technical proposal and a separately sealed price proposal submitted by each Design-Build Firm.

In the case of a Low Bid Design Build project, the 'bid opening' occurs where we open the price proposals and the apparent low bidder is identified. The department then opens that bidders technical proposal to determine if they are responsive. Ten days after we open the technical proposal or post an award notice, whichever comes first, all documents become public record, regardless if we opened them or not.

In the case of Adjusted Score Design Build, the Technical Review Committee (TRC) opens the technical proposals for evaluation purposes. However, since the price proposals have not been opened, the clock does not begin. The TRC evaluates and scores the technical proposals. The department then conducts a 'bid opening' where the price proposal is opened. The clock begins ticking after the opening of the price proposal. Therefore, ten days after opening, in this case, the price proposals or post an award notice, whichever comes first, all documents become public record.

- 2.4 Contracting Unit** is the unit in each District that has been given the responsibility of procuring Design-Build contracts. This unit may mean either the Contracts Administration Office or the Professional Services Unit; whichever is appropriate for the task required.
- 2.5 Contracts Administration Office** is the District or Central office that is responsible for the contracts awards process.

- 2.6 Design-Build** means combining the design and construction phases of a project into a single contract.
- 2.7 Design-Build Firm**, also known as Design-Build team, means any company, firm, partnership, corporation, association, joint venture, or other legal entity permitted by law to practice engineering, architecture and construction contracting, as appropriate. The entity may include a construction contractor as the primary party with the design professional as the secondary party or vice versa. The contractor or design professional cannot team with other partners to submit more than one bid per project. The secondary (i.e., designer or contractor) on a Design-Build team cannot change, after award, without the written approval of the Department. Consultant firms that have been contracted by the Department to develop the Request for Proposal on a Design-Build project should not be allowed to compete as a proposing Design-Build Firm.
- 2.8 Design-Build (Major)**, as authorized by **Section 337.11(7) F.S.**, is a contracting technique, which allows the Department to combine the design, construction and right-of-way (if necessary) phases of any project, except a resurfacing or minor bridge project, into a single contract.
- 2.9 Design-Build (Minor)**, as authorized by the Innovative Contracting statute (**Section 337.025 F.S.**), is a technique which allows road contracting projects and other types of construction projects that are not covered by **Section 337.11(7) F.S.** and have an estimated cost of less than \$10 million. There is a statutory cap annually on all innovative contracts (statewide).
- 2.10 Design-Build Maximum Price:** This method stipulates a maximum price and competes project scope, qualifications, quality, innovation, schedule, and costs (not to exceed the maximum price). Every proposal has a stipulated price and the competition is on price, scope, quality, innovation, and schedule. This method has the advantage of immediately allowing the Department to determine if the required scope is realistically achievable within the limits of a tight budget. It is responsive to the efficient use of funds by committing virtually all available funding up front and using the scope, schedule, innovation, and quality of project proposals to determine the most attractive offer.
- 2.11 Design-Build Hybrid:** This method stipulates a maximum price and competes project scope, qualifications, quality, innovation, schedule, and costs (not to exceed the maximum price). The Department has prepared and assembled a set of project contract plan sheets for the project and the plan sheets are attached to the RFP. Every proposal has a stipulated price and the competition is on price, scope, quality, innovation, and schedule. This method has the advantage of allowing the Department to determine if the required scope is realistically achievable within the limits of a tight budget. It is responsive to the efficient use of funds by committing virtually all available funding up front and

using the scope, contract plan sheets, schedule, innovation, and quality of project proposals to determine the most attractive offer.

- 2.12 Design Build with Options:** This process provides a method to build a project to a lesser scope versus not letting the project due to the bids coming in higher than what the Department can afford. The Department plans to construct the entire project as stipulated in the Contract Documents. However, the Department intends to establish priorities for the Contract award in the event the goals of the Department cannot be achieved with the funds determined available by the Department. If funding is a limitation on a project based on bids received, the Department can exercise options established for a project.
- 2.13 Design and Construction Criteria Package:** The design and construction requirements that clearly define the criteria essential to ensure that the project is designed and constructed, and if applicable, right of way services are provided to meet the needs determined by the Department. This package is part of the Request for Proposal.
- 2.14 Federal-Aid Oversight** applies to the Design and Construction of all Federal-Aid Highway and ITS projects except new or reconstruction projects on the Interstate Highway System with cost estimate less than one (1) million dollars.
- 2.15 Fixed Capital Outlay (FCO) Building Projects** provide for land purchases, building additions, replacements, major repairs or renovations to materially extend the useful life or improve/change the functional use (including furniture and equipment) necessary to furnish a new or improved facility.
- 2.16 Letters of Interest (LOI)** is used to refer to the process, which establishes criteria for evaluating interested Design-Build Firms for the short-listing process. Criteria required for Letters of Interest is stated in the advertisement. Firms desiring to submit bid proposals on Design-Build projects must submit a Letter of Interest setting forth the qualifications of the members of the Firm and providing any other information required by the announcement of the project. (Not applicable on low-bid offering.)
- 2.17 Low Bid Design-Build (LBDB)** means the contract award is based on the lowest responsive bid.
- 2.18 Major Bridge Project** means a bridge project with an estimated construction cost of \$10 million or more and that falls under **Section 337.11(7)** Florida Statutes.
- 2.19 Minor Bridge Project** means a bridge project with an estimated construction cost of less than \$10 million and that falls under **Section 337.025** Florida Statutes.

2.20 Non-FCO Building Project means a project to provide toll facilities, rest areas, weigh-in-motion facilities, Turnpike Service Plazas, welcome centers, and other buildings incidental to the roadway system.

2.21 Non-Responsive refers to any LOI that does not meet the criteria identified in the short-listing process or any proposal that does not comply with the criteria defined in the Request for Proposal.

2.22 Professional Services Unit is the District or Central office that maintains the Department's staff responsible for the proper procurement of professional services in its program area.

2.23 Project means the project to be designed and constructed as described in the public announcement.

2.24 Project Manager (PM) is the Department's designee responsible for the administration of the Design-Build project.

2.25 Rail Corridor Project means a project which involves design and construction of, improvements to, or replacement of tracks and track components such as rails, ties, turnouts, crossings, bridges, trestles, culverts, signals, communication lines, poles, radio masts, buildings, structures, facilities, and all other improvements or fixtures required for the operation of the railway.

2.26 Request for Proposal (RFP) is the package to be provided to the short-listed Design-Build Firms in the adjusted score Design-Build method and to those Design-Build Firms requesting an RFP in the low bid Design-Build method. FHWA approval of the RFP is required on FHWA oversight projects prior to authorization and the release of the RFP to short-listed Firms. The RFP must clearly define all functions and responsibilities required by the Firm. This RFP should consist of the following:

2.26.1 Dates: Technical proposal due date; Department's selection schedule; delivery of services/products date; Department's submittal reviews (if required) time period; and payout schedule.

2.26.2 Design and Construction Criteria: The design and construction requirements clearly define the specifications essential to ensure that the project is designed and constructed, and if applicable, right of way services are provided to meet the needs determined by the Department.

2.26.3 Guidelines for preparation/presentation of technical proposals and the following:

- Proposal evaluation criteria
- Price proposal requirements
- Identification of the Design-Build Firm's Project Manager

Insurance requirements
Subcontract services
MBE/DBE requirements
Bonding requirements

2.27 Responsive refers to a LOI that complies with the criteria identified in the short-listing process or a proposal that contains all the information and level of detail requested in the RFP and complies with the design and construction criteria defined in the RFP.

2.28 Selection Committee is a committee that reviews the long-list and chooses Firms that will be asked to submit proposals, thus creating the short-list. After the Technical Review Committee evaluates the technical proposals and submits their findings to the Selection Committee, the Selection Committee makes a final selection.

In the District, as a minimum, the Selection Committee is comprised of the District Secretary (who will serve as Chairperson), the appropriate Director, and the appropriate Office Head or as appointed by the District Secretary. A representative from the Contracting Unit will be a non-voting member and will serve as Recording Secretary at all meetings. Each member of the Committee may appoint an appropriate management level alternate as appropriate.

In the Central Office, the Selection Committee will be comprised of the appropriate Assistant Secretary or their designee (who will serve as Chairperson), the appropriate Director, and the appropriate Office Head or as appointed by the Chairperson. The Manager of the Contractual Services Office will be a non-voting member and will serve as Recording Secretary at all meetings. Each Committee member may appoint an appropriate management level alternate as appropriate.

2.29 Technical Review Committee (TRC) The TRC should develop the long-list from the Letters of Interest received on ASDB projects and evaluate the technical proposals of the short-listed Firms.

The TRC is comprised of the PM, District Construction Engineer, District Design Engineer, or their designees, and others as agreed upon by the preceding identified members, or as appointed by the District Secretary or his or her representative. There shall be a minimum of three members. For the success of the project, it is essential that the TRC be involved in the development of the Design and Construction Criteria Package.

For bridge projects, the TRC should include the District Structures Design Engineer, and for Category II bridges, the State Structures Design Engineer, or his designee.

For rail corridor projects, the TRC may include the Public Transportation Manager (or District Rail Corridor Manager) and the State Rail Office or his designee.

For building projects requiring major renovations, additions, or new facilities, which are intended for general public access, the Technical Review Committee should consist of an architect (District, Central Office, or General Consultant-non voting member), as well as appropriate Directors, or designees, based on the nature of the work requested, the complexity of the project, and the availability of personnel for a timely selection. The TRC for FCO buildings will also include the District/ Central Office FCO Coordinator.

For projects including right of way services, the TRC shall include the District Right of Way Manager, or their designee.

2.30 Value of Time Factor means an adjustment to the price proposal to reflect the worth of time. This adjustment factor is based on the Firm's proposed number of days to complete the project multiplied by a value per day established by the Department in the Request for Proposals, i.e., number of days multiplied by the dollar value per day equals the price proposal adjustment (increase). This factor will be used for selection purposes only and shall not affect the Department's liquidated damages schedule or affect any special provisions that may apply for incentives/disincentives

CHAPTER THREE

ADJUSTED SCORE DESIGN-BUILD BID PROCESS (ASDB)

The adjusted score approach may be used when overall outcomes can be clearly defined; however, a number of alternatives may exist which could provide the outcomes desired. An example of this method is a bridge project where alternative foundations, spans, and material types are acceptable.

3.1 PROJECT IDENTIFICATION

District and Central Office Management must first decide if contracting a specific project through the Design-Build method would benefit the Department and the Department's customers. The project will then be identified and included in the work program. Design-Build contracts will be identified in the Financial Management System (FM System) as Phase 52, Contract Class 9 for the fiscal year in which bids are to be received. For FCO projects, Design-Build contracts will be identified in the FM System in the fiscal year for which the appropriation is received. Phase 52 will include all work associated with preliminary engineering, construction, CEI, and if applicable, right of way services provided on the project. In-house CEI estimates that will initially be automatically generated (based on the overall Phase 52 level) must be manually revised to represent only the in-house effort required to manage the CEI consultant. District Program Development staff will code the Item Group as A3 (Design-Build Minor) or B8 (Design-Build Major) based on project description and authorization.

If incentives are used on a Design-Build project, the appropriate Item Group Code will be used in the FM System. The incentive payment should be programmed in the fiscal year in which the incentive payment is expected to be made. Expected payout will occur when the Design-Build Firm has met the early completion dates/days noted in the contract. Use Phase 5A to program these payments and the same program number as on the construction Phase 52 (02, 05, etc.).

All projects with right of way services included in the design build contract must be bid using the adjusted score bid process unless an exception is granted by the Chief Engineer.

3.2 DEVELOPMENT OF PRE-QUALIFICATION REQUIREMENTS

The Project Manager, with the assistance of a multi-disciplined team including the Contracting Unit, will determine the pre-qualification requirements. The Department's standard technical qualification requirements apply to each entity providing professional services (**Rule Chapter 14-75 FAC**). Standard contractor qualification requirements apply to the contractor in the Design-Build Firm who will be responsible for one or more classes of work. Contractors submitting as a lead or primary party with the design build team must be qualified in the advertised construction contractor work classes, in accordance with the provisions of **Rule Chapter 14-22, F.A.C.** Pre-qualification may

also be required for contractors performing specialty work, as described in FDOT Standard Specifications. Pre-qualification is required both prior to the closing date for the submittal of Letters of Interest and at the letting date.

NOTE: D-B rule state that a D-B firm can be a company, firm, partnership, corporation, association, joint venture or any other legal entity permitted by law to practice engineering, architecture and construction contracting. This mean that the legal entity must meet one or more of these requirements (and be prequalified with the FDOT).....so even the joint venture does not have to meet both the Contractor and engineer requirements as long as the D-B team meets all the qualification requirements in the advertisement.

FCO building pre-qualification requirements for contractors include the following:

- Applicable Contractor License,
- State Corporate Charter Number, if Corporation, and
- Added requirements, if necessary for specialized needs.

3.3 DEVELOPMENT OF DESIGN AND CONSTRUCTION CRITERIA

Individuals knowledgeable of the contracting requirements shall undertake development of the design and construction criteria for a Design-Build project and design professionals experienced in the application of the performance criteria appropriate to the facility needs. It is essential to the success of the project that members of the Technical Review Committee are involved in the development of the design and construction criteria. The TRC's early involvement is a key to smooth and timely procurement of Design-Build services.

All Projects shall have the RFP submitted to the State Construction Office for approval prior to authorization and release of the RFP to the firms.

If the project is subject to FHWA oversight, the RFP shall be submitted for FHWA approval prior to authorization and release of the RFP to the firms. It is critical that FHWA be involved throughout the development of the design and construction criteria in order to expedite FHWA's final RFP approval. Prior to sending the RFP to requesting Firms, the Department must have FHWA approval of the RFP, on oversight projects.

The request for federal authorization for each design build project shall include a right of way certification signed by the District Right of Way Manager. The certification may be either a certification for construction or a certification for authorization and advertisement. The certification for construction shall state that either no additional right of way is required for the project, or additional right of way was required for the project and all right of way activities have been completed in accordance with applicable federal and state requirements. The certification for authorization and advertisement shall state that additional right of way is required for the project, that the necessary processes and procedures are in place to address right of way issues, and appropriate controls have been included in the design build contract to ensure construction activities do not

commence prior to the Department's certification that all right of way activities have been completed in accordance with applicable federal and state regulations.

Design and construction criteria should clearly and completely identify Design-Build requirements/services, including any information, data, and services to be furnished by the Department. Rail projects that have Federal Transit Authority (FTA) oversight must submit a management plan.

The design and construction criteria shall provide a summary of the project's objectives and furnish sufficient information upon which Firms may prepare bid proposals (i.e. technical and price proposals). Criteria may include geo-technical analysis, surveying, permitting, right of way mapping, title searches, utility coordination, etc. The design and construction criteria shall state the specifications, design criteria, and standards to be used in the design and construction of the project, and if applicable standards are to be used in providing right of way services on the project, unless otherwise noted in the RFP.

(1) CQC

The Design-Build firm shall use the latest CQC Specifications for their Price and Technical Proposals. The Department will provide verification testing and inspection services in accordance with the latest CQC Specifications.

(2) Design-Build Contract where CEI services are included requires approval from the Director, Office of Construction.

Add the following in the Design/Construction Criteria requirements when CEI service is included in the Design-Build Contract along with Design-Build CEI Scope of Services.

A. Quality Control Engineering and Quality Assurance Engineering

The Department is responsible for providing Quality Assurance Engineering and will perform oversight duties including: project management; inspection review; report review; contract administration; contract payment; and verification testing.

The Design-Build Firm shall provide Quality Control Engineering in accordance with the Design-Build CEI Scope of Services. All activities will be under the direction of the Quality Control Engineer (A Registered Professional Engineer).

Any reference in the standard specifications to testing by the Contractor will be assumed to mean by the Design-Build Firm.

1. Independent Assurance (IA)

The Design-Build Firm is subject to the IA procedures. The Department's IA procedure will be used for comparison tolerances and actions. IA will be performed on Quality Control and Quality Assurance personnel.

3.4 CONTRACT NUMBER ASSIGNMENT

The Contracting Unit will obtain a contract number and enter the project into the Department's data system for monitoring.

3.5 ENCUMBRANCE

The contracting Unit or Project Manager will request a MEMO Encumbrance through the Contract Funds Management (CFM) system before submitting the Request for Proposal (RFP) to the vendor. The CFM system will generate an approved Funds Approval email, once the funds are successfully encumbered in FLAIR. The requestor must have the funds approval email in hand before the RFP can be issued.

Prior to awarding the contract to the vendor, the contracting Unit or Project Manager will request the award encumbrance through the Contract Funds Management system. The requestor must have the approved email in hand before the contract can be awarded.

3.6 ADVERTISEMENT

The time period for advertisement will be from mail-out of the RFP to the receipt of a Design-Build proposal. The actual length of time that the advertisement is publicized is at the discretion of the District. The Central Office Procurement website shall be the official Design-Build posting website where advertisements, shortlisting, pre-bid meeting notices, public announcements of technical scores, opening of sealed bids and all other public meetings, as well as posting of final selection results should appear. In addition, advertisements should be emailed out to all companies on the BSN Subscription list. Additionally, the Department may utilize other forms of communication, such as newspapers or magazines, mail-outs, or television or radio to announce the project.

The advertisement will include, as a minimum, the name and description of the project, the District and County location of the project, the major type(s) of work required, any minor types of work that are required for the project (but not normally associated with the major work), the estimated construction cost of the project (if applicable), how and where Firms can respond, any additional technical qualifications desired, the criteria on which Letters of Interest will be evaluated for the short-listing process, the time frames for Letters of Interest and submitting bid proposals, the number of copies to be received, how respondents will be selected, and tentative dates for short-list and final selection.

All advertisements should summarize the Department's selection schedule for the prospective Design-Build Firms. The selection schedule should provide an outline of specific calendar dates, and clearly identify the time allotted for the preparation of qualification statements for Design-Build proposals. Advertisements should also include

the "posting" date and bid solicitation protest rights. Each project advertisement should be drafted to fit the unique needs of that particular project.

Ad for Design-Build Contract with CEI services should have the following in addition to what is already required:

Under "Project Description"

Construction, Engineering, and Inspection services shall be provided by the team.

Under "Prequalification Requirements" & "Professional Team Member Qualified under Rule 14-75, F.A.C.- Work Class (es)"

10.1 - Rdwy Construction Engineering Inspection

The advertisement shall include date, time, and location of when the Selection Committee announces the Short-listing of Firms (if applicable) and announcement of technical scores (if applicable) and opening of price proposals.

3.7 LETTERS OF INTEREST

On Adjusted Score Design-Build (ASDB) projects, Letters of Interest will be required from interested Firms. Letters of Interest should be sent to the Contracting Unit. The Department is required to receive at least three (3) Letters of Interest in order to proceed with the Request for Proposals. If three (3) Letters of Interest are not received, then the Department will re-advertise, or alternatively review its list of pre-qualified Firms deemed to be the most highly qualified, based on qualification data on file, past performance grades, and location. The Department will then contact each of the listed Firms and conduct similar discussion concerning the project. Letters of Interest should be no more than five pages in length, as a general rule, and include a Contact Person, with name, phone number, and e-mail address (if available). Buildings, rail, or complex projects may require longer Letters of Interest. Letters of Interest will be evaluated based on the required criteria stated in the advertisement.

3.8 PREPARATION OF REQUEST FOR PROPOSALS (RFP)

All Projects shall have the RFP submitted to the State Construction Office for approval prior to authorization and release of the RFP to the firms.

If the project is subject to FHWA oversight, the RFP shall be submitted for FHWA approval prior to authorization and release of the RFP to the short-listed Firms.

(1) Project Time/Schedule

All RFPs shall state a time period in which the services and/or products are to be delivered. Time of performance requirements in the RFP are best stated in elapsed consecutive calendar days from the date identified in the notice-to-proceed. In this way, changes in the schedule to solicit, receive, evaluate, and select an award can be changed without affecting the project schedule. In those instances where the completion date is critical, the RFP must include a "but-not-later-than" qualifier in the project schedule. An outline of the selection schedule should be included in the RFP. The Department's selection schedule is the schedule of the entire selection process and should include all activities from initial advertisement to notice to proceed. The schedule should be stated in specific calendar dates and it should clearly identify the time allotted for the preparation of qualification statements and for Design-Build proposals.

The Firm's project schedule should depict at what stage in the Design-Build process the Firm intends to build each element/phase of the project. The Firm's project schedule shall be developed using critical path method (CPM) techniques (or other appropriate scheduling techniques based on the type of project) and specify the time frame for interim events. These events may include submittal requirements of the Firm, such as design development drawings or construction documents. They may also include requirements of the Department directly or through a third party, e.g., site availability, completion of an environmental report/permits or the delivery of Department-furnished equipment or materials.

Again, the interim deadline requirements should be stated in elapsed days and may be an obligation of the Firm or Department. The obligation of the Department to complete specific submittal reviews (if required) within a specified time period may also be included in the project schedule.

It is recommended that the RFP require a 60 to 90 day plans preparation and the review period be front-loaded into the schedule prior to allowing the Design-Build Firm to begin actual construction. This will allow the design process to get out ahead of the Design-Build Firm as well as providing sufficient time for the Department to conduct its conformity reviews. This plans preparation time must be clearly spelled out in the RFP so that the Firm can include it in their contract time calculation.

It may be appropriate to allow certain construction activities (such as geotechnical investigations and clearing and grubbing) during this plans preparation period. Specifics should be included in the RFP.

(2) Payout Schedule

The RFP must clearly address the invoicing and payment process including a payout schedule. The payout schedule should be based on major, well-defined tasks related to the Firm's CPM (or other appropriate) schedule. The payout schedule should also include provisions for tracking MBE/DBE participation. Generally, the details of the payout schedule are to be worked between the selected Firm and the Department after the project is awarded. Examples of payout schedules are based on monthly or percentage of completion of work schedules. For FCO building projects, the schedule of values will be used as a payout schedule. (A copy of the payout schedule for all awarded Design-Build projects should be sent to the Deputy Controller of the Financial Management Office.)

(3) Technical Proposal

The RFP shall include well-defined technical proposal requirements. This should include detailed instructions regarding the content and format.

(4) Price Proposal

The RFP shall include well-defined Price Proposal requirements. Design-Build projects are bid lump sum and are paid through a payout schedule based on major work items or tasks. The Firm's price proposal shall include the lump sum price, as well as the standard bid blank forms.

The Project Manager should include the appropriate Design-Build pay-items that reflect the scope of the work in the Bid Proposal Form. Refer to the Basis of Estimates Manual for various Design-Build pay-items.

The Project Manager should also include the "Do Not Bid" pay-items for FHP, Partnering, Disputes Review Board and Initial Contingency Amount in the Bid Proposal Form and provide for a quantity in accordance with the Basis of Estimates Manual.

(5) Subcontract Services

The RFP shall contain language that allows Firms to subcontract portions of their work. Partners in the Design-Build Firm (i.e., contractor, designer or right of way consultant, if applicable) cannot be changed after contract award without written consent of the Department. Failure to receive approval on such a change will result in contract cancellation.

(6) MBE/DBE Requirements

The RFP/Specifications shall address the Department's commitment to diversity in contracting. Utilization of women and minority-owned businesses is encouraged by the Department to be used on all projects.

(7) Technical Proposal Evaluation Criteria

The RFP shall include the evaluation criteria and point system to be used by the TRC to evaluate technical proposals on adjusted score Design-Build projects. The criteria shall be established by the TRC to meet the specific needs of a particular project.

(8) General Liability Insurance, Professional Liability and Contract Bonding

General Liability Insurance: The RFP/Specifications must include current Standard Specifications regarding general liability.

Professional Liability: The RFP/Specifications shall stipulate the amount of professional liability insurance required and term (the length of time) of coverage.

Contract Bonding: The RFP/Specifications must require applicants to be capable of providing a performance and payment bond in the full amount of their total Design-Build contract (see **Form No. 375-020-27**).

(9) Public Involvement

Since public involvement is an important aspect of the project development, it is imperative that the PM, working with the appropriate District staff, defines in the RFP the level of coordination/involvement required for a particular project. Public involvement includes communicating to all interested persons, groups and government organizations information regarding the development of the project.

(10) Consultant Eligibility

The term "affiliate" shall mean business concerns, organizations, or individuals where, directly or indirectly, either one controls or has the power to control the other, or a third party controls or has the power to control both, regardless of whether the entities have separate vendor IDs. Indicia of control include interlocking management or ownership, identity of interests among family members, shared facilities and equipment, common use of employees.

Any contracts that have been longlisted or shortlisted prior to the effective date of this policy shall not be affected by this policy.

Any questions related to the applicability of this policy shall be referred to the Chief Engineer.

ALL PROFESSIONAL SERVICES CONTRACT

Any Consultant or its affiliate developing the Request for Proposals or Scope of Services for a project will not be eligible for that project.

DESIGN-BUILD

The contractor or design professional cannot team, as a Prime, with other firms to submit more than one bid per project. The secondary member (i.e., designer or contractor) of the design-build team cannot change, after award, without the written approval of the District Secretary.

A professional firm shall not submit a proposal for CEI services, either as a Prime or a Sub, for a Design-Build contract for which the same firm or its affiliate is the EOR or is Sub to the EOR.

A consultant firm, its affiliate, or subconsultant that is under contract with the Department to develop the Request for Proposal for a Design-Build contract cannot be part of a Design-Build Team proposing on that contract as a prime or a subconsultant. A consultant firm, its affiliate, or subconsultant, that is under contract with the Department to provide Construction Engineering and Inspection (CEI) services on the Design-Build contract cannot be part of a Design-Build Team proposing on that contract as a prime or subconsultant.

A consultant or its affiliate, who was the Prime EOR on a Design-Bid-Build project, where the project is switched to Design-Build, may participate on a Design-Build contract with the approval of the District Secretary. The District Secretary shall consider level of design (% completed) by the EOR, the number of component design plans by different EOR's, etc.

3.9 CONSIDERATIONS FOR RFP DEVELOPMENT:

(1) Prior to advertisement, existing right of way must be verified and a determination made whether the project can be built within existing right of way. If additional right of way will be needed, a decision must be made in the identification stage if right of way services will be included in the Design-Build contract or handled separately.

Design build contracts may be advertised and awarded prior to right of way activities being completed. Construction activities may not begin on any portion of such projects until such time as title to all necessary right of way and easements necessary for the construction of that portion of the project has bested in the state or a local government entity (**Section 337.11 (7)(a), F.S.**) and a right of way certification for construction (**Form No. 575-095-10, Right of Way Certification**) for that portion of the project has been issued. (See Chapter 8, Right of Way Issues on Design-Build Projects.)

(2) Construction Engineering Inspection is an option in the Design-Build procedure. It should be determined in the identification stage if this will be part of the request for proposal (RFP).

(3) The project manager should put together a Design-Build team to assist in the development of the request for proposal. Team members need to be identified early so that all disciplines that are essential to the type of work in the scope are aware of their role and responsibilities. A multi-experienced team is required. Certain Department personnel are required to be members (or a designee) via the Design-Build procedure. Take care that the team does not get too large. A five to seven member team is a good size. One recommendation is to assign a project engineer at the stage of scope development, in order to have that person on the Design-Build team. This allows project management and field personnel to become familiar with the process.

(4) The type of funding must be identified in order to include the correct bid documents in the request for proposal. If federal funds are involved, all the normal procedures for approval and authorization must be followed. Encumbrance of funds follows Contract Administration procedures and must be done prior to advertising the project. This process takes some time so allow at least one month.

(5) Involvement by both professional services and contract administration in the early stages is critical. The design-build procedure combines the procedures of both departments so identifying responsibilities early is important. The advertisement and selection is governed by professional services. Bid documents are provided by contracts administration. Design-Build Firm pre-qualifications are determined by contracts administration upon receipt of the Letters of Interest (LOI). Design-Build Firms must be pre-qualified by the day that the LOI is due. Design-Build Firms must renew their pre-qualified status once a year. There may be a time frame in which they are not "qualified" during the period of time in which they are updating their paperwork.

(6) Advertisement must be posted on the FDOT web site; however depending upon project need, other sources for notification may be utilized, such as newspapers, professional magazines, etc. It is a standard courtesy to notify the Florida Transportation Builders Association (FTBA) of the announcement of a Design-Build advertisement, so that they have the opportunity to distribute notification to FTBA membership. The advertisement must include both design and construction pre-qualified work groups and classes.

Compensation to Short Listed Lead Design Firms: The issue of reimbursement for the preparation of the technical proposals needs to be addressed up front so that funds are made available. Federal funds **may** be used to reimburse short-listed firms for their effort in the preparation of the technical proposal. If the job is relatively small, eliminating the reimbursement may be the District's option.

Once a project has been identified as Design-Build:

(1) Design-Build lends itself to allowing preliminary work to be done on a project prior to advertisement. Such work may include survey, geotechnical data, permitting and/or other items of work, which could be performed by in-house staff independent of the design and construction. The more information available, the more detailed the scope of services. A decision needs to be made as to what, if any, preliminary work will be done.

(2) Set up a preliminary schedule. A Design-Build schedule looks nothing like a design/bid/build schedule and is in fact very different. Consider your team members, professional services, and the Design-Build firm in the allocation of time. Consider the terminology normally used and that which is used with Design-Build. It may not be the same and needs to be understood by those keeping track of the schedule. The project class is identified in PSM as Class 9 for Design-Build. The RFP should be complete and ready to go at the time the advertisement appears. This means that a Design-Build schedule is very front-end loaded for scope development, scope review, appropriate approvals and advertisement time. Federal funded projects require FHWA's involvement throughout the development of the RFP. FHWA authorization of the RFP should not be left to the last minute.

(3) Writing a request for proposal (RFP) is time consuming and requires review by various disciplines within the Department including Central Office & FHWA. Allow for at least two reviews. Allow time, up front, to make modifications knowing that each item listed in the procedure must be addressed. The more detailed the work the more time will be needed to write the RFP. A decision to include construction engineering inspection work must be made early so that it can be included in the RFP.

(4) The idea behind Design-Build is to eliminate unnecessary items. During the development of an RFP any request for documentation, plans, quantities, pay-items, comp books, disks, calculations, and etc. should be evaluated as to its absolute necessity. If it is not needed do not include it.

(5) Department review times are set in the RFP. These times are absolute. If comments are not provided to the design-build firm by the cut off date, the Design-Build firm may continue their work as if approved. It is suggested that the Project Manager (PM) discuss this with the reviewing units to ensure their understanding. Explain that the review times are significantly shorter (about 15 days) than in our current process. The reviews are however for "meeting design criteria" only. There is not the concern for appearance of submitted items as there is with our current procedure.

(6) Design-Build is handled for the most part by the District. Central Office reviews the RFP and performs project reviews only as they would under normal circumstances, such as category II bridges. The rest is left to the District.

(7) Although there are established Design-Build firms, most of the responses to Department advertisements for Design-Build projects, have been received from two separate companies that have teamed up specifically for a project. The contractor or consultant may lead. Contractors have more bonding capacity than consultants. Contractors tend to have higher costs than consultants. Consultants tend to know the professional services contracting procedures more thoroughly and are more familiar with writing technical proposals than contractors.

(8) The project manager receives the grades from team members once the technical proposals have been graded. This information should not be available to any one until the bids have been submitted.

Design-Build projects are unique in that they are let in the District no matter the construction cost or type of funding, including federal, unless the project falls under the management of the Central Office, such as an Fixed Capital Outlay (FCO) building project. Design-Build projects are shown only as Phase 52 and are designated as class 9. This presents some interesting scenarios in the Department's computer systems. Pay items and quantities are not required. This affects the testing and certification of construction materials during construction. Therefore, the LIMS process has provided an abbreviated Sample Testing and Reporting Guide (STRG) to use in the certification process.

3.9.1 GUIDELINES FOR REQUEST FOR PROPOSAL (RFP)

(1) Project Time/Schedule

- DOT selection schedule (should correspond to advertisement and include from advertisement to Notice to Proceed (NTP)) using specific calendar dates and time allotted for preparation of qualification statements and proposals.
- DOT's time period for services and/or products to be delivered.
- DOT's time of performance requirements in scope (elapsed consecutive calendar days from NTP).
- Require Firm to develop project schedule using CPM
 - Firm's submittal of design development drawings
 - Firm's submittal of construction documents
- 60-90 day plans preparation and review period front-loaded in schedule prior to construction (geotechnical investigations, clearing/grubbing, etc. may begin during this period).
- DOT or third party dates or time regarding site availability, completion of environmental report/permits, or delivery of DOT equipment or materials (elapsed days).
- DOT's submittal reviews (if required) within a specific time period.
- If completion date is critical DOT will indicate about-but-not-later-than qualifier in project schedule.

(2) Payout Schedule

- Invoicing and payment process.
 - Progress payments based on: a) monthly, or b) specific tasks completed.
- Provisions for tracking MBE/DBE participation.

(3) Technical Proposal

- DOT must provide detailed instructions regarding content and format.
- DOT will provide Technical Proposal Evaluation Criteria.

(4) Price Proposal

- Firm's proposal will include lump sum.
- Firm's proposal will provide breakdown for major items.
- Firm's proposal will provide breakdown for major tasks (consistent with major tasks/functions listed in payout schedule).
- Standard Bid Blank Forms.
- If extenuating circumstances, such as short response time, DOT will allow price proposal to be submitted later than technical proposal. This must be stated in RFP (also in advertisement).

(5) Subcontract Services

- RFP will contain language-allowing subcontracting by Firms.

(6) MBE/DBE Goals and Requirements

- FDOT's goals/requirements established: a) for the whole project, or b) for each category of services (i.e., design, right of way, CEI, construction).

(7) Scope of Services

- DOT's project objectives.
- Design Services/Requirements (i.e., Design Criteria Package)
 - Geotechnical Analysis
 - Surveying
 - Right of Way
 - Permitting
 - Utility Coordination
- Specifications
- Design Criteria and Standards
- Construction Engineering and Inspection (CEI) Services/Requirements (may include)
 - Construction Inspection
 - Off-site Prefabrication
 - Materials Sampling and Testing
 - As Built Drawings
 - Surveying
- Requirements on types and frequency of:
 - Reports
 - Submittal of shop drawings
 - Level of detail and type of documentation of construction material

If CEI works for Firm, CEI must provide monthly reports to FDOT with outline of progress, problems, corrective actions proposed /implemented, and status of corrective actions. For federal funded projects, FHWA must authorize RFP, to allow CEI to be part of Design-Build Firm.

- Construction Services/Requirements
- FDOT specifications (standard, supplemental, or special provisions)

May require reference to local/state building codes, national standards, or others.

Any particular construction processes/techniques necessary (example: top-down bridge to lessen environmental impacts - better to describe unique values desired and let the Firm select construction method/technique).

- Permits

FDOT must state what Permits/Easements are necessary, who will be responsible, and how coordination will occur.

Bridge projects often require easement from Trustees of the Internal Improvement Trust Fund (use of sovereign submerged lands) in conjunction with Environmental Resource Permit (DEP).

FDOT needs to contact agencies up-front and determine what will NOT be permitted for the project.

- Design Plans and Engineering Calculations Review

Design plans, shop drawings, engineering calculations (including, but not limited to) required for submittal by the Firm to FDOT for verification of compliance (not approval).

Requirements for packaging submittals and backup information.

Shop drawing review routing process.

- Utilities

Utility Agreements must be included in RFP and line item included in price proposal breakdown for each UA.

- Easements/Right of Way

Existing R/W must be verified and a determination made whether additional right of way will be needed. If additional right of way is required, the scope must clearly identify whether right of way services are included in the contract or will be handled separately. (See Chapter 8, Right of Way Issues on Design Build Projects).

Design-Build Firm is responsible for temporary easements for construction equipment, materials, and operations on property, which will not be incorporated into the construction of the project.

- Existing Project Features or Systems

Scope will specify the responsibility for demolition and disposal or retainage of existing features or systems no longer necessary to the project.

- Quality Control (QC) Requirements

Scope must identify QC requirements that apply (in addition to those in specs, policies, and procedures) and those that do not apply (ex., designer not required to submit phase plans to FDOT for review).

Firm required to explain their QC program for plans, construction, etc.

- Independent Assurance

FDOT will continue independent assurance program whether FDOT or Design-Build Firm hires CEI.

Project Manager has right to review records/conduct tests to ensure quality products/services are provided.

- Survey Requirements

Scope will specify any survey information required.

FDOT will notify Firms of any existing survey info available.

- Final Documents

Scope will define final documents required by the Firm upon project completion (including: as-built final plans (100% automated, engineering reports, shop drawings, test results, documentation, daily reports, etc.)

- Staffing Requirements

Scope shall outline minimum training, experience requirements and staffing level for profession personnel.

- Geotechnical Requirements

Scope will specify geotechnical information or reports required by FDOT (FDOT may perform geotechnical work in preparation of scope, or geotechnical investigations to save short listed Firms time/expense).

DOT will provide existing geotechnical information to short listed Firms.

- Items To Be Furnished by FDOT

Scope will include section-detailing items/services to be furnished by FDOT (ex. data reports, computer services, materials, equipment, testing devices, or other items that affect bid or tech approach) and environmental permits.

- Computer Services

Scope should include list of FDOT computer programs allowed to be used during design and construction of project.

Firms should identify in their technical proposal which programs will be used.

- Issue Escalation

Scope will include an issue escalation matrix or process for addressing questions/disagreements, stating chain of command in FDOT (beginning with Project Manager). Time frames for resolving the conflict should also be included

Firms will provide similar list of people.

Partnering is recommended on most large/complicated projects.

- Design-Build Firm Guaranteed/Value Added

Scope with project Design-Build Firm guaranteed/value added requirement should show the specified number of years and details of coverage (as a general rule, routine maintenance is not intended to be covered by warranty).

Major bridges should have Design-Build Firm guaranteed/value added of 5-15 years.

- Professional Liability and Bonding

Scope will include professional liability insurance requirements (dollar amount and length of time clearly spelled out).

Firms must be capable of providing Performance and Payment Bond in full amount of total design-build contract.

- Public Involvement

Project Manager (with appropriate district staff) must clearly define in Scope the level of coordination/involvement with interested persons, groups, organization required for the project.

- Construction Problems Resolution

Scope should define process to resolve construction problems (ex. piling driven out of tolerance, wrong elevation on piers, etc.).

a) If resolution does not change original intent of technical proposal/RFP, then Firm will be responsible for developing the design solution to the construction problem and CEI will be responsible for review/concurrence. If CEI has concerns, District Project Manager will involve appropriate personnel to resolve.

b) If resolution alters original intent of technical proposal/RFP, the Firm will develop and send proposed solution to the District Project Manager for review and concurrence by the appropriate personnel to resolve; CEI will be copied.

3.10 LONG-LIST DEVELOPMENT BY TECHNICAL REVIEW COMMITTEE

The Technical Review Committee (TRC) comprised of members, as identified in Section 3, Definitions, shall develop the long-list from Letters of Interest received from responding Firms. The appropriate office will provide the TRC with a copy of all Letters of Interest, and information to be used for evaluation purposes, for all responding Firms pre-qualified to perform the advertised work. Based upon this information, the TRC will identify or long-list a minimum of ten (or all qualified, if less than ten Firms submit Letters of Interest) Firms to be considered. The evaluation process for long listing should include all entities within the Firm - including contractor, designer, CEI (if appropriate), Right of Way Consultant (if applicable), as well as any major subcontractors listed in the Letter of Interest. No one developing the long-list may act as a voting member on the Selection Committee making the short-list.

The evaluation criteria, for long listing, apply to construction contractor(s), design professional members and Right of Way professionals of the Firm, when applicable:

- 1) Past performance grades received by key members of the Firm on current and previous Department projects, or other performance data supplied by the Firm.
- 2) Information contained in the Letter of Interest. As a minimum, the Firm's construction contractor's current workload, bonding capacity, and past performance.

3.10.1 LONG LIST EVALUATION GUIDELINES

The purpose of this section is to provide guidelines to allow the Technical Review Committee (TRC) to take the Letters Of Interest (LOIs) and reduce them to a ranked listing (i.e., Long List) for presentation to the Selection Committee.

The TRC does not need to consider the following criteria in the long list. These items are to be evaluated by the Professional Services Unit prior to the TRC receiving the LOI's.

1. Pre-qualifications
2. Bonding capacity

The TRC should take into consideration the following criteria as it applies to the project. Not all criteria will apply or may have little value for the particular project. The TRC should determine in advance the criteria and its importance in the evaluation of the LOIs to produce the ranked long list. The TRC is to determine the specific appropriateness of items 2 and 3, as the Florida Department of Transportation (FDOT) does not have a long history of firms using the Design-Build process. The criteria are:

1. Past Performance Grades: Contractor, Designer, and CEI (if CEI is included in contract).
2. Joint experience of the firms working together.
3. Design-Build experience of the Firms.
4. Similar type work experience.
5. The current capacity of the D/B Firms.
6. Time delays on past projects.
7. Experience of key personnel.
8. Safety record.
9. Firm organization, resources and location.
10. Environmental record.
11. Incidents of litigation/disputes history.
12. Other categories the TRC determines.

The following is a definition of the above criteria and includes an automatic disqualifier if applicable.

3.10.1.1 Past Performance Grade: Evaluate past performance grades of the primary Contractor as listed in the Contractor Past Performance Report. See the Qualifications Engineer in the State Construction Office to obtain this report. A Contractor with an average grade of less than seventy-four (74) should not be considered. Primary Designer and CEI grades (if CEI is included in the Design-Build contract) should be evaluated. A Consultant with an average grade of less than eighty (80) should not be considered. The grades for Consultant's can be obtained from the District Professional Services Unit. Firms without an average grade should not be penalized in the evaluation process. Information from other states may be used if submitted.

3.10.1.2 Joint Experience of the Firms Working Together – It may be beneficial to have information about experience that the major firm's members have had in the past. Traditional projects may have involved the Designer and Contractor working together during construction. This could include but not be limited to Design-Build. They may have a history of working with each other that has supported their coming together as a Design-Build firm. Many Consultants use Contractors for constructibility reviews as well as Contractors using Consultants for design issues. This past history can also include projects where the Consultant member designed the plans and the Contractor built the project. Even though some of these projects may or may not have

been transportation projects, it still demonstrates that the firms have a confidence level in each other that has led to teaming again. This may be considered a positive in the long listing process, as compared to a Designer and Contractor that have not worked together in the past.

3.10.1.3 Design-Build Experience of the Firms- Consider the individual firm members past experience with Design-Build projects of similar type (i.e. bridge, roadway, building, etc.) as well as the experience of the complete team on past Design-Build projects. Consider the overall project type, as well as the complexity and unique features, of past projects as compared to the demands of the subject project. Past Design-Build experience could be drawn from projects contracted by FDOT, other DOTs, private industry, or local governments. The criteria should carry a heavy emphasis on very sensitive projects. Projects, such as a complex bridge project, would be the standard for giving the criteria a heavy emphasis. Remember, many firms currently doing business with FDOT do not have a long history of Design-Build.

3.10.1.4 Similar Work Type Experience- Consider experience that clearly demonstrates that the Design-Build firm has performed construction of the same type, scope, and complexity as the advertised project. For example, if the advertised project is a three mile long precast segmental bridge, then the contractor should be able to show, as a minimum, experience with segmental construction - precast would be good but cast-in-place is acceptable - and with repetitive type operations. If the advertisement is for a predominantly roadway project and the Contractor's experience is mainly with bridges, the firm may not be considered a strong candidate.

3.10.1.5 The Current workload - Verification of the Design-Build firm's bonding capacity should exclude any team unable to bond the project from being considered. However, There may be several Design-Build projects in progress concurrently throughout the state. These projects will attract Design-Build firms that are familiar with the process and have an established team. This may lead to the same Design-Build firms submitting LOI's on multiple projects. Knowing the firm member's current work load and potential work load (i.e., both Contractor's and Consultant's work load) may assist the TRC in determining the firm's ability to perform the work for the project currently under consideration. In addition, both the contractor and consultant may have been successful in winning recent Design/bid/build projects. The Design-Build firm's staff identified in the LOI may be identified in other letters or already working on other projects. The TRC should take into consideration the current workloads of both the contractor and consultant of any firm submitting a LOI. This consideration should also include other local governments and private industry. If a firm already has several jobs that they have been selected for, it may benefit the Department to consider other firms over this one to allow other firms to have a chance to perform Design-Build for the Department.

3.10.1.6 Time Delays on past projects- Timely completion of past projects should carry a heavy emphasis. Firms who have demonstrated the ability to finish jobs on time when they have encountered conditions differing from those represented in the plans on current or past FDOT projects should be given greater consideration. There is

no known reporting format to substantiate this performance. It will be subjective information the FDOT construction personnel will have based on past experience with Contractor performance. Firms with one (1) day or more of liquidated damages on three (3) or more contracts in the past year should not be considered. Contact the Computer Support Section in the State Construction Office to obtain a report on liquidated damages. Reports of Owners (Cities, Counties, Municipalities) on non-FDOT projects may also be evaluated.

3.10.1.7 Experience of Key Personnel- Consider the experience of key personnel who are proposed, by the firm, to be in charge of the day-to-day work on the project. This includes the key persons in responsible charge of construction, design, inspection, and testing.

3.10.1.8 Safety Record-The firm's performance in the safety area can be considered by past performance on construction projects or any citations by OSHA for safety violations.

3.10.1.9 Firm Organization and Regional Experience- Organization of the proposed Design-Build firm and sub-consultants should be evaluated for ability to do the job; the location of the firms for ability to work together should also be evaluated. The Design-Build firm members experience with local and state government entities, permit and regulatory agencies, and community groups can also be evaluated.

3.10.1.10 Environmental Record- The performance of the firm can be evaluated by citations by DEP, EPA, etc. This information will most generally be published in the daily clips or newspaper articles. District Construction personnel's experience with the firm with NPDES requirements can also be used.

3.10.1.11 Incidents of Litigation/Disputes History- Review of Contractor claims (may be provided by Construction Contract Claims Report). A history of contractor claims pertaining to additional compensation or time extension, that are not negotiated and resolved through a Supplemental Agreement, or final estimate quantities disputes that proceed, after final acceptance, to circuit court or arbitration. Also, a history of disputes being escalated to Dispute Review Board (i.e., disputes may be initiated by Contractor or FDOT, generally contractor initiates) should be considered. There is no tracking mechanism available. The evaluators will have to rely on the experience of the construction personnel in the District.

3.10.1.12 Other- there may other criteria, unique to the proposed project, that warrants inclusion in the initial evaluation that is not listed above. The TRC should recognize this in the development of the Request For Proposal.

3.10.2 LONG LIST RANKING

The TRC may take many approaches to reach a long list. The long list should be a list with the preferred ranking when submitted to the Selection Committee. The list should

have a summary of strengths and/or weaknesses of each firm. Some processes that have been used by TRC's are:

- (1) Matrix ranking giving categories equal weighting.
- (2) Matrix ranking giving categories unequal weighting.
- (3) Individual ranking, group discussion, group ranking.
- (4) Group discussion, individual ranking, most top rankings win.
- (5) Group ranking, weighting applied by Selection Committee, high scores win.

A short description of how all five of the above processes work will follow in the methods of evaluation section after the following instructions.

The TRC should determine the methodology they will employ in the selection process and the criteria they will use in advance of receiving the LOI's. Normally there are four or five members on a TRC. Non-voting technical advisors may also be used for needed expertise.

Check all evaluation categories to make sure minimum qualifications are met for the category. For example, if any of the members of the Design-Build firm has FDOT past performance grades that are below the predetermined value, the firm is automatically disqualified from any further consideration for selection.

Each TRC member will evaluate the relative merits of each qualified firm using any logical method that can be justified. The end result of this evaluation process will be a list, using whole numbers and starting with 1, which ranks each firm starting with the strongest firm and ending with weakest firm.

The rankings of all the TRC members will be put in numerical order with the firm that has the lowest numerical value ranked first. The numerical list will then be numbered starting with the number 1, with whole numbers in order to establish the final ranking. If averaging is used, firms may have the same average numerical ranking value. Thus, these firms will receive the same final ranking, so for example, there may be two firms that are ranked third.

The TRC, as a group, will establish a written list of strengths and weaknesses for each firm in order to justify that firm's final ranking. Firms at the top of the ranking list must have far more strengths than weaknesses and firms at the bottom must have far more weaknesses than strengths.

3.11 SHORT-LIST DEVELOPMENT BY SELECTION COMMITTEE

The Contracting Unit will access information on design professionals through the Department's database. A short-list profile will be developed on each of the Firms identified on the long-list. This information, along with supporting data that the respective Selection Committee (see **Section 2: Definitions**) deems appropriate, will be packaged and presented to each Selection Committee member for their review prior to or at the scheduled selection meeting.

The Selection Committee will short-list no less than three Firms. The Selection Committee may, at its discretion, designate alternate Firms to be contacted should any of the short-listed Firms indicate that they are unable to continue the selection process. The Selection Committee is not limited to short-listing from the list of long-listed Firms. However, when the Selection Committee elects to short-list other qualified Firms who are not on the long-list, but did submit a Letter of Interest, the Contracting Unit as to the reasons for the selection must document the selection file. The Selection Committee must document the justification for their short-list selection and be available to provide to competing Firms the selection criteria and basis of the Department's decision.

At the conclusion of a short-list meeting, the Contracting Unit will ensure that each short-listed Firm is contacted, and verify that they desire to be considered for the project. The Contracting Unit will complete *Form No. 375-030-2A*, Professional Services Selection Package – Short-list Evaluation Package, which will become part of the permanent project file. The Contracting Unit will post the list of short-listed Firms.

3.12 PRE-BID MEETING FOR SHORT-LISTED FIRMS

A pre-bid meeting may be held, with FHWA being invited on oversight projects, in order to discuss the project in detail and to clarify any concerns.

The purpose of this meeting is to provide a forum for all concerned parties to discuss the proposed project, answer questions on the design and construction criteria, CPM schedule, and method of compensation, instructions for submitting proposals, and other relevant issues. Each DESIGN BUILD FIRM being considered for this project will provide a 30-minute oral presentation to describe its design and approach to the project. No questions should be answered relating to the project objectives after the information cutoff date. The Firms should be instructed to direct all questions after the meeting to one entity, either the Project Manager or the Contracting Unit.

During and after the meeting, it is the responsibility of the Contracting Unit to ensure that each short-listed Firm develops their technical proposal with the same information. If a Firm receives information from the Department relating to the project prior to the information cutoff date, the Department will ensure that all short-listed Firms 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.

At the conclusion of the meeting or when it is reasonable to assume that no further changes regarding design and construction criteria will be required, the Contracting Unit, along with the Project Manager, will update the criteria, as necessary. The updated criteria should be made available to each member of the TRC prior to the evaluation of the technical proposals. Also, should significant changes result from the meeting, the short-listed Firms should be provided the updated criteria or any changes occurring in the RFP. (FHWA must approve such change)

3.13 COMPENSATION TO SHORT-LISTED LEAD DESIGN FIRMS

For Adjusted Score Design/Build projects, where appropriate, the Department intends to contract directly with the lead Designer of the shortlisted Design/Build Firms for preparation of a responsive written technical, oral technical, and price proposal in response to the Design/Build RFP.

All districts should use the referenced Standard Professional Services Agreement Form No. 375-030-16 between FDOT and the lead designer of the Design/Build Firm. Where the Department intends to reimburse firms for submitting a proposal, the Department must enter into a Professional Services Agreement (Contract Type C) directly with the lead designer of each design-build firm immediately after the short-listing. Please note that the lead designer for all responsive shortlisted firms (typically three firms) will ultimately be compensated for their proposals. An agreement is required to document the terms and conditions of compensation. The intent is to compensate the amount that is noted in the RFP package. The amount is not intended to compensate the firms for the total cost of preparing the bid package.

Each district should create three (3) sequences under the phase 32 (for each of the shortlisted firms). Each sequence will be programmed for the agreement amount. The funds should be encumbered under each of the sequences. This is due to the fact that the Department has a contract with each of the lead designers. Therefore, all three have to be encumbered and programmed in WPA. The agreements will be executed with all three lead designers and all three will receive compensation if the proposals are responsive. The lead designer will submit an invoice and are paid from the encumbrance. This compensation will be shown in the Schedule of Values of the winning design-build firm as part of the project total contract amount.

GUIDELINES FOR ESTIMATING COMPENSATION AMOUNTS FOR ADJUSTED SCORE DESIGN BUILD PROJECTS

Contract Value	Complex Urban and Rehab.	New Construction Projects	Range of Compensation
< \$5M	0.0050 * Estimate	0.0040 * Estimate	\$15K - \$25K
\$5M - \$20M	0.0030 * Estimate	0.0025 * Estimate	\$15K - \$60K
\$20M - \$50M	0.0020 * Estimate	0.0018 * Estimate	\$36K - \$100K
\$50M - \$100M	0.0015 * Estimate	0.0012 * Estimate	\$60K - \$150K
> \$100M	0.0012 * Estimate	0.0010 * Estimate	\$100K +

Note: Estimate only, actual compensation could vary based on nature of work.

Examples:

1. A \$4 Million rehabilitation project would have a recommended compensation of \$4,000,000 (0.0050) = \$20,000.
2. A \$30 Million complex urban project would have a recommended compensation of \$30,000,000 (0.0020) = \$60,000.
3. A \$175 Million new bridge project would have a recommended compensation of \$175,000,000 (0.0010) = \$175,000.

This decision will be at the discretion of the contracting District or Central Office. The amount and conditions of the compensation must be included in the Department's advertisement.

Federal funds MAY be used to compensate the short-listed Firms.

3.14 PROPOSALS SUBMITTED BY SHORT-LISTED FIRMS

The Department shall request proposals from no fewer than three of the Design-Build Firms submitting letters of interest. If a Design-Build Firm withdraws from consideration after the Department requests proposals, the Department may continue if at least two proposals are received. Firms will be asked to develop and submit proposals based on the RFP. Proposals will be segmented

into two parts: Technical Proposals and Price Proposals. Technical and price proposals will be received by the date, time and appropriate office, as noted in the announcement. Technical and price proposals shall be submitted in separate packages (with the price proposal sealed) and appropriately labeled.

Price proposals shall include all D/B package forms (i.e., ***Bid Bond, DBE Utilization Summary Form***, etc.) The office receiving the proposals will send the technical proposals to the TRC and hold sealed price proposals until technical proposal scores are provided by TRC. If a Firm withdraws from consideration after the Department requests a proposal, the Department may continue, if at least two proposals are received.

(1) Technical Proposals

A technical proposal should include a detailed project schedule using CPM (or other techniques as appropriate), preliminary design plans, preliminary specifications, technical reports, calculations, permit requirements, total contract time and other data requested in response to the RFP. The package shall indicate clearly that it is the technical proposal and shall identify clearly the Firm's name, project description, or any other information required.

(2) Price Proposal

Price proposals shall include one lump sum cost for all design, construction, and construction engineering and inspection (if CEI is included) of the proposed project. The package shall indicate clearly that it is the price proposal and shall identify clearly the Firm's name, project description, and any other information required.

3.15 DESIGN BUILD MAXIMUM PRICE

Design-Build Maximum Price is scored in the same fashion as other design-build contracts. The Department announces the maximum price for the project, and all proposers develop design approaches with corresponding schedules that maximize the amount of scope that can be designed and built without exceeding the maximum price. The scope may be modified to meet this maximum bid price. The evaluation uses a form of weighted criteria method with point scoring to arrive at a final score for each proposal and the project is awarded to the proposal that has the lowest adjusted score. This process should be used on all projects \$25 million and greater in price.

3.16 DESIGN BUILD HYBRID

Design-Build Hybrid is scored in the same fashion as other design-build contracts. The Department announces the maximum price for the project, has prepared and assembled a set of project contract plan sheets for the project and the plan sheets are attached to the RFP and all proposers develop design approaches with corresponding schedules that maximize the amount of scope that can be designed and built without exceeding the maximum price. The scope may be modified or changed to meet this maximum bid price. The evaluation uses a form of weighted criteria method with point scoring to arrive at a final score for each proposal and the project is awarded to the proposal that has the lowest adjusted score. This process should be used on all projects \$100 million and greater in price.

3.17 DESIGN BUILD WITH OPTIONS

This process provides a method to build a project to a lesser scope versus not letting the project due to the bids coming in higher than what the Department can afford. The Department plans to construct the entire project as stipulated in the Contract Documents. However, the Department intends to establish priorities for the Contract award in the event the goals of the Department cannot be achieved with the funds determined available by the Department. If funding is a limitation on a project based on bids received, the Department can exercise options established for a project. The Department assigned award priority for each option would be as follows:

- Option 1: All items of work.
- Option 2: Option 1 less items of work identified in the Contract Documents under Option 2.
- Option 3: Option 2 less items of work identified in the Contract Documents under Option 3.

Should the Department exercise its option on the Contract, the options will be taken in the order as provided above. The Department intends to award the Contract to the responsible bidder with the lowest bid for the option for which the Department has determined available funding exists.

3.18 METHODS FOR EVALUATIONS

The following are detailed explanations on five methods that have been used in conducting evaluations for long listing.

3.18.1 Matrix Ranking Giving Categories Equal Weight

- (1) Develop a matrix using the aforementioned criteria.
- (2) Rank each firm by criteria on a 1 to 10 scale with 10 being best. This can be done by the group or by individual TRC members.
- (3) If done by individuals, average the individual grades by criteria and per Design-Build firm.
- (4) Sum up the averaged criteria by Design-Build firm, highest scores win.

3.18.2 Matrix Ranking Giving Categories Un-Equal Weight

- (1) Develop a matrix using the aforementioned criteria and determine the weight to give each criteria.
- (2) Rank each firm by criteria on a 1 to 10 scale with 10 being best. This can be done by the group or by individual team members.
- (3) If done by individuals, average the individual grades by criteria and per Design-Build firm.
- (4) Apply the pre-determined weight to all criteria.
- (5) Sum up the averaged and weighted criteria by Design-Build firm, highest scores win.

3.18.3 Individual Ranking, Group Discussion, Group Ranking

- (1) Each TRC member ranks the Design-Build firms, 1 thru however many LOI's there are to be evaluated, prior to getting together as a group using the aforementioned criteria.
- (2) The group discusses the strengths and weaknesses of each Design-Build firm.
- (3) The group then ranks the Design-Build firms.

3.18.4 Group Discussion, Individual Ranking, Most Top Rankings Win

- (1) Group discussion of strengths and weaknesses of all Design-Build firms using the aforementioned criteria.
- (2) Individuals on TRC rank all Design-Build firms from 1 to however many LOI's.
- (3) Average the individual rankings.
- (4) The three firms with the lowest average are the top three firms for the long list.

3.18.5 Group Ranking, Weighted Applied by Selection Committee, High Scores Win

- (1) The TRC develops a matrix, as in the second method, except the Selection Committee will provide the weight to apply after the TRC has evaluated the Design-Build firms on all evaluation criteria being examined. The Selection Committee determines the weight to be applied to each criteria, but does not reveal it to the TRC.
- (2) The weights should be on a scale of 1 to 10, with 10 being best.
- (3) The Selection Committee's weights are applied and the higher ranked team is selected.

3.19 EVALUATION OF PROPOSALS

The TRC (**Section 2: Definitions**) will evaluate each Firm's technical proposal based on the rating criteria provided in the Request for Proposal.

Criteria, to be considered, may include:

1. Environmental Protection/Commitments (_____ points)

Credit will be given for minimizing impacts to the environment during all phases of design/construction and insure that all environmental commitments are honored.

2. Maintainability (_____ points)

Credit will be given for a design that minimizes periodic and routine maintenance. The following elements should be considered: access to provide adequate inspections and maintenance, maintenance of navigational system lighting, access to structure's lighting system, and quality of construction materials. Credit will be assigned for exceeding minimum material requirements to enhance durability of structural components.

3. Design-Build Firm Guaranteed/Value Added (_____ points)

Credit will be given for the extent of the coverage.

4. Schedule (_____ points)

Credit will be given for a comprehensive and logical schedule that minimizes contract duration. Proper attention should be provided to the project's critical path elements.

5. Coordination (_____ points)

Credit will be given for a coordination plan/effort that includes, as a minimum, coordination with the following groups:

- Department management team
- Community and boat users
- Permitting/Environmental agencies
- Utility owners
- Local governments

6. Quality Management Plan (_____ points)

Credit will be given for a timely, complete and comprehensive quality management plan, which incorporates effective peer reviews and includes all phases of the project.

7. Maintenance of Traffic (_____ points)

Credit will be given for a MOT scheme that minimizes disruption of roadway traffic. This shall include, but not be limited to, minimization of lane closures, lane widths, visual obstructions, and drastic reductions in speed limits.

8. Aesthetics (_____ points)

Aesthetics will be considered in the geometry, economy, and appropriateness of structure type, structure finishes, shapes, proportion and form. Architectural treatments such as tiles, colors, emblems, etc., will not be considered as primary aesthetic treatments.

9. Design and Geotechnical Services Investigation (_____ points)

Credit will be given for the quality of the following elements:

- Quality and quantity of design resources
- Design coordination and plans preparation schedule
- Construction coordination plan minimizing design changes
- Geotechnical investigation plan
- Test load program
- Structure design

10. Construction Engineering Inspection (CEI) (_____ points)

Evaluation of construction engineering and inspection capabilities will be based on the reputation, qualification, and experience of the CEI team assigned to the project. Credit will be given for a comprehensive CEI program managed by qualified, competent, and experienced field/construction personnel. Experience in providing CEI services on projects of a comparable nature, size, and complexity and on projects for the Department will be considered in evaluating proposals.

11. Construction Methods (_____ points)

Credit will be given for construction methods that minimize impacts to the traveling public and the environment, reduces costs, improves worker safety, and minimizes contract duration. Credit will be given for exceeding minimum material requirements to enhance durability of structural components.

12. Design-Build Experience (_____ points)

Credit will be given for the team's experience on similar work and the individual team member's successful design build experience. Consideration will be given to:

- Design-Build project team leadership and areas of responsibility
- Design-Build team internal coordination plan
- Design-Build team commitment to partnering and history of a quality project completed on time and within budget

13. Landscaping (_____ points)

Credit will be given for the quality of the elements presented.

The Department may chose to meet with the Firm, formally, to further clarify their selection. This will be followed by a 60-minute Question and Answer period by the DEPARTMENT. The purpose of the Q & A session is for the Technical Review Committee to seek clarification and ask questions, as it relates to the Technical Proposal, of the Proposer. The DEPARTMENT will terminate the presentations promptly at the end of the allotted time. The DEPARTMENT may tape record or videotape all or part of the presentations. The oral presentations will not constitute "discussions" or negotiations. Proposers will not be permitted to ask questions of the DEPARTMENT except to ask the meaning of a clarification question posed by the DEPARTMENT. No additional time will be allowed to research answers. Oral presentations will occur a minimum of 2 weeks after the date the Written Technical Proposal are due, and be part of the Overall Technical Proposal Scoring. The Design Build Firms should be given a minimum of one (1) week after the Oral Presentations to submit their Price Proposal.

The rating or technical evaluation process is extremely important and should be accomplished using one of two methods (the FHWA must be provided one copy of

technical proposal, for oversight projects only, at same time to insure consistency with the design criteria specified in the RFP)

Method 1: Each TRC member is responsible for scoring the Firm's proposals in the areas of their expertise only. In other words, a roadway design engineer would not develop scores for evaluation criteria related to bridge design, but rather only score items, such as approach roadways, MOT, and environmental impacts appropriate to their level of expertise. A minimum of three (3) scores are required for each evaluation criteria prior to averaging the scores for the development of a final technical proposal score.

Method 2: Each TRC member is responsible for obtaining a score for each evaluation criteria by selecting other persons to assist them in those areas where they do not possess an appropriate level of expertise. As an example, a bridge designer may call upon a roadway designer for assistance in scoring each Firm's roadway approach details and MOT, and a permitting or environmental person for input on environmental mitigation details.

When scoring the technical proposal the TRC members need to consider the following:

1. Design-build firms should be evaluated based on the criteria set forth in the RFP and in comparison with the other shortlisted firms.
2. Scores should be defensible.
3. Evaluations need to be performed on an individual basis – not as a consensus. When the TRC meet (public meeting), they may only discuss the actual technical proposal. Scores shall not be discussed.
4. Each member of the TRC must base their evaluation on the same criteria (any pre-determined category and category weight) as established in the RFP.
5. If any member of the TRC gives a shortlisted design-build firm a very high/low score, the TRC member must ensure that the score (as compared to the other design-build firm's scores) is substantiated in the write-up.
6. Calculations must be verified.

When the TRC is preparing comments on the Technical Proposal they need to consider the following:

1. Each TRC member should provide substantive comments to support their scores.
2. Comments should be clear and concise. Comments should only be related to technical proposals given by the design-build firm. Comments should be in complete sentences and identify the strong/weak points of each design-build firm. Comments should also be in-line with the scores given to each design-build firm.
3. State the facts – good and bad aspects of the technical proposals.
4. Comments should be typed and a spell check review performed. Remember, this package can potentially be presented in a court of law.
5. All comments should be signed by the TRC member.

During the technical review process, the TRC may meet with the Technical Advisors for a fact finding meeting. This is intended to be a structured meeting to allow the Technical Advisors to present the facts of how well each proposal met the criteria in their area of expertise. The purpose of the meeting is to gather and report factual information about each of the proposals, not draw conclusions as a group. Rating points for each proposal should not be discussed at this meeting. This meeting does not need to be a public meeting.

The Contracting Unit shall notify all short-listed Firms of the date, time, and location of the public announcement of technical scores and opening of the sealed bids. This meeting will be recorded. At this meeting, the Department will announce the score for each member of the Technical Review Committee for each Proposer and each Proposer's average Technical Score. Following announcement of the technical scores, the sealed bid proposals will be opened and the adjusted scores calculated. The Department's Selection Committee will review the evaluation of the Technical Review Committee and the Price Proposal of each Proposer as to the apparent lowest adjusted score and make a final determination of the lowest adjusted score. The Selection Committee has the right to correct any errors in the evaluation and selection process that may have been made. The Department is not obligated to award the contract and the Selection Committee may decide to reject all proposals. If the Selection Committee decides not to reject all proposals, the contract will be awarded to the Proposer determined by the Selection Committee to have the lowest adjusted score

The following example shows how the selection formula would work:

Firm	TECHNICAL SCORE	PRICE	ADJUSTED SCORE
A	90	\$6.7 Million	74,444
B	80	\$6.5 Million	81,250
C	70	\$6.3 Million	90,000

3.20 VALUE OF TIME FACTOR IN THE EVALUATION OF TECHNICAL PROPOSAL FOR ASDB

The adjusted score bid may include a bid adjustment for the value of time. This adjustment will be based on the Firm's proposed number of days to complete the project multiplied by a value per day established by the Department (number of days times cost/day = price proposal adjustment [increase]).

This adjustment will be used for selection purposes only and shall not affect the Department's liquidated damages schedule or constitute an incentive/disincentive to the contract. The Department shall establish the cost/day value and include it in the RFP package. The Firm will determine the contract time necessary to perform all Design-

Build functions. Using zero base line, the Firm shall multiply its contract time by the cost/day contained in the RFP package. This value added to the price proposal will constitute the time-adjusted price. The following example is how this selection process would work using \$2,000/day:

Firm	Tech Score	Contract Time (Days)	Time Value (Days x \$/day)	Price Proposal	Time Adjusted Price (Time Value + Price Proposal)	Adjusted Score
A	90	300	\$600K	\$6.7 M	\$7.3 M	81,111
B	80	250	\$500K	\$6.5 M	\$7.0 M	87,500
C	70	400	\$800K	\$6.3 M	\$7.1 M	101,428

Under the adjusted score Design-Build bid, the time adjusted price would be divided by the technical proposal score to determine the lowest adjusted score. In the above example, Firm A would be awarded the contract under this scenario.

If the value of time factor is used, it is highly recommended that an incentive/disincentive clause also be included in the contract with a dollar amount per day equal or greater than the value of time factor amount. The incentive/disincentive will create a more balanced approach by helping to eliminate the manipulation of proposed contract time.

3.21 SELECTION COMMITTEE AWARDS ASDB BID

The Selection Committee should meet at least five working days after the public opening of the score and bids. Unless all proposals are rejected, the Selection Committee will approve an award to the Firm with the lowest adjusted score. The Department will enter into a contract for the price proposed. In the advertisement and pertinent bid documents, the Department shall reserve the right to reject all proposals and waive minor proposal irregularities.

The Department shall post the results and provide notification to each Firm submitting a proposal of the award of the project or rejection of all proposals within thirty (30) days of final selection or determination to reject all proposals.

The Contracting Unit shall provide justification for the selection, or upon request by the non-selected Firms, arrange a formal meeting to explain and review technical scores to clarify the selection of the Firm awarded the contract.

At the time of the award, the Department may negotiate changes for the purpose of clarifying the design criteria and work to be done, provided that the negotiated changes

do not affect the selection order. (Negotiated changes should be accomplished prior to bids being awarded)

3.22 PREPARATION AGREEMENT

See *Construction Bid Package Forms (Infonet)*

See *FCO Forms Package (Central FCO Office)*

CHAPTER FOUR

LOW BID DESIGN-BUILD (LBDB) BID PROCESS

As a general rule, the low bid approach should be used on projects where the design and construction criteria are concise, clearly defined, and innovation or alternatives are not being sought. This might include bridge projects with a specified foundation type, span lengths, and beam type. Resurfacing projects are restricted to the use of the Low Bid Design-Build (LBDB) bid process and approval from the State Roadway Design Engineer is needed. Projects, which are awarded based on the LBDB approach, will not utilize the Letters of Interest and short-listing process. Projects with right of way services included in the design build contract may not be bid using the low bid process unless an exception is granted by the Chief Engineer.

4.1 PROJECT IDENTIFICATION (Same as for *ASDB: Section 3.1*)

4.2 DEVELOPMENT OF PRE-QUALIFICATION REQUIREMENTS (Same as for *ASDB: Section 3.2*) Note: For low bid projects the Design-Build Firm shall be qualified at the letting date.

4.3 DEVELOPMENT OF DESIGN AND CONSTRUCTION CRITERIA

In addition to the requirements in *Section 3.3* the following applies to Low Bid Resurfacing Projects:

- 1) The Criteria Package shall include a topographic survey and pavement cross-sections, or cross-slope and profile data at a minimum.
- 2) The Criteria Package shall include pavement cores and traffic data in accordance with standard FDOT procedures, at a minimum. Preferably a Pavement Design Package or the minimum pavement design criteria.
- 3) The scope shall specifically detail any improvements other than resurfacing of pavements. If existing structures violate clear zone, the scope shall note that the violation needs to be remedied, or that an exception/variance will be granted.
- 4) If signal work is included, the scope shall identify if strain poles or mast arms are required.
- 5) For all Low Bid Design Build Resurfacing Projects, the Criteria Package should include survey and geotechnical information.

4.4 CONTRACT NUMBER ASSIGNMENT (Same as for *ASDB: Section 3.4*)

4.5 ENCUMBRANCE (Same as for *ASDB: Section 3.5*)

4.6 ADVERTISEMENT (Same as for *ASDB: Section 3.6*)

A minimum of sixty (60) days is allowed from the date of advertisement to the receipt of a Design-Build proposal. The actual length of time that the advertisement is publicized is at the discretion of the District. The Central Office Procurement website shall be the official Design-Build posting website where advertisements, shortlisting, pre-bid meeting

notices, public announcements of technical scores, opening of sealed bids and all other public meetings, as well as posting of final selection results should appear. In addition, advertisements should be emailed out to all companies on the BSN Subscription list. Additionally, the Department may utilize other forms of communication, such as newspapers or magazines, mail-outs, or television or radio to announce the project.

If a pre-bid meeting is to be held, the announcement must also provide the date, time, and location of the pre-bid meeting.

For Low Bid D/B Projects, approval of the RFP (and the federal authorization request) must occur prior to project advertisement since the RFP is provided with the contract advertisement.

4.7 PRE-BID MEETING AND Q&A MEETING FOR LOW BID DESIGN-BUILD

If the LBDB project is complex, a pre-bid meeting may be held in order to discuss the Design-Build project and clarify any concerns (See **ASDB: See 3.12**). This meeting may be waived if the complexity of the project does not warrant such a meeting.

For all Low Bid Design Build Resurfacing projects, a mandatory pre-bid and Q&A Meeting shall be held.

4.8 LBDB PRE-QUALIFIED FIRMS MAY REQUEST RFP

Any Firm interested in being considered for the project must first meet pre-qualification requirements (See **Section 3.2**). LBDB pre-qualified Firms should request a copy of the Request for Proposal (RFP) from the name and address identified in the advertisement. Firms must be pre-qualified before submitting LBDB proposals.

4.9 PREPARATION OF REQUEST FOR PROPOSALS (RFP) Same as for **ASDB: Section 3.8 and 3.9**

4.10 COMPENSATION TO SHORT LISTED LEAD DESIGN FIRMS

For Low Bid Resurfacing projects projects, where appropriate, the Department intends to contract directly with the lead Designer of the shortlisted Design/Build Firms for preparation of a responsive written technical, oral technical, and price proposal in response to the Design/Build RFP.

All districts should use the referenced Standard Professional Services Agreement Form No. 375-030-16 between FDOT and the lead designer of the Design/Build Firm. Where the Department intends to reimburse firms for submitting a proposal, the Department must enter into a Professional Services Agreement (Contract Type C) directly with the lead designer of each design-build firm immediately after the short-listing. Please note that the lead designer for all responsive shortlisted firms (typically three firms) will ultimately be compensated for their proposals. An agreement is required to document

the terms and conditions of compensation. The intent is to compensate the amount that is noted in the RFP package. The amount is not intended to compensate the firms for the total cost of preparing the bid package.

Each district should create three (3) sequences under the phase 32 (for each of the shortlisted firms). Each sequence will be programmed for the agreement amount. The funds should be encumbered under each of the sequences. This is due to the fact that the Department has a contract with each of the lead designers. Therefore, all three have to be encumbered and programmed in WPA. The Work Program instructions will be updated to reflect this change. The agreements will be executed with all three lead designers and all three will receive compensation if the proposals are responsive. The lead designer will submit an invoice and are paid from the encumbrance. This compensation will be shown in the Schedule of Values of the winning design-build firm as part of the project total contract amount.

The formula that should be used to estimate the amount of the compensation is as follows:

$$0.0010 * \text{Estimate}$$

This is only a guideline to determine the estimated amount of the compensation the decision will be at the discretion of the contracting District or Central Office. The amount and conditions of the compensation must be included in the Department's advertisement.

4.11 PROPOSALS SUBMITTED BY LOW BID DESIGN-BUILD FIRMS

(Same as for *ASDB: Section 3.14*)

4.12 BID OPENING FOR LOW BID DESIGN-BUILD

Under the LBDB process, the appropriate District or Central Office will publicly open the price proposals on the day, time, and location noted in the advertisement, and send the Technical Review Committee the technical proposals for only the low-bid team, unless compensation to the Short Listed Lead Design Firms are included in the advertisement. If compensation is included then the TRC will be sent all technical proposals.

4.13 RESPONSIVENESS OF PROPOSALS

The TRC shall review the design concepts and preliminary designs of the lowest bidder proposed in order to assess the responsiveness of the lowest bidder's technical proposal compared to the Design and Construction Criteria Package.

If compensation is included in the advertisement then the TRC shall review the design concepts and preliminary designs of all the bidders proposed in order to assess the

responsiveness of the bidder's technical proposal compared to the Design and Construction Criteria Package.

In the event the lowest bidder's technical proposal is found to be non-responsive, the TRC will then review the next lowest bidder's technical proposal to determine its responsiveness (FHWA must concur). A Bid Proposal is considered non-responsive if it does not contain all the required information and level of detail, or is non-compliant with the design and construction criteria defined in the RFP. It may be appropriate for the Department to contact the non-responsive Firm to discuss/clarify its concerns prior to moving on to the next lowest bidder. However, once determined that the low bidder is non-responsive, the process will continue until the lowest bidder having a responsive proposal is found.

The TRC will then notify the Selection Committee of the lowest bidder having a responsive technical proposal. Unless all proposals are rejected, the Selection Committee will approve the award bid to the Firm with the lowest responsive bid. The Department will then enter into a contract for the price proposed. The Department reserves the right to reject all proposals.

4.14 VALUE OF TIME FACTOR FOR LBDB

Low Bid Design-Build (LBDB) may include a bid adjustment for the value of time. This adjustment will be based on the Firm's proposed number of days to complete the project multiplied by a value per day established by the Department (number of days times cost/day = price proposal adjustment [increase]).

This adjustment will be used for selection purposes only and shall not affect the Department's liquidated damages schedule or constitute an incentive/disincentive to the contract. The Department shall establish the cost/day value and include it in the RFP package. The Firm will determine the contract time necessary to perform all Design-Build functions. Using zero base line, the Firm shall multiply its contract time by the cost/day contained in the RFP package. This value added to the price proposal will constitute the time-adjusted price. Below is an example of how this selection process would work using \$2,000/day:

Firm	Contract Time (Days)	Time Value (Days) x \$/day)	Price Proposal	Time Adjusted Price (Time Value + Price Proposal)
A	300	\$600K	\$6.7 M	\$7.3 M
B	250	\$500K	\$6.5 M	\$7.0 M
C	400	\$800K	\$6.3 M	\$7.1 M

In the example, under LBDB, Firm B would be awarded the contract based on the lowest time-adjusted price, if the proposal was deemed responsive by the TRC.

If the value of time factor is used, it is highly recommended that an incentive/disincentive clause also be included in the contract with a dollar amount per day equal to the value of the time factor amount. The incentive/disincentive will create a more balanced approach by helping to eliminate the manipulation of proposed contract time.

4.15 SELECTION COMMITTEE AWARDS FIRM WITH THE LOWEST RESPONSIVE BID

Unless all proposals are rejected, the Selection Committee will approve an award to the Firm with the lowest bid that has a responsive technical proposal. The Department will enter into a contract for the price proposed. In the advertisement and pertinent bid documents, the Department shall reserve the right to reject all proposals and waive minor proposal irregularities.

The Department shall post the results. Due to the number of potential bidders in the LBDB process, individual notification to each Firm will not occur, as in the ASDB. At the time of the award, the Department may negotiate changes for the purpose of clarifying the design criteria and work to be done, provided that the negotiated changes do not affect the selection order. Negotiated changes should be accomplished prior to contract being awarded.

CHAPTER FIVE**DEVELOPMENT OF THE DESIGN AND CONSTRUCTION CRITERIA PACKAGE
FOR THE RFP****5.1 DESIGN SERVICES REQUIREMENTS**

The design requirements (criteria) and Specifications are essential to ensure that the project is constructed to meet the needs as determined by the Department. The following guidance is provided as to various design requirements that should be in the design and construction criteria for each project type:

- (1) Bridge project requirements may include but are not limited to alignment, prescribed typical section elements, design criteria, design guidelines, aesthetic requirements, project schedule, standard detail drawings, subsurface soil data, minimum vertical and horizontal clearance requirements, load rating, hydraulics, scour predictions, ship impact, roadway approach needs, and maintenance.

The Traffic Control Plan specifying Maintenance of Traffic (MOT) requirements, such as the number of lanes to be maintained and the lane closure times, should be noted as well.

- (2) Building project requirements may include but are not limited to building size, net and gross interior space provisions, building systems, material quality standards, allowed budget amount, project schedule, site development requirements, aesthetic requirements, landscaping, domestic water requirements, sanitary sewage requirements, storm water disposal, parking provisions, ADA requirements, regulatory, environmental and permitting requirements, and maintenance.
- (3) Rail corridor project requirements may include but are not limited to the track master plans which specify the track configuration (number of tracks and horizontal and vertical alignments) required to support both current and anticipated future rail operations for each operating rail corridor, rail design criteria, signal and communications criteria, minimum horizontal and vertical clearance requirements (tracks, sidetracks, bridges and building), standard detail drawings, air rights, wire line agreements, right of way, available geotechnical data, structural requirements to minimize harmonic motion and allow high speed operation, special car design requirements, safety requirements, and maintenance. Rail projects that have Federal Transit Authority oversight must submit a management plan.
- (4) Roadway project requirements may include but are not limited to alignment, project limits, prescribed typical section elements, design controls and criteria, controlling roadway and traffic design standards,

traffic signal, project schedule, drainage, pavement design, signing and pavement marking, traffic control plan design, traffic control plan, bicycle and pedestrian designs, including ADA requirements, lighting, landscaping, controlling access management standards, and maintenance.

- (5) Traffic systems project requirements may include but are not limited to Intelligent Transportation Systems elements involving location of field infrastructure, location of central control center, communication plant, software requirements for traffic management software and operating software, traffic control plan, and maintenance. The Design and Construction Criteria Package shall address design, procurement, installation, integration testing and warranty.

5.2 CONSTRUCTION ENGINEERING AND INSPECTION (CEI) SERVICES/REQUIREMENTS

The criteria must clearly define the CEI services and requirements if these services are to be provided by the Firm. Services may include construction inspection, off-site prefabrication, materials sampling and testing, as-built drawings, surveying, and other services as necessary for the particular project.

Requirements may include but are not limited to the type and frequency of reports, submittal of shop drawings, the level of detail and type of documentation for materials used in the construction of the project, and other such requirements necessary for the particular project. Requirements will also include the collection and furnishing of information needed for final certification. This may require the use of the Department's Laboratory Information Management System and/or other similar databases. This information is necessary for final material certification of the project. Use of warranty can allow for reduced CEI sampling and testing.

In the event that the CEI works for the Firm, it is recommended that the CEI be required to provide a monthly report to the Department which outlines progress made, problems that occurred, corrective actions proposed/implemented, and the status of corrective actions. The purpose of this report is to provide the Department with a summary of the CEI's efforts and to enhance accountability. **CEI cannot be part of the Design-Build contract if the project is federally funded unless specific authorization has been received from FHWA and the State Construction Office.**

5.3 CONSTRUCTION SERVICES/REQUIREMENTS

The criteria shall reference any applicable Department specifications, including standard specifications, supplemental specifications, or special provisions, etc. as deemed appropriate by the PM. In addition, it may be necessary to reference local or state building codes, national standards, or other specification requirements pertinent to the specific project.

Also, the PM should consider whether there are any particular construction processes or techniques that need to be specified in order to satisfactorily construct the project. (For example: top-down bridge construction to lessen the environmental impacts.) As a general rule, it is better to describe unique social, environmental, and community values desired and let the Firm select the construction method/technique.

5.4 PERMITS

The Department must determine who will be responsible for permits and how the coordination process will be handled. (FHWA holds FDOT responsible for all permits on Federal Aid Projects) The RFP will clearly state when the Firm is to be responsible for identifying and obtaining all required permits. All permits requiring additional permanent right of way easements must comply with Right of Way Procedures Manual (Topic No.: 575-000-000).

Bridge projects often require an easement from the Trustees of the Internal Improvement Trust Fund (TIITF) for use of sovereign submerged lands. This easement must be obtained in conjunction with the Environmental Resource Permit issued by the State. When the Firm is responsible for obtaining permits for the project, the Firm is required to obtain the TIITF easement where use of sovereign submerged lands is necessary before physical construction. Although, the facilitation of this process may be the responsibility of the Firm, FDOT, as holder of the submerged lands easement, must sign the Environmental Resource Permit application. The RFP shall identify what permits/easements are required and whom the Department contact will be that must approve commitments made by the Firm on behalf of the Department as a result of obtaining permits.

Certain projects may require easements from the Trustees of the Internal Improvement Fund (TIITF) for uplands. The contract must specify that the easement must be obtained before any physical construction may commence. Because of the complexity of the process, the Department must be responsible for obtaining the upland easement; however the design-build Firm may be responsible for the coordinating efforts between the various parties. The design-build Firm cannot be responsible for making decisions involving conditions and requirements placed on the granting of the easement that the Department may or may not be able to accept.

The need for an easement from the Trustees of the Internal Improvement Trust Fund is considered an administrative transfer between agencies of the State of Florida. A permit requirement, which generates the need to obtain an easement other than an administrative transfer between agencies of the State of Florida, would require the services of a licensed real estate broker under the provisions of Chapter 475, F.S.

All known permit requirements, especially those affecting the Firm's construction options and costs, should be clearly defined and supplied to the Firms prior to preparing technical proposals. Initial permit coordination meetings should begin as the design package is developed. The Department needs to contact agencies up front to find out what will not be permitted for the project. This does not alleviate the Firm's responsibility to acquire the necessary permits or to modify existing project permits as necessary. Some examples of permitting issues/concerns are:

- Dredging restrictions for construction access,
- The extent of required removal below the mud line of the existing bridge,
- Horizontal and vertical requirements for the main span,
- Blasting restrictions or requirements for bridge removal,
- Special turbidity control requirements,
- Mitigation ratios and special requirements,
- Other site specific permitting restrictions, and
- Local ordinances, including noise and hours of operation,
- Building permits.

5.5 DESIGN PLANS AND ENGINEERING CALCULATIONS REVIEW

The design criteria shall clearly define any documentation (included but not limited to design plans, shop drawings or engineering calculations) that is to be received by the Department. Under Design-Build, these submittals are not for the Department's approval but rather for verification of compliance with the Design and Construction Criteria Package. The Design and Construction Criteria Package shall also clearly state any requirements for packaging submittals and backup information that the Department may desire in order to avoid fragmented submittals. The Design and Construction Criteria Package should also define the shop drawing review (routing) process.

Design Build Projects – Plan Content Requirements

Roadway Plans

Item	Required when Applicable to Project Type	Required when Specified by District	Not Required
Key Sheet	X		
Summary of Pay Items			X
Drainage Map		X	
Interchange Drainage Map		X	
Typical Section	X		
Summary of Quantities	X ¹		X ¹
Box Culvert Data	X		
Summary of Drainage Structures			X
Project Layout	X		
Roadway Plan-Profile	X		
Special Profile	X		
Back-of-Sidewalk Profile		X	
Interchange Layout	X		
Ramp Terminal Details	X		
Intersection Layout/Detail	X		
Drainage Structures		X	
Lateral Ditch Plan-Profile	X		
Lateral Ditch Cross Section	X		
Retention/Detention Ponds	X		
Cross Section Pattern Sheet	X		
Roadway Soil Survey	X		
Cross Sections	X		
Storm Water Pollution Prevention Plan	X		
Traffic Control Plans	X		
Utility Adjustment	X		
Selective Clearing and Grubbing	X		
Miscellaneous Structures Plans	X		
Signing and Pavement Marking Plans	X ²		
Signalization Plans	X ²		
Lighting Plans	X ²		
Landscape Plans	X		
Utility Joint Participation Agreement Plans	X		
Mitigation Plans	X		
Computation Book			X

1. Summary Tables are not required when plan details sufficiently describe the work. Summary tables should be used for items of work not typically depicted by plan detail (e.g. mail boxes, side drain).
2. Traffic Plans Tabulation of Quantity Sheets is not required. On Traffic Plans, pay item numbers may be used to describe the items of work on plan sheets even though pay items are not used for bidding purposes.

"If sufficient data is available, the Department can provide the complete pavement design package as part of the Design Criteria. If the Department does not provide the pavement design, project specific pavement design criteria will be provided as part of the Design Criteria Package to assure a reasonable pavement design is provided by all competing Design/Build teams.

The project specific pavement design criteria may include the minimum design period, minimum ESALS, minimum design reliability, roadbed resilient modulus and minimum structural asphalt thickness and whether or not modified asphalt binder should be used in the final structural layer. For Low Bid resurfacing designs, a topographic survey and pavement cross-sections, or cross-slope and profile data, a minimum milling depth and whether an ARMI layer is required should be included in the criteria. The Pavement Coring and Evaluation report will be provided with the criteria. In addition to this project specific criteria, all standard requirements of the Department's pavement design manuals are to be followed."

Design Build Projects – Plan Content Requirements**Bridge Plans**

Item	Required when Applicable to Project Type	Required when Specified by District	Not Required
Key Sheet when no Roadway Plans	X		
General Notes, Index,	X		
Standard Drawings (piling, traffic barrier, etc.)	X		
Plan and Elevation	X		
BHRS	X		
Report of Core Borings	X		
Foundation Layout	X		
End Bent Details	X		
Intermediate Bents or Piers	X		
Finish Grade Elevations	X		
Superstructure Sheets	X		
Framing Plan	X		
Miscellaneous Details	X		
Beam Sheets	X		
Reinforcing Bar List	X		
Detour Bridge Plan and Elevation	X		
Detour Bridge Details	X		
Retaining Wall Sheets			X
Existing Bridge Sheets			X
Computation Book			

5.6 Utilities: The Design-Build Firm shall be responsible for identifying the existence, features and locations of any and all utilities within the limits of construction; for coordinating any required utility relocations or adjustments necessary for satisfactory completion of the Contract work; and for any and all work necessary to otherwise accommodate any and all utilities within limits of construction during construction and upon satisfactory completion of the work.

The Department will make available to the Design-Build Firm for inspection all utility permits and utility relocation information upon written request; however, the Department makes no representation as to the completeness or accuracy of such information and the Design-Build Firm relies on the completeness or accuracy of such information at its own risk.

To the extent that there is found, within the limits of construction, one or more utilities that after reasonable pre-construction coordination and investigation by the Design-

Build Firm is found to be either materially mislocated vertically or horizontally, materially different in features, or existing when previously undisclosed, the Design-Build Firm may pursue recovery of actual damages against the utility involved, up to and including the compensation formulas provided for in 4-3.2 and 5-12 of the Specifications, and the Department will grant the Design-Build Firm an assignment of rights the Department may have by permit or as a property right as to the utility, expressly limited however to only those rights necessary for the Design-Build Firm to pursue recovery of actual damages directly against the utility, and as limited above.

The utility company will be responsible for all relocation costs except when prior compensable interests exist.

5.7 EASEMENTS/RIGHT OF WAY

The Design and Construction Criteria Package should note that the Design-Build Firm is responsible for any uncompensated license agreements required for construction equipment, materials and operations.

Existing right of way must be verified and a determination made that the project can be built within the existing right of way. This would include an on site inspection of the right of way to verify there are no encroachments. The right of way must be certified prior to advertising the project.

5.8 EXISTING PROJECT FEATURES OR SYSTEMS

The Design and Construction Criteria Package shall include a section, which specifies the responsibility for demolition and disposal or retainage of existing features or systems that are no longer necessary to the project.

5.9 QUALITY CONTROL (QC) REQUIREMENTS

The Design and Construction Criteria Package shall address any QC requirements that the Firm must follow in addition to those already in the referenced specifications, policies and procedures that will assure quality products (plans, materials, construction, etc.). The criteria should also note any standard QC practices that do not apply (such as the designer submitting phase plans to the Department for review).

5.10 INDEPENDENT ASSURANCE

Whether the Department hires the CEI or the CEI is a part of the Firm's responsibilities, the Department will continue with its independent assurance program. In addition, the PM (or his/her designee) and FHWA has the right to review records and conduct tests at any time in order to ensure quality products and services are being provided.

5.11 SURVEY REQUIREMENTS

The Design and Construction Criteria Package shall specify any survey information required by the Department and notify the Firms of existing survey information that is available.

It may be necessary for the Department to perform some survey work in the preparation of the Design and Construction Criteria Package. In any event, the PM must determine who will provide the survey control for layout, the layout itself, and if it is to be tied to the State Plane Coordinate System. All survey work will adhere to the requirements of the Department's *Location Survey Manual, Topic No.: 550-030-100*.

5.12 FINAL DOCUMENTS

The Design and Construction Criteria Package shall clearly define the final documents required by the Department from the Firm upon completion of the project. These should include: as-built final plans (100% automated, including sheet files and geometric data files - GEOPAK files), computer files containing the as-built design plans, engineering reports (such as Load Rating, Foundation Construction Information, etc.), shop drawings, test results, documentation, daily reports, quantities list, warranties for equipment installed on the project, and certificate of occupancy, etc.

5.13 STAFFING REQUIREMENTS

The Design and Construction Criteria Package shall outline the minimum training and experience requirements for any professional personnel deemed appropriate by the PM and/or required by regulatory agencies.

5.14 GEOTECHNICAL REQUIREMENTS

The Design and Construction Criteria Package shall specify any geotechnical information or reports required by the Department. The Department may perform some preliminary geotechnical work in the preparation of the design and construction criteria. The Department may conduct the geotechnical investigations in order to save the short-listed Firms the time and expense. The Department shall provide copies of any existing geotechnical information that is available to all short-listed Firms.

5.15 ITEMS TO BE FURNISHED BY THE DEPARTMENT

The Design and Construction Criteria Package shall include a section that details any items or services to be furnished by the Department. This should include any information (data, reports, etc.), support functions (computer services, etc.), materials, equipment, testing devices, or other items that would affect the bid or technical approach. Such information might include survey data, geotechnical information, bridge hydraulic reports, existing plans (if available), right of way maps, etc.

As a general rule, the Department should provide a typical section package as a part of the design criteria. The PM must also determine if the Department is going to provide the pavement borings and pavement design or if the Firm will accomplish this.

The following are examples of other information that might be necessary for the Department to provide in order to clarify design and construction criteria:

- Preliminary geotechnical survey including bridge borings, wall borings and roadway borings (within the limits of the possible alignments).
- Bathometric survey for all water crossings, for construction access information.
- Site specific permit surveys potentially affecting or restricting the Firm's allowable construction methods and cost. Examples:
 - Sea grass surveys detailing limits of sea grasses within right of way (Also permit implications affecting construction access in these areas). The same applies for limits of oyster beds, etc.
 - Survey showing limits of contaminated sites within the right of way, which potentially affect excavations such as building bridge piers and drainage structures. (Verbiage requiring special conditions such as coordination with a specialty contractor should be included in the contract).
 - Limits of jurisdictional wetlands within the right of way and on adjacent properties. (Also permit implications affecting construction access in these areas needs to be addressed.)
 - Endangered species survey.
 - Asbestos survey on building projects or on projects involving existing bridge removals, especially when bascule bridges are removed or when buildings are modified or demolished.
 - Lead and other heavy metals paint survey.
 - Permits

5.16 ISSUE ESCALATION/RESOLUTION

The Design and Construction Criteria Package shall include an issue escalation matrix or process that clearly defines the process for addressing questions or disagreements that may arise. This process should state the chain of command within the Department and require the Firm to provide a similar list of people in responsible charge. For the Department, the escalation should begin with the PM and continue through the District Construction, Materials or Maintenance Engineer, the Director of Operations or Administration, and then the District Secretary. Consideration should be given to the level that issue escalation begins, depending on the type of issue.

Typically, issues should be resolved at the lowest possible level (e.g., Project Superintendent, Project Field Engineer). If Partnering is used, the chain of command for issue escalation is discussed and decided at the initial Partnering meeting. Each level of escalation should also include a time frame for resolving the conflict.

Construction issues that arise - such as piling driven out of tolerance or wrong elevations on piers, caps, etc. shall be resolved through the following process:

- If the resolution does not change the original intent of the technical proposal/RFP then the Engineer of Record or Architect, who works for the Firm, will be responsible for developing the design solution to the construction problem and the CEI will be responsible for review and concurrence. If the CEI has concerns, then the relevant District Office will be involved through the PM.
- If the resolution alters the original intent of the technical proposal/RFP, then the EOR or Architect will develop the proposed solution and submit to FHWA for approval on Federal oversight projects, and to the Department through the PM for review and approval with a copy provided to the CEI.

It is recommended that Partnering be used on complex Design-Build projects in order to enhance the project's administrative and work processes.

5.17 DESIGN-BUILD FIRM GUARANTEED/VALVE ADDED

The Design and Construction Criteria Package shall generally include a provision for a project Design-Build Firm guaranteed/Valve added with a specified number of years and the details as to what is to be covered. As a general rule, routine maintenance is not intended to be covered by a Design-Build Firm guaranteed/Valve added. If during the Design-Build firm guaranteed/Valve added period, any encroachments to right of way occur, the Department will be responsible. Major bridges should have a Design-Build firm guaranteed/Valve added of 5-15 years. Standard Design-Build Firm guaranteed/Valve added forms or clauses may need to be modified to fit project specific needs. FCO building projects should have a warranty of no less than 1 year.

Any Design-Build Firm guaranteed/Valve added that are developed for Federal-aid projects on the National Highway System shall be tied to specific features or products. The Design-Build Firm guaranteed/Valve added shall be tied to known criteria to ensure that the Design-Build Firm undertakes any corrective work necessary during the life of the Design-Build Firm guaranteed/Valve added. All Design-Build Firm guaranteed/Valve added language in the RFP used in construction contracts on the National Highway System should be approved by the FHWA.

CHAPTER SIX**ENCUMBRANCE****6.1 ENCUMBRANCE FOR COMPENSATION TO THE SHORT LISTED FIRMS:**

Based on the Contracting Unit's decision to provide compensation, the Contracting Unit will submit separate Encumbrance Requests to the Financial Management Office for the amount of compensation for each short-listed Firm. The Contracting Unit immediately following the short-listing process should submit the Encumbrance Requests for compensation.

6.2 ENCUMBRANCE FOR DESIGN-BUILD CONTRACT:

The Contracting Unit will send an Encumbrance Request to the Financial Management Office requesting encumbrance for the award amount for the assigned contract number immediately following selection. The Contracting Unit or Project Manager will ensure that the Financial Management Office approves a Request for Encumbrance before the time of award provided that all criteria for encumbrance are met.

The Contracting District will submit to the ***Contract Status Change Form No. 350-020-06***, to the Financial Management Office immediately after the execution of the contract, in accordance with the ***Contract Funds Approval Procedure No. 350-020-200***.

6.3 TECHNICAL GUIDELINES:

Design-Build contracts will be identified in WPA as phase 52-contract class 9. For state funded projects the phase 52 will include all work associated with Preliminary Engineering, Construction, and CEI. In-house CEI estimates that will initially be automatically generated (based on the overall phase 52 level) must be manually revised to represent only the in-house effort required to manage the CEI consultant.

On state and federally funded projects, when independent inspection is performed by CEI consultants who are not members of the Design-Build firm and included in the Design-Build contract, a separate contract shall be advertised and awarded for CEI services (use phase 6x). For federally funded projects, for which the CEI is proposed for inclusion in the Design-Build contract, FHWA must specifically review and approve CEI to be performed by the Design-Build firm.

Once a project is identified as a Design-Build project, it should be decided who is going to perform the services necessary to bring the project to completion (services such as utilities/railroad, permits, geotechnical services, survey, and CEI). Some of these services may be done prior to the design build contract. However, it is important

to ensure that the funds are programmed in the correct category, i.e., in-house or consultant.

6.4 COMPENSATION TO “SHORT LISTED” FIRMS (DESIGN-BUILD)

On an adjusted score Design-Build project where the Department intends to compensate the short-listed firms for submitting a proposal, the Department must enter into a contract with each firm immediately after the short-listing. A contract is required to document the terms and conditions of compensation. The intent is to compensate the amount that is noted in the RFP package. The amount is not intended to compensate the firms for the total cost of preparing the bid package. These contracts for the compensation shall be Professional Service “C” contracts.

Program the amount to be paid as phase 32 program number 00 for the unsuccessful short-listed firms under the same work program item/segment as the construction phase. See DOT **Procedure No. 625-020-010** for contracting procedures.

6.5 INNOVATIVE METHODS

The innovative contracting methods are capped per **Section 337.025, Florida Statutes** to \$120 million annually. Below are the definitions of the innovative contracting methods?

6.6 DESIGN-BUILD CONTRACTING - MINOR

See information in the “Design-Build Section” above on the Design-Build – Minor method.

As Districts identify projects that will utilize one of the alternative contracting practices, the Districts will input or change the Item Group that correlates to the appropriate innovative or alternative method (s). Districts will input the Item Group code(s) on the WP03 screen. Refer to the list below:

<u>ITEM GROUP</u>	<u>DESCRIPTION</u>
A1	Bam (Bid Averaging Method)
A3	Design/Build (Minor)*
B0	Lump Sum
B1	Bonus
B2	A + B Bidding
B3	Lane Rental
B5	Incentive/Disincentive
B6	Liquidated Savings
B8	Design/Build (Major)
B9	Design-Build Firm Guaranteed/Value Added

* See Design-Build Section for definition

If a contract utilizes more than one technique on a project, enter each individual Item Group code to be used on the WP03 screen. Work Program is no longer using combination Item Group codes.

If a supplemental agreement for bonus, lane rental or incentives/disincentives have been added after the contract has been awarded, an additional Item Group code for the supplemental agreement must be input. Contracts with supplemental agreements for bonuses, lane rental, or incentives/disincentives initiated after the award to accelerate construction must be coded with the following Item Group codes. This coding enables the Department to monitor the impact of supplemental agreement incentives.

BS1	Supplemental Agreement Bonus
BS3	Supplemental Agreement Lane Rental
BS5	Supplemental Agreement Incentive/Disincentive

The incentive payments should be programmed in the fiscal year in which the incentive payment is expected to be made. Expected payout will occur when the Highway Design-Build Firm has met the early completion dates noted in the contract (bonus days). **The District Work Program Manager should obtain this information concerning the amount to be programmed and expected payout date from the District Director of Production/or District Director of Operations.** Be conservative! It is better to program too early, as opposed to programming in an outer year and the payout occurs before the programmed year. Use phase 5A to program these payments and the same program number as on the construction phase 52 (02, 05 etc.).

Incentives may be on the following contracting practices:

- No Excuse Bonus
- A + B Bidding
- Incentive/Disincentive
- Liquidated Savings
- Design/Build Contracts
- Lane Rental

If the Design-Build Firm fails to meet the bonus days identified in the contract, the phase 5A should be removed from the project.

In the year in which the incentive payment will be made, a fund approval request should be submitted to the Financial Management to encumber the funds. The contract award amount will be Office encumbered with a phase 52 and the incentive

amount will be encumbered in the year in which payment is expected to be made with a phase 5A.

It is the responsibility of the Resident Engineer to ensure that the funds are requested and encumbered before requesting payment of an incentive. This responsibility includes removal of encumbrances if an incentive will not be paid in accordance with Contracts Funds Approval Procedure No. 350-020-200.

If the project is a federal project and the federal authorization has been met or exceeded on the project, a separate ***Request for Authorization*** should be requested before payment of the incentive.

A contract class of nine should be programmed for Design-Build contracts.

If conditions warrant removing a project from the alternative contracting program, the item group should be removed from the WP03 screen.

In the Project Scheduling System, use activity event of 166 to schedule the phase 5A.

CHAPTER SEVEN

FEDERAL AID AUTHORIZATIONS FOR DESIGN-BUILD PROJECTS

The following instructions cover the planning, authorization and closeout of federal funds allocated to Design-Build projects. Design-Build projects are authorized under the Special Experimental Project (SEP) 14 approved plan. This annually approved plan governs federal participation in Design-Build projects.

Federal Aid authorization on Design-Build projects is also subject to the provisions of the Exemption Agreement executed between FHWA and the Department. This agreement identifies types of projects and functions subject to oversight by FHWA and those projects and functions delegated to the Department.

The FHWA shall perform the following review and approval functions on Federal-aid D/B oversight projects if applicable: Typical Section Package, Pavement Design Package, Phase Roadway and Bridge Plan Submittals, Specifications, Revisions, Bridge Hydraulic Report (BHR), Utility Agreements, Railroad Agreements, Concurrence in Award, Value Engineering Change Proposals, Time Extensions, Supplemental Agreements, Contract Claims, and Final Acceptance.

The concurrence-in-award package shall include a summary of the adjusted scores, the results of the question and answer session by the short listed firms, and the Department's selection committee's decision for award of the contract.

It is suggested that District Work Program Managers and District Federal Aid Coordinators be included in District coordination activities, meetings and correspondence concerning Design-Build Projects to insure timely programming and federal aid authorization activities. This coordination is important to insure needed financial adjustments to Design-Build project cost estimates at time of award occur in the Adopted Work Program and reflected in the Federal Obligating Authority Plan.

7.1 PLANNING FOR USE OF FHWA FUNDS ON DESIGN-BUILD PROJECTS

The scheduling of the obligation of funds on Design-Build projects is important from two perspectives:

- A. The Department plans for the obligation of federal funds apportioned and allocated to Florida based upon projects in the Adopted Work Program and their related activities and events in the Project Scheduling System. Major Design-Build projects consume significant amounts of these funds. The Federal Obligating Authority Plan includes Design-Build project fund commitments in months when the authorization is needed as defined by the scheduled Activity/Event.

- B. Unlike regular construction which uses activities/events pertaining to the letting schedule, Design-Build projects must be authorized **before** the Request for Proposals and Design Criteria Package is published or mailed and **after approval** of the RFP and Design Criteria Package. The package approval, fund authorization and distribution of RFPs occur long before “receipt of bids”. For Low Bid D/B Projects, approval of the RFP (and the federal authorization request) must occur prior to project advertisement since the RFP is provided with the contract advertisement.
- C. RFP and Design Criteria packages for Interstate system capacity projects that are subject to FHWA Oversight are approved by the FHWA Division office. The FHWA Division office requests up to three weeks to review the RFP and Design Criteria Package before granting their approval. Since several draft submittals and re-submittals can occur, the authorization request is processed only upon final written package approval. For Exempt projects, the District Design-Build team approves the package. Usually, the District Professional Services Administrator notifies the Federal Aid Coordinator in writing of this approval.
- D. These package approvals are necessary for FHWA participation in the project. The Design-Build authorization request should be processed immediately upon notice of receipt of package approval. Upon receipt of the approved FHWA authorization, District Federal Aid Coordinators should notify the District Design-Build team so that the RFPs and Design Criteria packages can be distributed.

Therefore, a new Project Scheduling System Activity/Event has been established to plan for the future obligation of federal funds and also to schedule the anticipated date of package approval. The PSM code is:

“RFP/Design Package Approval” – Activity/Event No. 285

Regardless of the Oversight or Exempt project nature or type of Design-Build (Adjusted Score or Low Bid), this Activity/Event is to be scheduled in PSM when the project is incorporated into the work program. Design-Build projects and associated PSM schedules will be included in annual review of the District Tentative Work Program.

7.2 PREPARATION OF REQUESTS FOR AUTHORIZATION

Since R/W must be certified clear with environmental determinations and permitting complete before the RFP Design Criteria Package is approved, these activities normally will be authorized with federal funds in advance of the Design-Build authorization. Therefore, District work for Project Development phases should serve as the basis for the **original federal project authorization**, followed by R/W (survey and acquisition) if required.

The District Federal Aid Coordinator should request one Federal Aid Project Number for the entire project (all phases).

The sequence of federal authorizations is as follows:

1. PD&E advance activities are performed by the District
2. Authorization modification for R/W, if required
3. Authorization modification for Design-Build.
Note: If the RFP package includes provision to pay compensation to the short-listed lead design firms on an Adjusted Score Design-Build project, the authorization request will include a Work Program Phase 32 for the compensation with the Design-Build Phase 52 and CEI Phase.
4. Work program phase estimates for Design-Build (Phase 52) and CEI (Phase 61 and/or 62) and the FHWA federal aid authorization previously established, will need to be adjusted after the contract is awarded. Generally, these contract price adjustments should occur in the month following Design-Build contract award.
5. Final authorization modification for project closeout, if needed to balance authorization to final expenditures.

7.3 DOCUMENTATION REQUIREMENTS TO SUPPORT DESIGN-BUILD FEDERAL AUTHORIZATIONS

The form of documentation requirements for Design-Build is different from regular construction projects. Design-Build authorizations with federal funds, whether Oversight or Exempt, should be supported by:

1. R/W clear certifications;
2. Written FHWA approval if oversight or District Design-Build Team approval if state oversight of the RFP and Design Criteria Package;
3. The RFP and Design Criteria package documentation should affirm if other Plans Processing Manual checklist items, such as, utilities and permits and NEPA status are complete;
4. If NEPA has not yet been completed when the preliminary design phases are authorized (clarify this authorization is for PE to proceed and PE funds are not actually paid to the D/B firm), the contract must contain a termination clause if the “no build” option is selected and the Design/Build firm may not participate in preparation of the NEPA documentation as this would be a conflict of interest. Any consultants who prepare the NEPA document must be selected and subject to the exclusive control of the state/local government agency; and
5. Oversight projects must receive, from the FHWA Florida Division, a signed concurrence in award for the design–build contract and concurrence for the “finding of price reasonableness” after NEPA is completed and a price for the construction is determined.

7.4 CLOSING DESIGN-BUILD PROJECTS

From a federal aid perspective, closing these projects is not expected to be dissimilar from regular construction closeout. The final voucher stage (sequence 5. above) will be initiated by the project manager based on a Final Acceptance document from FHWA for Oversight projects or from the District Design-Build team for Exempt projects.

The PM should coordinate the removal of any encumbrance and retainage balances with the Financial Management Office. The PM must provide the final acceptance and the contract time sheet to the Federal Aid Coordinator and request that the federal project be closed. The Federal Aid Administration Section of the Financial Management Office will review the costs and notify the District Federal Aid Coordinator to prepare the final federal authorization modification.

CHAPTER EIGHT

RIGHT OF WAY ON DESIGN BUILD PROJECTS

8.1 RIGHT OF WAY

If right of way is required for the design-build project, coordination and schedule control become essential to the success of the project. Design-build contracts must allow sufficient time for right of way acquisition giving consideration to court schedules that are outside the Department's control. The District Right of Way Office must be informed regarding contractual obligations, the impact of delays, and the potential for contractor claims if right of way is not available when needed for construction to proceed.

Prior to advertisement, all projects must have one of two types of right of way certification pursuant to [*Section 12 of the Right of Way Procedures Manual*](#):

- The certification for construction states that all right of way needed for the project is available for construction.
- The initial design build certification states that additional right of way is required for the project and will be acquired in compliance with applicable state and federal law.

If an initial design build certification has been issued, a certification for construction must be executed when all right of way activities have been completed. Construction may commence on buildable segments of the design build project prior to certification for construction provided the Department's district right of way manager states in writing that all right of way activities have been completed for the buildable segment and right of way is clear for construction.

CHAPTER NINE

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E)

9.1 PERMITTING

Regulations for implementing the National Environmental Policy Act (NEPA) are promulgated by the Council on Environmental Quality (CEQ). These regulations provide that a Final Environmental Impact Statement (FEIS), Finding of No Significant Impact (FONSI), or a determination that a proposed action is categorically excluded serve as the administrative record of compliance with the policy and procedures of the NEPA and other environmental statutes and executive orders.

On Federal-Aid projects, usually the Federal Highway Administration (FHWA) serves as the lead federal agency for compliance with the NEPA and the Florida Department of Transportation (FDOT) serves as the lead state agency.

When funds other than Federal funds are used to develop and construct a transportation project, a State Environmental Impact Report (SEIR) or a Non-Major State Action (NMSA) checklist will be required to comply with State Laws. NEPA compliance is required if Federal approval of an action is needed.

The standard for the preparation and processing of an environmental document to comply with the NEPA is the Department's Project Development and Environment (PD&E) Manual. The process spelled out in the PD&E Manual must be followed and completed before a project can advance to the final design and construction phases. Before design and construction funds can be authorized for Federal-Aid projects, the FHWA has to approve the environmental document and issue location and design approval. For projects funded with funds other than federal funds, the District Secretary must approve the SEIR or NMSA, before the project can advance. As with regular projects, the PD&E process needs to be complete before a Design-Build project can be concept acceptance.

Construction activities are regulated by environmental rules and regulations that are administered by federal, state, local and special district governing agencies. Environmental permits are required from one or more regulatory agencies for most land alterations such as addition of impervious surfaces, construction, alteration or abandonment of storm water management facilities, and wetlands or surface water impacts. The time at which these permits can be obtained vary with the type of project, its impacts and the requirements of a specific permitting agency. The acquisition of permits can result in having to re-address NEPA issues during design so it is very important to have done a complete and thorough job during the PD&E phase.

The normal PD&E process starts with the distribution of an Advance Notification (AN) Package to various states, federal and local agencies. The AN package describes the

project and, among other things, specifies all potential permits required on the project. In most cases a Permit Coordination Package is developed to enhance interagency coordination early in the process of project development. This package provides conceptual information on the project and is circulated to applicable permitting agencies for comments. The preliminary coordination with jurisdictional agencies may take six (6) to twelve (12) months depending on the complexity of the project and the environmental sensitivity of the project area. The final permit application is normally started when Phase II plans are complete.

In the interest of shortening the permit application period, the following have been tried with success on previous Design-Build projects:

1. Coordinate with the permitting agencies and keep them involved in the decision making during the PD&E process. Having one-on-one periodic meetings with the agencies is recommended in addition to the submission of the Preliminary Coordination Package. Obtaining "preliminary" commitments from the agencies in writing during the PD&E process helps to expedite the permit application during design.
2. Perform enough design work upfront to obtain permits during the PD&E process instead of having to apply for permits during the design phase. This would eliminate part of the permitting work from the Design-Build scope of work. Written prior concurrence from the permitting agencies will have to be obtained.
3. Identify construction activities that can begin before final permits are received. This would enable the design consultant to start design in project features that do not require permits. The Contractor could start working in those areas while the design consultant is working in other design and permit application activities.

For programming PD&E projects in the Work Program, and to ensure that projects are programmed correctly, please see the Department's Work Program Instructions.

9.2. Reevaluations

Prior to the authorization of D/B projects under either Federal or State funding, a reevaluation of the environmental impacts shall be made. If a major design change is proposed after the authorization, then a written reevaluation must be produced as required in the PD&E Manual. The D/B Team shall provide the information to the District Environmental Management Office to determine if the proposed design changes warrant a reevaluation. The D/B Team is responsible for conducting any needed environmental studies and completing the documentation for the environmental reevaluation. For Federal-aid projects, FDOT shall obtain FHWA's approval of the NEPA reevaluation before the Design-Build firm can proceed.

CHAPTER TEN

SOIL AND FOUNDATIONS GUIDELINES

10.1 DESIGN-BUILD PROJECTS

Design-Build projects are handled differently than the normal design-bid-build project. For a Design-Build project the Design-Build team takes on many of the responsibilities and control that the Department or their representative normally would have. This requires a change in the approach to the project by the various groups involved. For a Design-Build project to work properly this change in approach must happen.

10.2 RESPONSIBILITIES

The responsibilities between the Department's Geotechnical Engineer and the Design-Build team can be broken down as follows.

10.2.1 Planning and Development Phase

- a. Department's Geotechnical Engineer – Gathers data on the conditions at the site sufficient for the Design-Build team to make a realistic proposal. Helps prepare the scope including any geotechnical limitations/requirements (such as steel piles not allowed due to corrosion, etc.) for the project and any construction requirements (such as requiring verification testing, no Mechanically Stabilized Earth walls are allowed, etc.). Remember if it is not written down in one of the required documents (scope, Structures Design Guidelines, etc.) it is not a requirement to the Design-Build team.
- b. Design-Build Team – No team selected at this time. Potential teams submitting letters of interests from which a short list is determined.

10.2.2 Technical Proposals & Bidding Phase

- a. Department's Geotechnical Engineer – Answers questions from the Design-Build team through the project manager.
- b. Design-Build Team – Performs analyses of the geotechnical data and makes a determination of the appropriate design and construction method based on his approach/equipment. Submits technical proposal and bid.

10.2.3 Design/Construction Phase

- a. Department's Geotechnical Engineer – Verifies design and construction are in compliance with the contract documents, including verification testing if required.
- b. Design-Build Team – Meets the requirements set forth in the contract documents. The team:
 - 1) Gathers additional geotechnical data and testing (such as load tests, etc.) if required.
 - 2) Continues with the design process.
 - 3) Constructs the project and performs Quality Control.

10.3 PRESENTATION OF GEOTECHNICAL DATA

The geotechnical investigations for Design-Build projects must be handled differently from the normal design-bid-build project. The geotechnical investigation that is done prior to bidding is for information only. The amount of geotechnical data gathered should be 100 – 120% what would normally be done for a typical project? The analysis of the data, however, is left to the Design-Build teams.

Upon completion of the subsurface investigation, the information obtained must be compiled in a format, which will present the work that has been performed to the various Design-Build teams. It is perhaps the most critical function of the geotechnical process.

The data is typically compiled in a geotechnical report. The purpose of the geotechnical report is to present the data collected in a clear manner. The format and contents of the geotechnical report are somewhat dependent on the type of project. Most projects will generally require either a roadway soil survey or a structure related foundation investigation, or both.

This chapter describes the format for presentation of geotechnical data for each type of project. General outlines of the topics to be discussed in the geotechnical report are presented. Not every project will follow these formats exactly, however; for any given project, certain items may be unnecessary while other items will need to be added. Also included in this chapter are discussions on the finalization and distribution of the geotechnical report.

10.4 ROADWAY SURVEY

The geotechnical report for a roadway soil survey should present data only. The following is a general outline of the topics, which should be included.

- a. Description of significant geologic and topographic features of the site.
- b. Description of width, composition, and condition of existing roadway.
- c. Description of methods used during subsurface exploration, in-site testing, and laboratory testing; along with the raw data from these tests.
- d. Soil conservation services (SCS/USDA) and USGS maps.

10.5 STRUCTURES INVESTIGATION

The geotechnical report for a structure should present geotechnical information only. The following is a general guide to the contents of a typical structure foundation report.

- a. Vicinity map, including potentiometer map, USGS and soil survey maps (SCS/USDA), depicting project location.
- b. Description of the methods used in the field investigation, including the types and frequencies of all in-site tests.
- c. Description of the laboratory-testing phase, including any special test methods employed.
- d. Boring location plan plots of boring logs and/or cone soundings. Note the size of rock core sampled. The minimum acceptable rock core diameter shall be 2.4 inch (61 mm) (although 4 inch {101.6 mm} diameter rock cores are preferable).
- e. Environmental class for both substructure and superstructure, based on results of corrosively tests. This information is also reported on the Report of Core Borings sheet. For extremely aggressive classification note which parameter placed it in that category.
- f. Any other pertinent information.

10.6 EXCLUDED ITEMS

Geotechnical reports for Design-Build project should not include the following.

- a. Analysis of the geotechnical information.
- b. Requirements/items that would not belong in the scope.
- c. Any suggestions on handling any potential problems.

10.7 DESIGN-BUILD SCOPE

The following are some examples of what should be looked at for inclusion into the Design-Build scope.

1. Any restrictions placed on the Design-Build team (no MSE Walls are allowed, displacement piles may not be used, etc.).
2. Any special requirements that must be met such as additional geotechnical work, any required testing over and above what is normally required (i.e. requiring verification testing, etc.).

10.8 TECHNICAL PROPOSALS AND BIDDING PHASE

The Geotechnical Engineer may be responsible for reviewing and grading technical proposals for the following:

1. Proposals meet appropriate codes and guidelines.
2. Handling of geotechnical problems.
3. Meets any given restrictions and special requirements.
4. Proposed geotechnical investigation/design/construction procedures including quality control.
5. Innovative design/construction practices.

10.9 DESIGN/CONSTRUCTION PHASE

The Geotechnical Engineer may be responsible during the design/construction phase for the following:

1. Review of construction criteria (e.g. pile driving criteria, etc.) and documentation.
2. Verification testing.
3. Issue escalation and construction problem resolution.
4. Independent Assurance.

CHAPTER ELEVEN

STRUCTURES

11.1 STRUCTURES GUIDELINES FOR DESIGN-BUILD

The Structures Design Guidelines remain virtually intact for Design-Build projects since the issues contained in this document are structural design parameters that are not project specific. The guidelines do contain issues, which require project specific input, and decisions, which need to be addressed and the directions specified in the RFP. Most urban or high profile projects have certain issues, which are mandated due to public input, corridor uniformity, etc. These specific features which may be required include: aesthetics features, specific structure types, minimum bridge length, minimum span lengths, pier types, cross-sections, foundation types, lighting, navigational channel requirements, coloration, surface textures, wall types, utility attachments, etc. Decisions and issues, which are normally addressed during the design phase of a project, which the Department does not wish to leave up to the Design-Build Team, will need to be addressed prior to the RFP and mandated in the RFP. This includes items such as the minimum amount of foundation testing and soils tests to be performed, content and frequency of public meetings, construction phasing, load ratings of existing bridges and associated decisions, etc. Any desired feature must be described in enough detail to adequately transfer the requirements to the Design-Build Team so a responsive proposal can be developed.

For projects containing bridge widenings, a load rating shall be performed for all bridges prior to the release of the RFP. Based upon the results of these load ratings, the decision can be made as to the acceptability of the bridges to be widened and the scope clearly defined in the RFP.

As a minimum, the cross-sectional requirements, operational importance of the bridge, environmental classifications and limits of hazardous materials must be stated in the RFP. Consideration should be given to performing a geotechnical investigation, lead paint survey bathymetric survey, hydraulic analysis for issues not directly affected by the structure selection and a ship impact study and providing this information to the Design-Build Team. Known permit issues affecting structure type or construction methods also need to be included in the RFP. Supplying this type information to the Design-Build Team will provide for uniformity in the engineering assumptions used to produce the technical proposal, minimize the risk of unforeseen issues and keep cost to a minimum.

CHAPTER TWELVE

PRELIMINARY ESTIMATES

12.1 PRELIMINARY ESTIMATES PROCESS FOR DESIGN-BUILD

If there is only one project in the contract, the Designer will code in one of the following pay items for Design-Build Alternative:

	METRIC	ENGLISH	UNIT
1. Design-Build (Resurfacing)	2050-1	50-1	ls/lc
2. Design-Build (Roadway Const.)	2050-2	50-2	ls/lc
3. Design-Build (Roadway Reconst.)	2050-3	50-3	ls/lc
4. Design-Build (Bridge Const.)	2050-4	50-4	ls/lc
5. Design-Build (Buildings)	2050-5	50-5	ls/lc
6. Design-Build (Traffic Opps.)	2050-6	50-6	ls/lc

If there is more than one project in a single contract (strung project), the Designer will code the appropriate Design-Build pay item on each project in the string. The contingency pay item (Metric 2999-25 / English 999-25) can also be used in conjunction with Design-Build contracting methods. This item will be placed on each job in the string as well.

You probably will want to consider combining the warranty specification in conjunction with Design-Build.

The Preliminary Cost Estimate for Design-Build projects may be derived in a number of ways:

1. Data from the Project Manager
2. Historical Data from current projects
3. Long Range Estimate (LRE)
4. Bid Tabs from a similar current job
5. Square Foot cost from a similar bridge project

The cooperative effort of the Project Manager in providing "possible" anticipated pay items, a well defined scope-of-work and a "major checklist" of work tasks to the CES Coordinator will be very helpful in improving the accuracy of the Design-Build project estimate.

Design Costs (PE) will be included in the Preliminary Estimate Cost as well as CEI costs. The following is a recommendation on how to estimate these costs:

	<u>Dollar Range</u>	<u>Percent</u>
*1. PE	\$0 to \$1,000,000=	20% of the Construction Cost
	\$1,000,000 to \$5,000,000= Cost	15% of the Construction Cost
	\$5,000,000 to up=	10% of the Construction Cost
*2. CEI	\$0 to \$1,000,000=	15% of the Construction Cost
	\$1,000,000 to \$5,000,000=	12% of the Construction Cost
	\$5,000,000 to \$up=	10% of the Construction Cost

The "automatic award" criteria will be increased to 25% (with FHWA'S approval) instead of the current 10%. This means that we will only review those projects that are 25% or more above the Estimate.

Geotechnical Costs (on bridge projects) will be included in the Preliminary Estimate. This will vary with how much Geotechnical work was done upfront by FDOT. (Range = 0 - 5% of Construction Cost). *

The costs of Permits will also be included in the Preliminary Cost Estimate. (Check with Permits office for a better feel of cost). *

Right-of-Way will (not) be included in the Preliminary Cost Estimate because R/W Section will purchase any additional R/W before the project is advertised.

* asterisk = check with the Project Manager and/or appropriate offices for better cost.

CHAPTER THIRTEEN

CONTRACT ADMINISTRATION

13.1 GENERAL

These guidelines are intended to identify issues and concerns that are unique to Design-Build projects, for the use by Department's Construction project managers or other Department personnel.

13.2 SCOPE OF SERVICES FOR CONSULTANT CEI PROJECTS

On Design-Build projects for which the Department hires a CEI consultant (CEI), the scope of services may differ from conventionally bid projects and should be supplemented and revised as follows:

13.2.1 Design Coordination: Unlike conventional projects, Design-Build project requires the Design-Build Firm to complete the design of the project after letting. The CEI must be under contract and working after the contract is awarded because the Design-Build Firm may choose to begin some construction phases very soon after notice to proceed. It is more likely; however, that the Design-Build Firm will take some time to complete design work - especially for major bridges - before any construction begins. Since the CEI is available, it is desirable to assign the responsibility for design review coordination to the CEI. It is very important that the CEI have knowledge and experience in the design of projects including FDOT plans processing procedures and the following project specific issue areas: geotechnical, structural, roadway, drainage, utilities, permitting, etc. The degree to which the CEI will be involved in the actual review of design submittals should be clearly covered in the CEI scope of services. Most of the time the Design-Build Firm's design submittals will be at 90 and 100% plans stage.

13.2.2 Quality Control/Quality Assurance /Independent Assurance (QC/QA/IA): Design-Build projects usually require the Design-Build Firm to perform QC level materials sampling as well as QC level inspection. The CEI is expected to perform predominantly QA sampling, testing and inspection and infrequent QC inspection. The scope of service should reflect this approach since conventional scopes stress QC level involvement. Since the environmental permit agencies do not allow Design-Build Firms to perform permit testing such as turbidity, the CEI will be expected to perform these tests and these should be covered by the scope. The scope should address specific QC tasks that must be performed by the CEI. Department IA will be performed by the District Materials Office as usual. IID from the State Materials Office will be very infrequent or not at all.

13.2.3 Scheduling: Most Design-Build projects will require the Design-Build Firm to submit a critical path method (CPM) schedule that will be used to determine the Design-Build Firm's monthly estimate. The CPM schedule will be required to be

resource loaded which will generate project costs over time. The Department will review and approve the CPM schedule for reasonableness and will base the monthly estimates on the approved schedule. It is important that the CEI have proven experience with CPM scheduling since this experience will be critical to managing payment of the Design-Build Firm and the scope should specify this experience requirement.

13.3 PAYMENTS

13.3.1 Monthly Estimates: The Design-Build Firm will develop a list of general pay items based on a resource loaded CPM schedule. The pay items will be per each such as columns for a bridge and; therefore, the monthly payment due the Design-Build Firm will be based on the number of columns completed of the total planned. If the total column item is \$100,000.00 and 5 out of 10 columns were completed in one month, then the Design-Build Firm is due \$50,000.00 for that month.

13.3.2 Final Estimate: The final estimate will be required as usual but due to the fact that the project is lump sum; the effort involved in preparing final estimate documents is greatly reduced. It is still recommended that the guidelines set forth in the Department's Preparation and Documentation, Review and Administration Manuals be adhered to, to maintain the integrity and continuity of the Final Estimates Package.

13.3.3 Supplemental Agreement Compensation: Compensation for extra work may be required. The supplemental agreement process is the same as for conventional projects except that individual pay items are not available for the Design-Build Firm's basis of payment. Under this circumstance it is very important that detailed supporting calculations are submitted by the Design-Build Firm with the request for additional compensation. The calculations should be detailed enough to allow the Department to perform a comprehensive evaluation of the validity of the Design-Build Firm's cost estimate.

13.3.4 Pay Adjustments for deficiencies: Adjustments will be done according to the contract specifications.

13.4 RECORDS

13.4.1 Daily Report of Construction (DRC): Design-Build projects will require the standard DRC form to be filled out every day for every construction operation underway. Particular attention should be paid to recording what work is completed for use in preparing the monthly estimate.

13.4.2 Shop Drawings:.

13.4.2.1. Definitions:

(a) Shop Drawings: All working, shop and erection drawings, associated trade literature, calculations, schedules, manuals and similar documents submitted by

the Design-Build Firm to define some portion of the project work. The type of work includes both permanent and temporary works as appropriate to the project.

(b) Permanent Works: All the permanent structures and parts thereof required of the completed Contract.

(c) Temporary Works: Any temporary construction work necessary for the construction of the permanent works. This includes falsework, formwork, scaffolding, shoring, temporary earthworks, sheeting, cofferdams, special erection equipment and the like.

(d) Construction Affecting Public Safety: Construction that may jeopardize public safety such as structures spanning functioning vehicular roadways, pedestrian walkways, railroads, navigation channels of navigable waterways and walls or other structure foundations located in embankments immediately adjacent to functioning roadways. It does not apply to those areas of the site under the Design-Build Firm's control and outside the limits of normal public access.

(e) Major and Unusual Structures: Bridges of complex geometry and/or complex design. Generally, this includes the following types of structures:

1. Bridges with an individual span longer than 300 feet [100 m].
2. Structurally continuous superstructures with spans over 150 feet [45 m].
3. Steel box and plate girder bridges.
4. Steel truss bridges.
5. Concrete segmental and longitudinally post-tensioned continuous girder bridges.
6. Cable stayed or suspension bridges.
7. Arch bridges.
8. Tunnels
9. Movable bridges (specifically electrical and mechanical components).
10. Rehabilitation, widening, or lengthening of any of the above.

(f) Special Erection Equipment includes launching gantries, beam and winch equipment, form travelers, stability towers, strong-backs, erection trusses, launching noses or similar items made purposely for construction of the structure. It does not apply to commonly available proprietary construction equipment such as cranes.

(g) Falsework includes any temporary construction work used to support the permanent structure until it becomes self-supporting. Falsework includes steel or timber beams, girders, columns, piles and foundations, and any proprietary equipment including modular shoring frames, post shores, and adjustable horizontal shoring.

(h) Formwork includes any structure or mold used to retain plastic or fluid concrete in its designated shape until it hardens. Formwork comprises common materials such as wood or metal sheets, battens, soldiers and walers, ties, proprietary forming systems such as stay-in-place metal forms, and proprietary supporting bolts, hangers and brackets. Formwork may be either permanent formwork requiring a shop drawing submittal such as stay-in-place metal or concrete forms, or may be temporary formwork which requires certification by the Specialty Engineer for Construction Affecting Public Safety and for Major and Unusual Structures.

(i) Scaffolding is an elevated work platform used to support workmen, materials and equipment, but not intended to support the structure.

(j) Shoring is a component of falsework such as horizontal, vertical or inclined support members. In this Section, this term is interchangeable with falsework.

(k) Specialty Engineer versus Engineer of Record: For the purpose of the shop drawing review process as set forth in this article, the term "Specialty Engineer" will apply to the initiator or producer of shop drawings regardless of whether or not that party is normally the Engineer of Record or the Specialty Engineer and the term "Engineer of Record" will apply to the shop drawing checker and certifier regardless of whether or not that party is normally the Engineer of Record or the Specialty Engineer.

13.4.2.2 Work Items Requiring Shop Drawings: In general, the Department requires shop drawings for items of work not fully detailed in the plans which require additional drawings and coordination prior to constructing the item, including but not limited to:

(a) Bridge components not fully detailed in the plans, i.e. segments, steel girder details, post-tensioning details, handrails, etc.

(b) Retaining wall systems

(c) Precast Box Culverts

(d) Non-standard lighting, signalization and signing structures and components

(e) Building structures

(f) Drainage structures, attenuators, and other nonstructural items

(g) Design and structural details furnished by the Design-Build Firm in compliance with the Contract

(h) Temporary Works affecting public safety

Additional clarification for certain types of bridge structures is provided in 13.8.2.1 Other provisions of the Contract Documents may waive the requirement for submittals for certain items; i.e., items constructed from standard drawings or those complying with alternate details for prestressed members under Section 450. Review the Contract Documents to determine the submittals required.

13.4.2.3 Schedule of Submittals: Prepare and submit a schedule of submittals that identifies the work for which shop drawings apply. For each planned submittal, define the type, and approximate number of drawings or other documents that are included and the planned submittal date, considering the processing requirements herein. Submit the schedule of submittals to the Department's Shop Drawing Review Office within 60 days of the start of construction operations, and prior to the submission of any shop drawings. Coordinate subsequent submittals with construction schedules to allow sufficient time for review and re-submittal as necessary.

13.4.2.4 Style, Numbering, and Material of Submittals:

13.4.2.4.1 Drawings: Furnish two clearly legible photographic or xerographic copies of all shop drawings that are necessary to complete the structure in compliance with the design shown on the plans. Prepare all shop drawings using the same units of measure as those used in the plans. Use sheets no larger than 24 by 36 inches [610 by 915 mm]. Consecutively number each sheet in the submittal series, and indicate the total number in the series (i.e., 1 of 12, 2 of 12, . . . , 12 of 12). Include on each sheet the following items as a minimum requirement: the complete Financial Project Identification Number, Bridge Number(s), drawing title and number, a title block

showing the names of the fabricator or producer and the Design-Build Firm for which the work is being done, the initials of the person(s) responsible for the drawing, the date on which the drawing was prepared, the location of the item(s) within the project, the Design-Build Firm's approval stamp with date and initials, and, when applicable, the signature and embossed seal of the Specialty Engineer. A re-submittal will be requested when any of the required information is not included.

13.4.2.4.2 Other Documents: Provide four sets of original documents or clearly legible photographic or xerographic copies of documents other than drawings, such as trade literature, catalogue information, calculations, and manuals. Provide sheets no larger than 11 by 17 inches [280 by 432 mm]. Clearly label and number each sheet in the submittal to indicate the total number of sheets in the series (i.e., 1 of 12, 2 of 12, . . . , 12 of 12). Provide an additional three sets of documentation for items involved with precast prestressed components. Provide an additional two sets of documentation for items involving structural steel components. Prepare all documents using the same units of measure as those used in the plans. Bind and submit all documents with a Table of Contents cover sheet. List on the cover sheet the total number of pages and appendices, and include the complete Financial Project Identification Number, a title referencing the submittal item(s), the name of the firm and person(s) responsible for the preparation of the document, the Design-Build Firm's approval stamp with date and initials, and, when applicable, the signature and embossed seal of the Specialty Engineer and the approval stamp of the Engineer of Record. Submit appropriately prepared and checked calculations and manuals that clearly outline the design criteria. Include on the internal sheets the complete Financial Project Identification Number and the initials of the person(s) responsible for preparing and checking the document. Clearly label trade literature and catalogue information on the front cover with the title, Financial Project Identification Number, date and name of the firm and person(s) responsible for that document.

13.4.2.5 Submittal Paths and Copies:

13.4.2.5.1 General: Shop drawings are not required for prequalified items. For non-prequalified items, determine the submittal path to be followed based upon the identity of the Engineer of Record as shown adjacent to the title block on the structural plan sheets, and on the key sheets of roadway plans, signing, and pavement marking plans, and/or lighting plans. At the preconstruction conference, the Department will notify the Design-Build Firm of any changes to the standard submittal process. The Department's red ink review stamp will signify an officially reviewed shop drawing and will state either "Released for Construction" or "Released for Construction as Noted". Submit shop drawings to the appropriate Department Shop Drawing Review Office with a copy of the letter of transmittal sent to the Resident Engineer. For work requiring other information (e.g., catalog data, procedure manuals, fabrication/welding procedures, and maintenance and operating procedures), submit the required number of copies to the appropriate Department Shop Drawing Review Office. Provide copies of material certifications and material tests to the Resident Engineer.

13.4.2.5.2 Building Structures: Submit working, shop and erection drawings, and all correspondence related to building structures, such as Rest Area Pavilions, Office Buildings, and Maintenance Warehouses, to the Architect of

Record for review and approval. Send a copy of the transmittal to the Resident Engineer.

13.4.2.5.3 Temporary Works: For Construction Affecting Public Safety, submit to the Engineer of Record shop drawings and the applicable calculations for the design of special erection equipment, falsework, scaffolding, etc. Ensure that each sheet of the shop drawings and the cover sheet of the applicable calculations is signed and sealed by the Specialty Engineer. Transmit the submittal and copies of the transmittal letters in accordance with the requirements of 13.8.2.4 through 13.8.2.5.5, as appropriate.

13.4.2.5.4 Formwork and Scaffolding: The Design-Build Firm is solely responsible for the safe installation and use of all formwork and scaffolding. The Department does not require any formwork or scaffolding submittals unless such work would be classified as Construction Affecting Public Safety.

13.4.2.5.5 Other Miscellaneous Design and Structural Details Furnished by the Design-Build Firm in Compliance with the Contract: Submit, to the Engineer of Record, shop drawings and the applicable calculations. Ensure that each sheet of the shop drawings and the cover sheet of the applicable calculations is signed and sealed by the Specialty Engineer. Transmit the submittal and copies of the transmittal letters in accordance with the requirements of 13.8.2.4 through 13.8.2.5.5, as appropriate.

13.4.2.6 Processing of Shop Drawings:

13.4.2.6.1 Design-Build Firm Responsibility for Accuracy and Coordination of Shop Drawings: Coordinate, schedule, and control all submittals, with a regard for the required priority, including those of the various subcontractors, suppliers, and engineers, to provide for an orderly and balanced distribution of the work. Coordinate, review, date, stamp, approve and sign all shop drawings prepared by the Design-Build Firm or agents (subcontractor, fabricator, supplier, etc.) prior to submitting them to the Department for review. Submittal of the drawings confirms verification of the work requirements, units of measurement, field measurements, construction criteria, sequence of assembly and erection, access and clearances, catalog numbers, and other similar data. Indicate on each series of drawings the specification section and page or drawing number of the Contract plans to which the submission applies. Indicate on the shop drawings all deviations from the Contract drawings and itemize all deviations in the letter of transmittal. Likewise, whenever a submittal does not deviate from the Contract plans, clearly state so in the transmittal letter. Schedule the submission of shop drawings to allow for a 14-day Department review period or a review period as specified in the RFP. The review period commences upon the Department's receipt of the valid submittal or re-submittal and terminates upon the transmittal of the submittal back to the Design-Build Firm. A valid submittal includes all the minimum requirements outlined in 13.8.2.4. Allow a 14-day Department review time for resubmittals or a review period as specified in the RFP. Submit shop drawings to facilitate expeditious review. The Design-Build Firm is discouraged from transmitting voluminous submittals of shop drawings at one time. For submittals transmitted in this manner, allow for the additional review time that may result. Only shop drawings distributed with the "red ink" stamps are valid and all work that the Design-Build Firm performs in advance of the Department's release of shop drawings will be at the Design-Build Firm's risk.

13.4.2.6.2 Scope of Review by the Engineer of Record:

The Engineer of Record's review of the shop drawings is for conformity to the requirements of the Contract Documents and to the intent of the design at a minimum. The Engineer of Record's review of shop drawings, which include means, methods, techniques, sequences, and construction procedures, is to determine if effects on the permanent works are acceptable.

13.4.2.6.3 Special Review by the Engineer of Record of Shop Drawings for Construction Affecting Public Safety: For Construction Affecting Public Safety, the Engineer of Record, will make an independent design review of all relevant shop drawings and similar documents. Do not proceed with construction of the permanent works until receiving the Engineer of Record's approval. Send a copy of the approval letter to the Resident Engineer. The review of these shop drawings is for overall structural adequacy of the item to support the imposed loads.

13.4.2.7 Other Requirements for Shop Drawings for Bridges:

13.4.2.7.1 Shop Drawings for Structural Steel and Miscellaneous Metals: Furnish shop drawings for structural steel and miscellaneous metals. Shop drawings shall consist of working, shop, and erection drawings, welding procedures, and other working plans, showing details, dimensions, sizes of material, and other information necessary for the complete fabrication and erection of the metal work.

13.4.2.7.2 Shop Drawings for Concrete Structures:

Furnish shop drawings for concrete components that are not cast-in-place and are not otherwise exempted from submittal requirements. Also, furnish shop drawings for all details that are required for the effective prosecution of the concrete work and are not included in the Contract Documents such as: special erection equipment, masonry layout diagrams, and diagrams for bending reinforcing steel, in addition to any details required for concrete components for the permanent work.

13.4.2.7.3 Shop Drawings for Major and Unusual

Structures: In addition to any other requirements, within 60 days from the start of construction operations, submit information to the Engineer outlining the integration of the Major and Unusual Structure into the overall approach to the project. Where applicable to the project, include, but do not limit this information to:

(1) The overall construction program for the duration of the Contract. Clearly show the Milestone dates. (For example, the need to open a structure by a certain time for traffic operations.)

(2) The overall construction sequence. The order in which individual structures are to be built, the sequence in which individual spans of girders or cantilevers are erected, and the sequence in which spans are to be made continuous.

(3) The general location of any physical obstacles to construction that might impose restraints or otherwise affect the construction, and an outline of how to deal with such obstacles while building the structure(s). (For example, obstacles might include road, rail and waterway clearances, temporary diversions, transmission lines, utilities, property, and the Design-Build Firm's own temporary works, such as haul roads, cofferdams, plant clearances and the like.)

(4) The approximate location of any special lifting equipment in relation to the structure, including clearances required for the operation of the equipment. (For example, crane positions, operating radii and the like.)

(5) The approximate location of any temporary falsework, and the conceptual outline of any special erection equipment. Provide the precise locations and details of attachments, fixing devices, loads, etc. in later detailed submittals.

(6) An outline of the handling, transportation, and storage of fabricated components, such as girders or concrete segments. Provide the precise details in later detailed submittals.

(7) Any other information pertinent to the proposed scheme or intended approach. Clearly and concisely present the above information on as few drawings as possible in order to provide an overall, integrated summary of the intended approach to the project. The Department will use these drawings for information, review planning, and to assess the Design-Build Firm's approach in relation to the intent of the original design. The delivery to and receipt by the Engineer does not constitute any Department acceptance or approval of the proposals shown thereon. Include the details of such proposals on subsequent detailed shop drawing submittals. Submit timely revisions and re-submittals for all variations from these overall scheme proposals.

13.5 ROLE OF THE DEPARTMENT'S PROJECT MANAGER (PM)

The Department's PM will be responsible for coordinating the procurement of Design-Build services as well as overseeing the engineering/inspection/construction of the project. A team approach, with a PM from Production and a PM from Operations (Construction), is a viable solution to fulfilling the responsibilities associated with this role. The responsibilities may include, but are not limited to:

- Working with Contracting Unit and other appropriate offices in establishing the pre-qualification categories and advertisement.
- Coordinating with the Federal Highway Administration representative on oversight and exempt projects
- Participating in the Technical Review Committee (TRC), including review of Letters of Interest to develop the long-list of Design-Build Firms (FHWA should be invited).
- Participating in the development of the RFP
- Working with the Contracting Unit in responding to Design-Build Firm's inquiries
- Participating in the pre-bid meeting, if applicable
- Coordinating the Technical Review Committee's evaluation of technical proposals
- Coordinating the submittal of technical evaluations to Selection Committee
- Acting as the Department's liaison with the Design-Build Firm during the construction of the project in general and as person in responsible charge of the project.
- Coordinating the review of the Firm's submittals by FDOT during design and construction
- Making periodic site reviews
- Reviewing and approving periodic progress payments
- Monitoring MBE/DBE participation
- Ensuring the Department receives final documents as specified in the contract
- Ensuring that proper CEI is performed during construction

- Working with appropriate offices to develop supplemental agreements if applicable
- Ensuring that the Firm's Quality Control (QC) plan is being followed
- Ensuring that all environmental commitments are followed through
- Ensuring that appropriate documentation takes place at each step in the process
- Furnishing the Firm an adequate supply of all Department standard forms necessary to carry out the terms of the project contract
- Conducting performance evaluations

The PM must rely heavily on a multi-disciplined team in order to: (a) determine the pre-qualification requirements, (b) develop the design and construction criteria, (c) evaluate the Letters of Interest (LOI) and technical proposals, and (d) oversee the design, construction, and CEI of the project. The District Secretary or the District Directors should assign the appropriate people to serve on this team. Due to the complexity of coordinating a Design-Build project, the PM and members of the multi-disciplined FDOT team must work in concert to successfully complete all elements of the contracting and administrative process required by Design-Build projects.

CHAPTER FOURTEEN**MATERIALS ACCEPTANCE PROGRAM (MAP)
FOR DESIGN-BUILD CONTRACTS****14.1 GUIDELINES FROM THE STATE MATERIALS OFFICE**

- A. All the materials used on the project must be reviewed and accepted by the Department and must meet the requirements of the Specifications and other governing documents.
- B. Refer to the Materials Manual for details on specific requirements and sub-processes in various material groups.
- C. The materials are divided in six groups for acceptance purposes.
- D. Bidders submit details on Group 5 materials with the Bids.
- E. Bid Proposals include the information that the bidders must incorporate their cost & resources associated with the QC, IA, and Verification requirements.
- F. Bids with Group 5 materials must include the cost analysis including the immediate cost Vs. Long Term Cost savings over the design period. The Materials Office will review all proposals for cost saving innovative use of materials.
- G. The Material Acceptance Program (MAP) covers all the process requirements of Quality Control (QC), Verification (V), Independent Verification (IV), Resolution (R) and Independent Assurance (IA).
- H. The Design-Build Firm will request and obtain a user ID from the Department, and obtain connectivity for LIMS in accordance with the guidelines available.
- I. No later than 21 calendar days prior to construction commencement, the Design-Build Firm shall prepare and submit a complete project-specific list of material items and quantities to be used on the project as a Job Guide Schedule (JGS) in the same format as the Department's current STRG. Those items in the STRG that are not to be used on the project shall not be included in the JGS, and conversely items that are not on the Department's STRG and are intended for use on the project shall be included on the JGS. The JGS shall be maintained throughout the project and shall reflect quantity changes in all materials previously placed and any additional materials placed. No work on activities, which require testing, can commence until the JGS has been reviewed and accepted by the Department.
- J. Testing of materials accepted by Field Sampling and Testing will be performed immediately following completion of material placement.
- K. Testing personnel will report the test results upon completion of the testing.
- L. The JGS shall be kept up-to-date, and provided by the Design-Build Firm on a monthly basis to the District Materials Engineer and District Construction

Engineer. The JGS shall specify each material placed by material number and related information, the total quantity placed throughout the project duration, the quantity placed since the previous submittal, and any additional materials identified with related quantities and testing details. These quantities will facilitate verification that minimum materials acceptance testing requirements in accordance with the STRG are being performed.

- M. At the completion of the project, the final JGS shall be in the same format as the monthly reports.
- N. The Design-Build Firm must meet all the requirements for successful completion of the MAP.
- O. The proposed MAP will include a general QC Plan (QCP). The QCP will include material specific information, including identifying the persons responsible in charge for various activities. See the Materials Manual for further information regarding QCP requirements.
- P. The materials used on construction projects are divided into the following six groups.

14.2 Group 1: Materials Accepted By Field Sampling & Testing.

- a. Definition: These materials are accepted based on the test results of the samples taken from the point of use, or otherwise as stated in the Specifications.
 - 1) These materials are listed in the LIMS.
 - 2) A Job Guide Schedule (JGS) must be created and submitted in accordance with 14.1 Guidelines above.
- b. Acceptance:
 - 1) Acceptance is based on Department's Verification testing.
 - 2) Design-Build Firm's Quality Control (QC) testing may be required.
 - 3) The test results must meet the requirements specified in the "Standard Specifications for Roadway and Bridge Construction (Specification.);" and any approved supplemental specifications.
- c. Process:
 - 1) The testing personnel will perform the sampling and testing and report the results into LIMS upon completion of testing.
 - 2) Additional requirements will be applied as described in the Contract documents, Independent Assurance Program and Materials Manual.
- d. Contact:
 - 1) The local District Materials Office is the primary contact for more information on this group of materials.

14.3 Group 2: Fabricated Structural Steel and Miscellaneous Metal Structures.

a. General:

- 1) The fabricated structural steel and miscellaneous metal structures include major steel structures, e.g. steel bridge components, overhead cantilevered sign supports with a 41-foot long or greater cantilever, and movable bridge components. This also includes minor metal structures such as toll structures.
- 2) During the design development, the Department or the Design-Build Firm representing the Department may add any other structures to the list of Group 2 materials.

b. Acceptance:

The Department or consulting firm representing the Department accepts these structures based on the fabricator's quality control inspection, testing, and Certification and Department's verification inspection and testing. The Department or consultant, representing the Department, performs the verification inspections and testing.

c. Process:

- 1) The Design-Build Firm will notify the District Structures Design Office of the Department regarding the types and locations of structural steel and other metal structures that are planned to be on the project. Notification will occur within 21 days of contract award or as otherwise Specified.
- 2) The Department Structures Design Office may identify additional structures during periodic reviews of the developmental Design.
- 3) The Design-Build Firm will contact the Department's District Materials Office and submit complete list of all identified structures, the location of the metal fabrication, and the anticipated fabrication schedule. The fabrication schedule shall include information regarding the anticipated total duration of the fabrication units, the number of days per week the fabrication facility will be fabricating, and the number of work-shifts the fabricator intends to work.
- 4) The Design-Build Firm will perform the required quality control inspection and testing and coordinate the verification inspection activities with the Department's Consultant. Any nonconformance or conflicts between the quality control and verification inspections shall be resolved so that the fabrication works result in full compliance with Department requirements.
- 5) The Consultant will report the verification results of the inspections and submit final Certification letter of the Design Build firm to the Project Engineer and the District Materials Office.
- 6) The Project/ Resident Engineer will acknowledge receipt of the final Certification letter as a part of the certification statement in the "Resident/ Project Engineer's Materials Certification Letter" to the State Materials Office (SMO).

d. Contact:

- 1) The Commercial Inspection Unit of the State Materials Office is the Primary contact for more information regarding the quality control and quality assurance inspections and testing of this Group of Materials.

14.4 Group 3: Manufactured Products.

a. Definition:

- 1) These materials are the “Manufactured Products” listed in Qualified Product List (QPL).

b. Acceptance:

- 1) These materials are to be accepted based on manufacturer’s certification.
- 2) The certifications must include the QPL Identification number.
- 3) The certifications must include all test results and meet minimum requirements as described in the Specifications.
- 4) The certifications must be typed on the Department approved form for each material. The forms are available from the Department’s Internet site or from the State Materials Office.
- 5) Unacceptable batches of such materials will be listed on the SMO web page.

c. Process:

- 1) The Design-Build Firm will submit individual certifications as the materials arrive on the project site.
- 2) The Acceptance/Verification personnel will, upon receipt of the certification, (1) verify the minimum requirements for test results, and (2) verify that the batch number/s listed are acceptable.
- 3) At the end of the project the Project Engineer will account for all the Certifications.
- 4) The Project Engineer will certify that all Certifications were received and the materials were found in compliance with the Specifications. This will be included as a certification statement in the “Managers Material Statement” to the State Materials Office.

d. Contact:

- 1) The State Materials Office, Manufactured Product & Qualified Product Coordinator is the primary contact for more information on the materials in this group.

14.5 Group 4: Incidental materials.

a. Definition:

- 1) These materials are manufactured products not listed in QPL, **AND**
 - 2) Any product/ material that requires only approval and installation on the project.
- b. Acceptance:
- 1) These materials will be accepted based on Manufacturer/ Supplier's certification.
 - The certification will meet the requirements as described in Group 3 materials.
 - 2) In addition to Manufacturer's certification, the Design-Build Firm will provide certification warranting the placed products.
 - The Design-Build Firm will provide one certificate covering all incidental materials used within the project limits at the time of project final certification.
- c. Process:
- 1) Same as Group 3 Products.
 - 2) The Project Manager's Materials Statement will also include the scope of Design-Build Firm's certificate.
- d. Contact:
- 1) The State Materials Office, Manufactured Product & Qualified Product Coordinator is the primary contact for more information on the materials in this group.

14.6 Group 5: Unapproved/New materials.

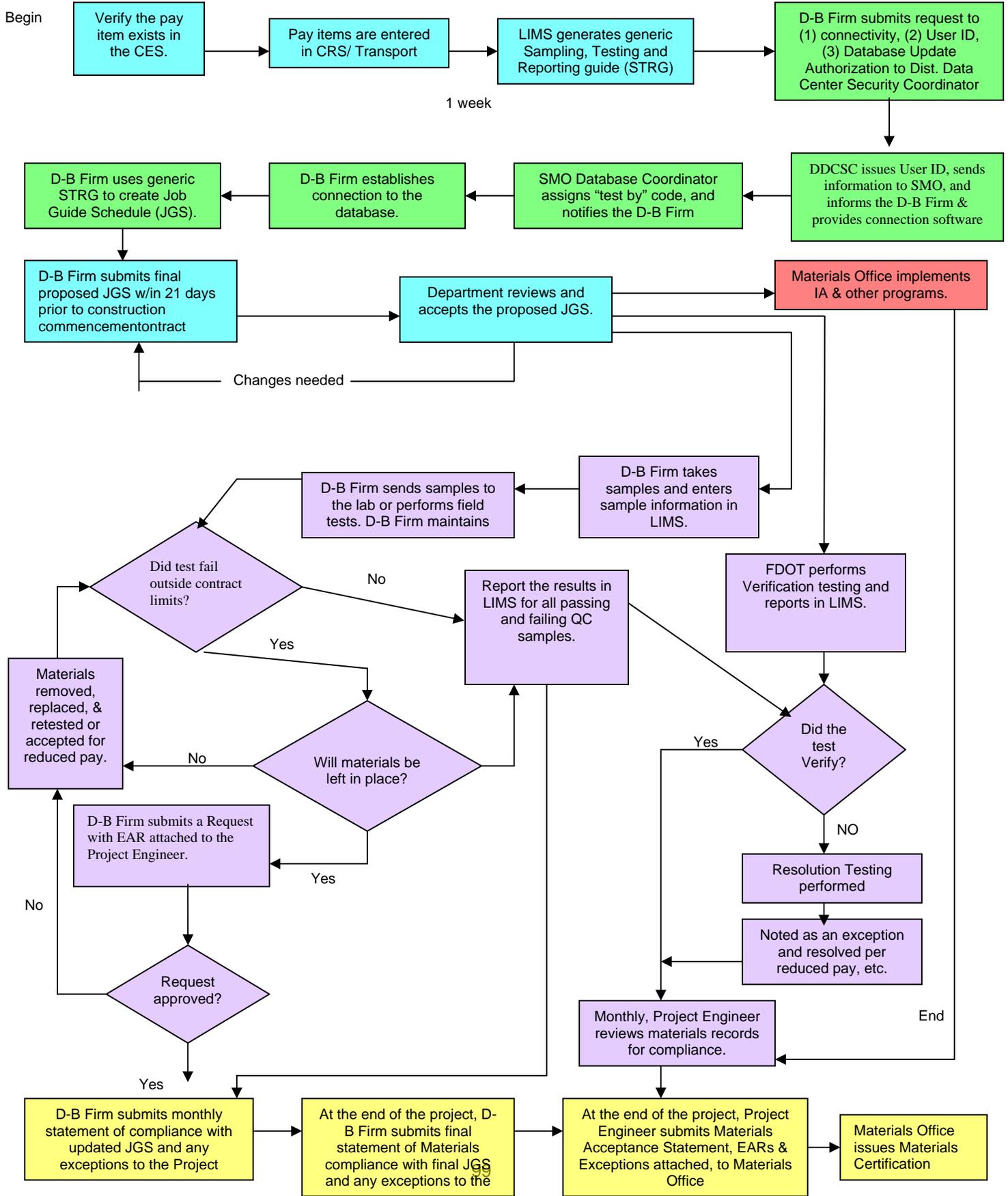
- a. Definition:
- 1) These are the materials that are not specified in the Department's references.
 - 2) It also includes innovative use of approved materials.
- b. Acceptance:
- 1) The Design-Build Firm must get the Materials Office authorization for the use and acceptance criteria of such materials prior to use.
 - 2) The Design-Build Firm will propose Acceptance criteria as the Design is being developed, based on the materials Group it falls in. The materials Groups are described herein.
 - The Materials Office will assist the Design-Build Firm in developing acceptable criteria for such materials when necessary.
- c. Process:
- 1) The Design-Build Firm, during developmental reviews, will define and get approval from the Materials Office, which of the previously defined Groups the material is in.

- 2) The process for appropriate Group will be followed.
- d. Contact:
 - 1) The local District Materials Engineer is the primary contact for more information on the materials in this group. . The District Materials Engineer will coordinate the evaluation process with the State Materials Office.

14.7 Group 6: Coarse and Fine Aggregates

- a. Definition: All the aggregates used on the project.
- b. Process: All the aggregates must be produced under the requirements of the Department's Aggregate Control Program.
- c. Contact:
 1. The State Materials Office, Aggregate Control Unit is the primary contact for more information on the materials in this group:
<http://www.dot.state.fl.us/statematerialsoffice/Geotechnical/Aggregates/agghome.htm>

Material Acceptance Program Process Flowchart

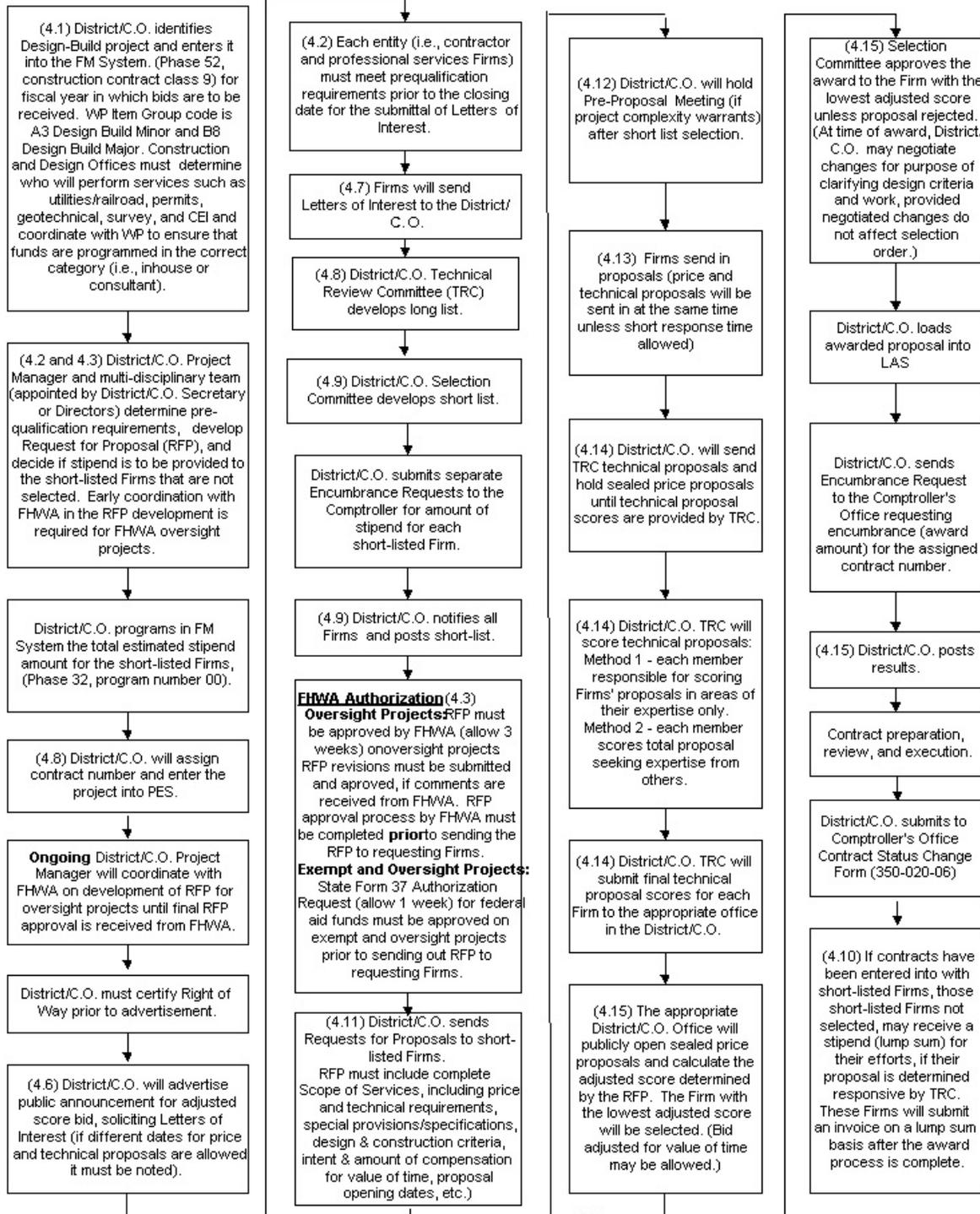


CHAPTER FIFTEEN**FINAL ESTIMATE GUIDELINES FOR DESIGN-BUILD PROJECTS**

- A. The Design-Build Firm shall assign the schedule of values to the activities in the CPM (Critical Path Method) schedule. (This will be the basis for the monthly, or as needed, progress payments)
- B. The Design-Build Firm shall have an approved DBE Affirmative Action Plan prior to a contract being awarded.
- C. When a deficiency is determined, the engineer will apply a reduction in payment based on the area of deficiency at the item's unit price table set forth in the contract.
- D. Monthly payments will be based on the Design-Build Firm's invoice and the approved payout schedule, fewer payments previously made.
- E. The Design-Build Firm shall make a request for payment by submitting an invoice no later than Twelve O'clock noon Monday after the monthly estimate cut-off date or as directed by the engineer, based on the amount of work done or completed.
- F. Retainage will be released when all provisions in the contract have been met.
- G. In addition to the submittal of the regular documents, the following items shall be added to the list of submittals:
 - 1. As-built (record) drawings
 - 2. Design plans and calculations
 - 3. Geotechnical reports
 - 4. Load rating of as-built structure(s)
- H. Monthly (Progress) payments shall be that portion of the work completed, as determined by the Project Administrator, as compared to the total work contracted.
- I. The monthly payments shall be approximate only and shall be subject to reduction for overpayments or increase for underpayments on preceding payments to the Design-Build Firm and to correction in the subsequent estimates and the final estimate and payment.
- J. Folder containing Pay Item Summary and Certification Sheet, followed by documented adjustments: Supplemental Agreements, Work Orders, Pay Reductions, Penalties that may have occurred on project.

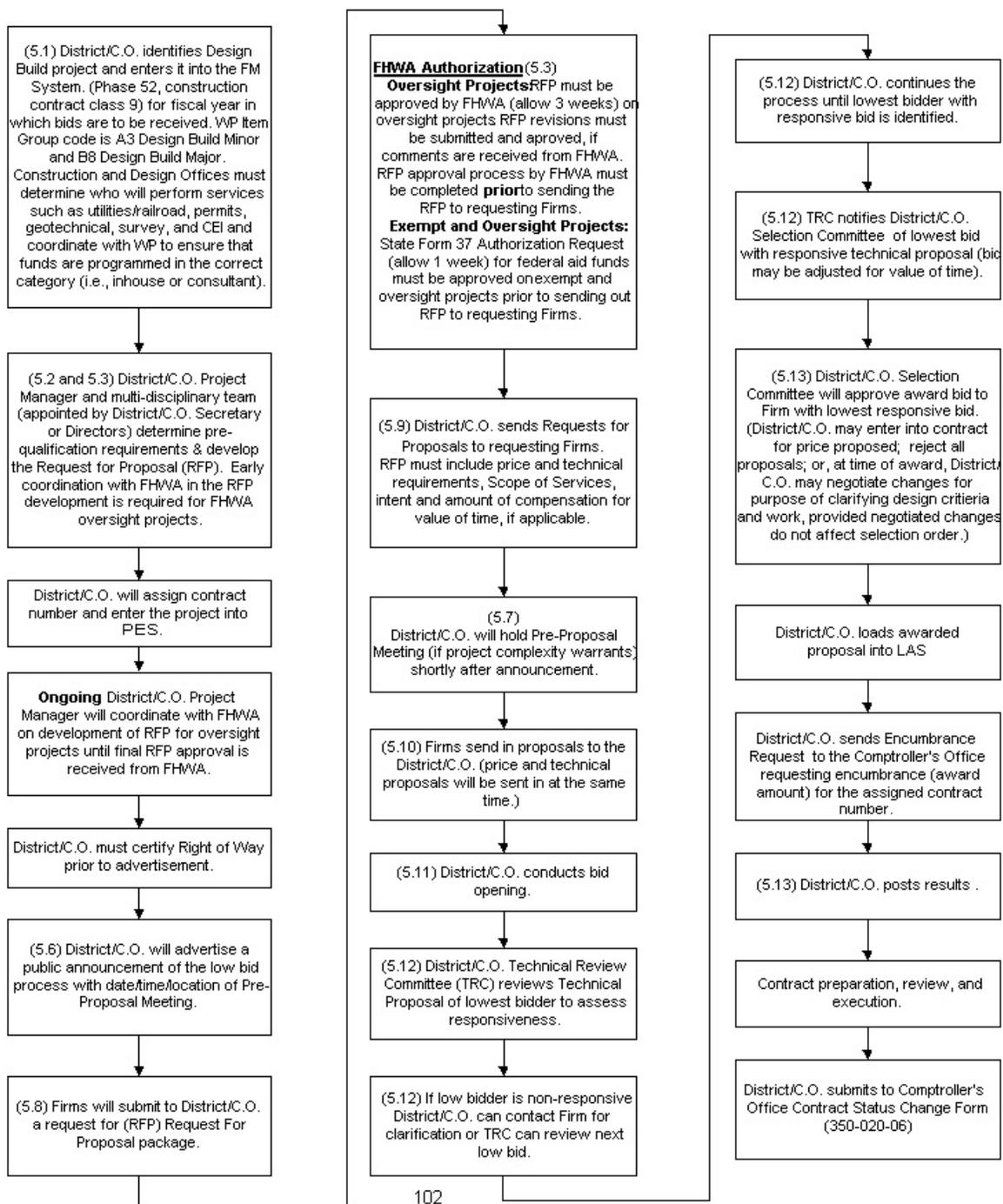
Attachment 1 - Contracting Flowchart Adjusted Score

(District or Central Office (C.O.) may be responsible for contracting D/B; therefore, both are identified in this process.)

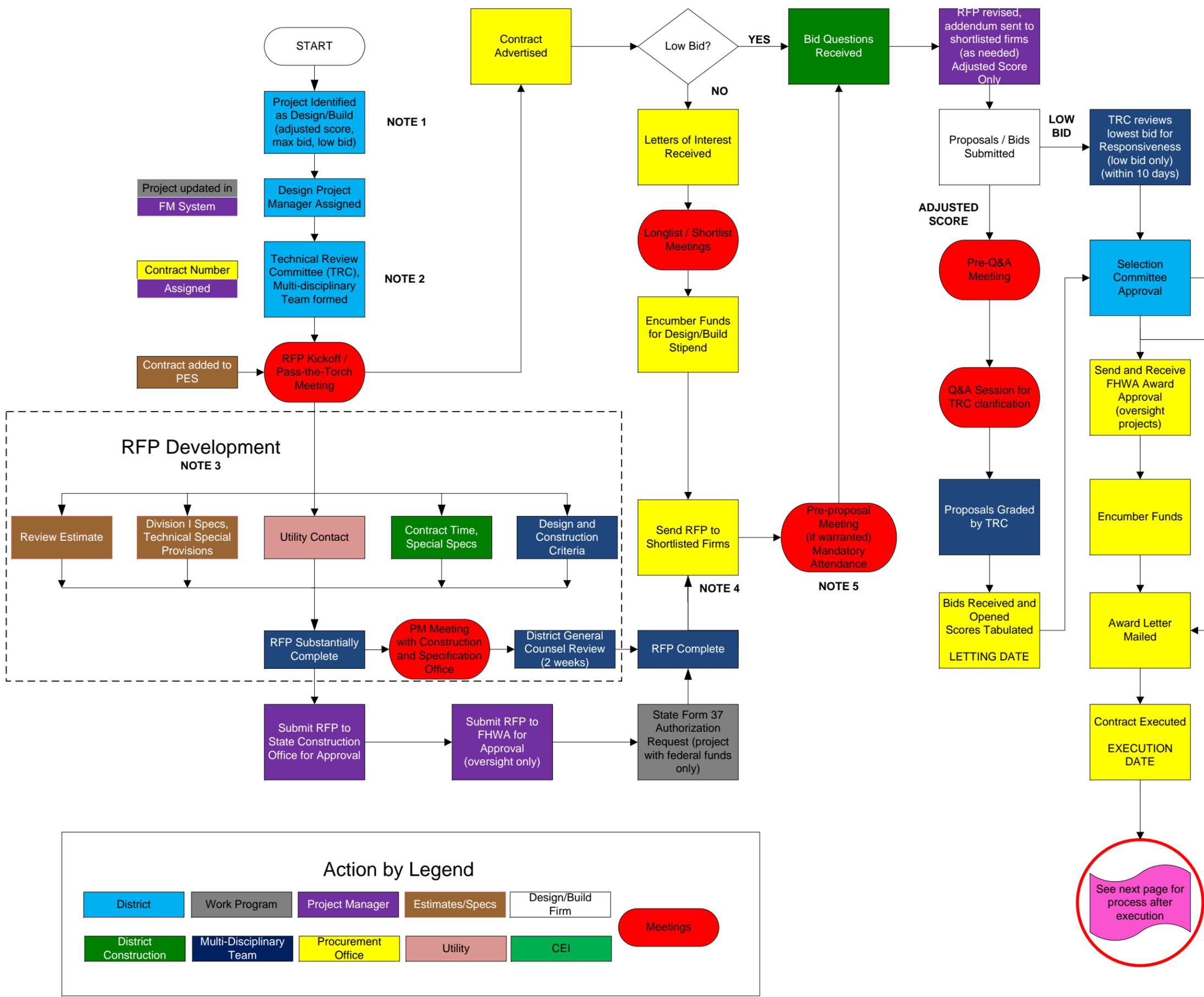


Attachment 2 - Contracting Flowchart

(District or Central Office (C.O.) may be responsible for contracting D/B; therefore, both are identified in this process.)



District 5 Design/Build Contracts **PRIOR** to Contract Execution



NOTES

1. See Design Build Guidelines for guidance on which types of projects should be adjusted score and which should be low bid. Must coordinate with Central Office to insure alternative contracting limit is not exceeded.

2. TRC includes District Design Engineer (or designee), District Construction Engineer (or designee), Local Construction Office representative, plus one or two from appropriate disciplines. TRC is designated by the DCE & DDE, confirmed by Selection Committee. Advisers are selected based on project type.

3. Proper development of the Design & Construction Criteria is critical to the success of any design/build project. Generally, the Design Project Manager will develop a DRAFT for all members to review and provide input. After all comments and concerns are incorporated into the criteria, all members should have the opportunity to review again. Several meetings between all concerned will probably be required to insure all critical requirements are included. Remember: If an item or activity is not in the Design & Construction Criteria, and the Department later decides it is absolutely necessary, it will cost EXTRA later.

- The FDOT Multi-disciplinary Team:**
- | | | |
|--------------|-------------------------|----------------------|
| Estimates | Roadway Design | Drainage |
| Utilities | Structures Design | Location Survey |
| Legal | Environmental Mgmt. | Right of Way |
| Maintenance | Structures & Facilities | Construction |
| Geotechnical | Traffic Operations | Materials & Research |

4. Three extra complete packages of all information sent to the Design/Build firms need to be retained in the District:
 1-for the contracting office records
 1-for the Design Project Manager Records
 1-for the CEI who will administer the contract

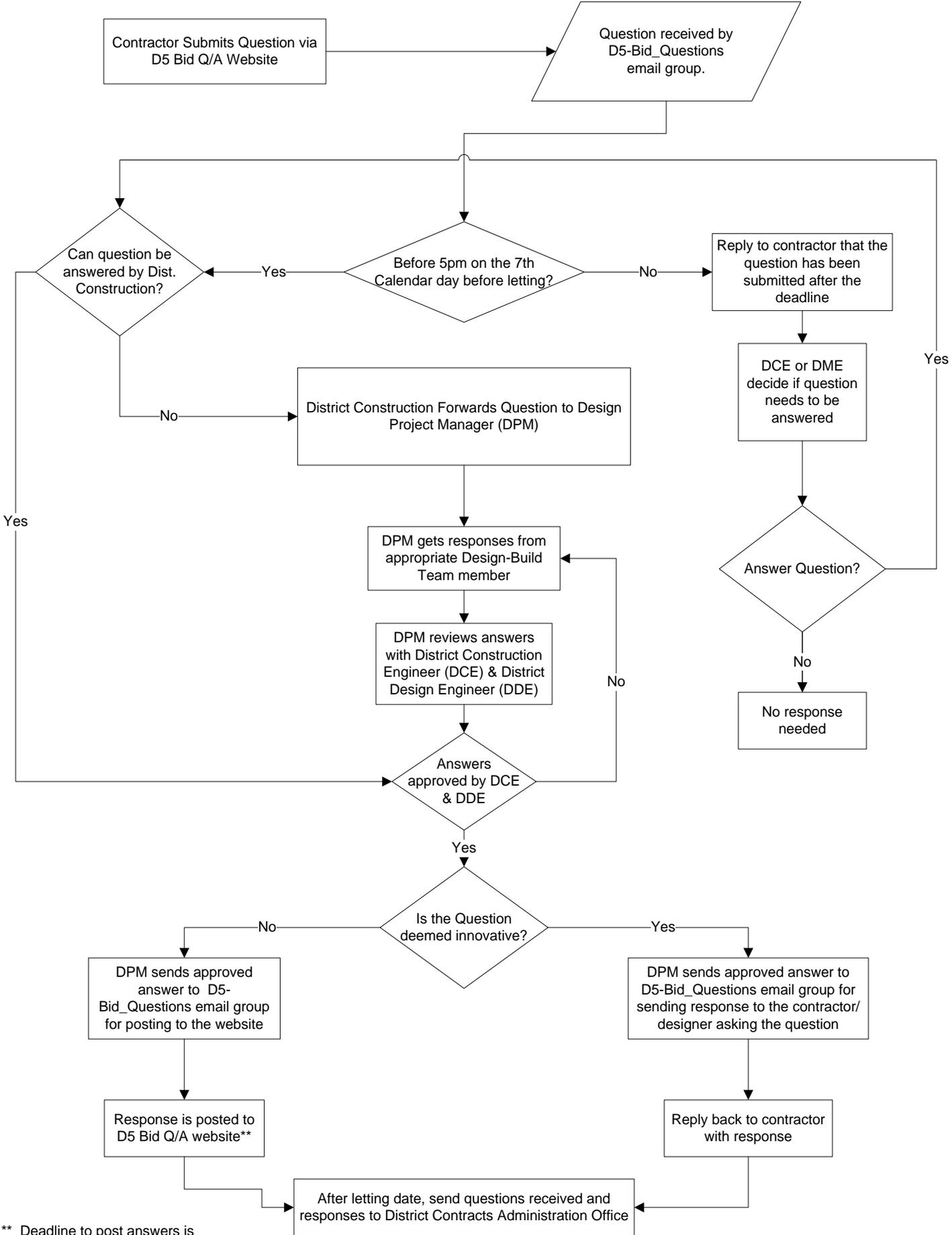
5. Consult with DCE & DDE

See next page for process after execution

Pass the Torch Agenda

- When: Shortly following letting
- Purpose: Transfer of relevant project information to construction
- Attendees: Agents, Reviewers, Acquisition Admin., Appraisal Admin., Attorney/paralegal, Design Project Manager, Design engineer/consultant (EOR), Construction PM/PA, contractor, Property Management Agent, Utility contact, Support staff, Relocation Coordinator, Relocation Admin., Outdoor Advertising Coordinator (ODA)
- Agenda:
 - Parcel by parcel discussion
 - Construction commitments
 - Encroachments
 - Remainders
 - Improvements
 - ODA issues
 - Owner concerns
 - Difficulties
 - Negotiation/Litigation status
 - Cure plans/Right of Entry agreements
 - Access issues
 - Plan notes
 - Utility issues
 - Demolition status
 - Environmental/contamination issues
 - Fencing and livestock control
 - Driveway Modifications & Property Owner Coordination
 - Utilities:
 - Update on utility relocation status
 - Joint Project Agreements
 - Non-Utility Joint Project Agreements i.e., like landscaping, street lighting
 - Discuss EOR post design services availability – Methods for dealing with RFIs
 - Environmental concerns
 - Review environmental permits with the EOR
 - Discuss implementation of the Erosion Control Plan
 - Customer satisfaction survey
 - Transfer of hard copy documents (commitment sheets on each parcel, right of entries, deed with special conditions, easements, final judgments, aerial photos)

District 5 Bid Questions Flow Chart – Design Build Projects



** Deadline to post answers is 2 calendar days prior to letting

Scope Commitment and Coordination Meeting Agenda

FM Number XXXXXX-X

March 9, 2009 1:00pm

Volusia County Conference Room

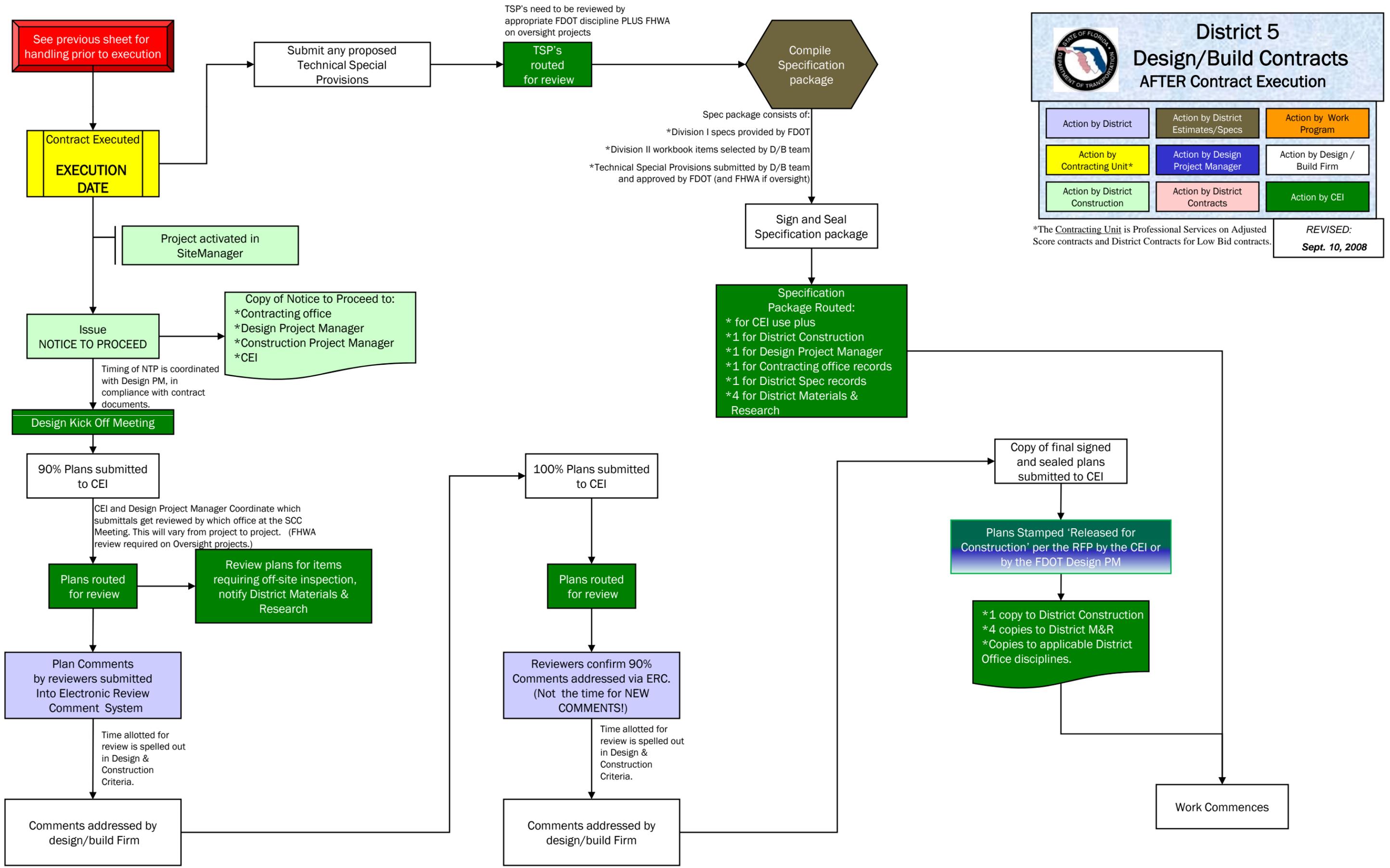
PRIOR TO THIS MEETING, all attendees (Technical Reviewers and Advisors) are expected to re-review the technical proposal of the winning firm as well as any notes from the Q&A session.

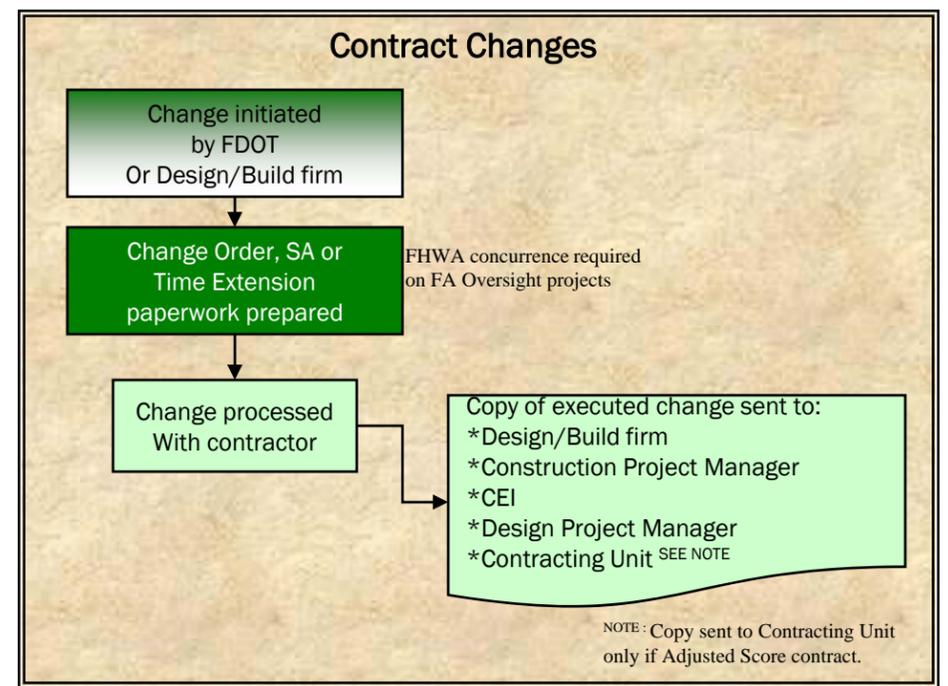
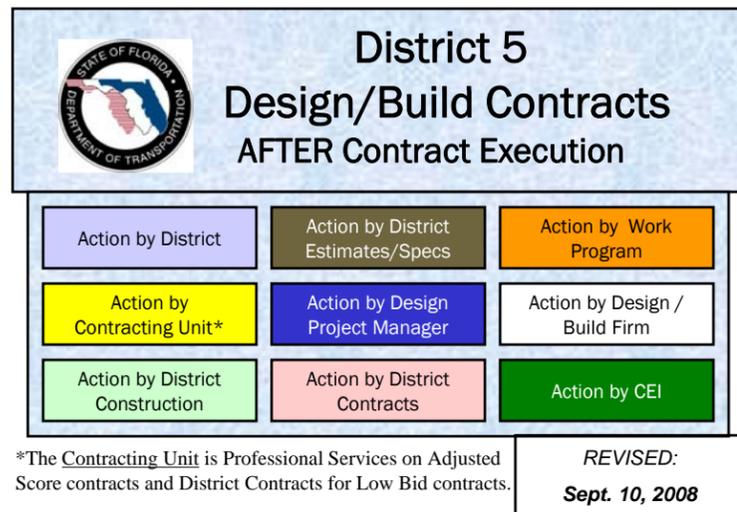
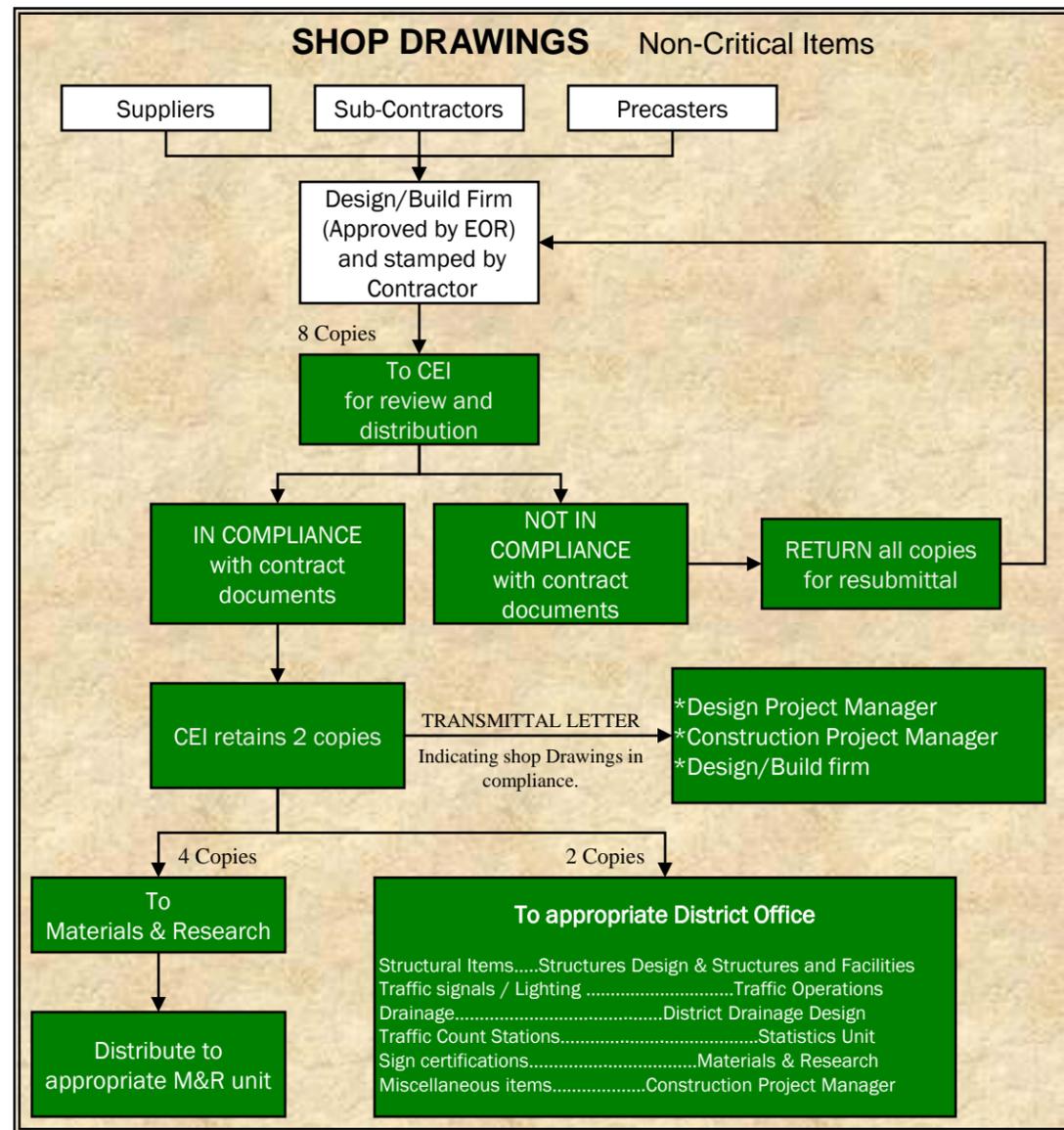
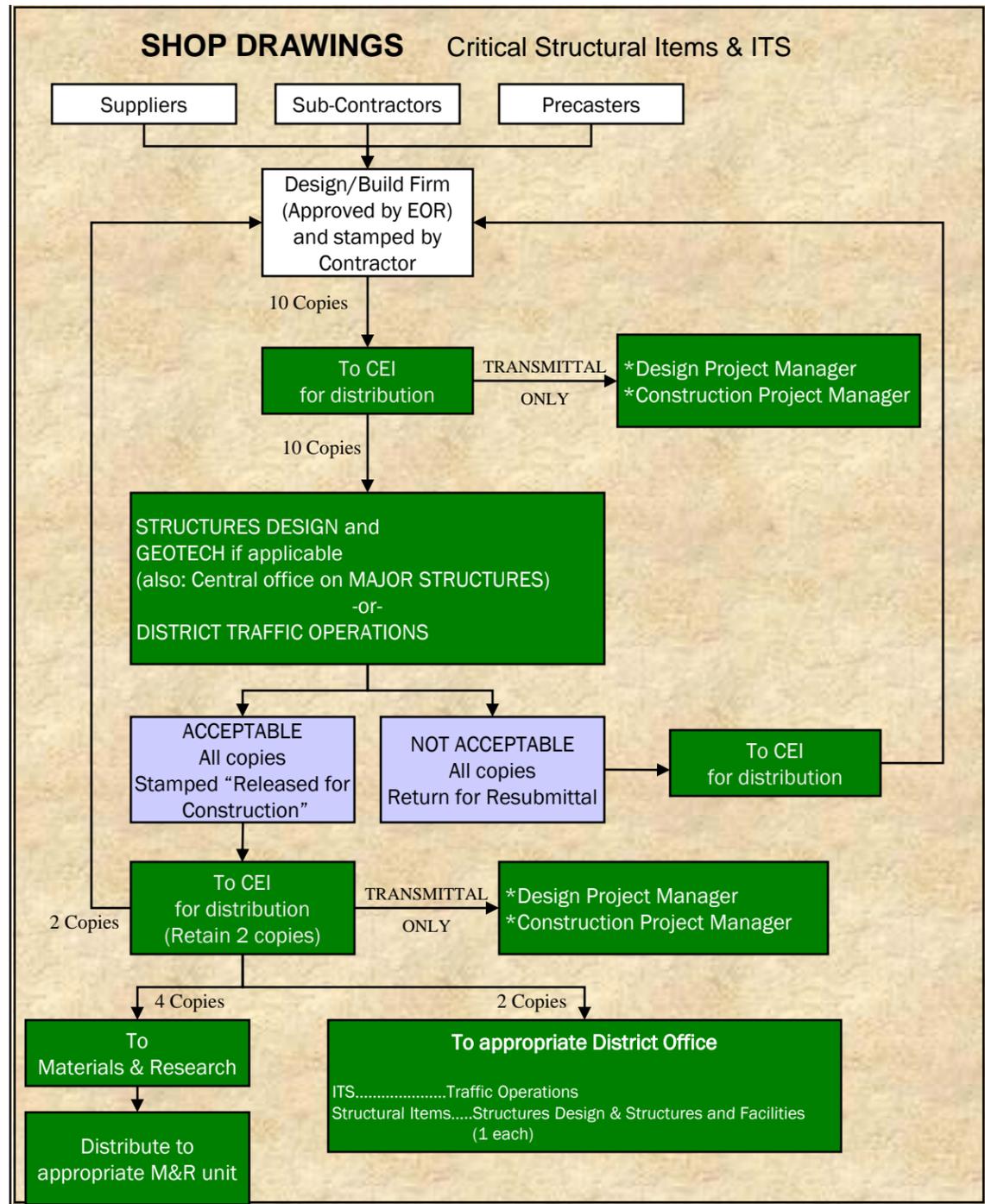
A. Introductions/purpose of meeting

The purpose of the meeting is to visit any commitments made in the winning proposers Technical Proposal and their responses at the Q&A session to identify any features the D/B firm proposed that were beyond (or better than) the minimum requirements in the RFP. The Department can then confirm if we want what the D/B firm proposed, or at the FDOT's discretion, if we want what the RFP requires instead. Once identified, all FDOT reviewers are then aware of what they should be expecting from the D/B firm, and any items proposed that the FDOT wants to incorporate into the project will be delivered.

B. For each department, list all commitments made with respect to that discipline either in Technical Proposal or Q&A Meeting

1. Determine if the commitment is inside/outside the scope requirements of the RFP
2. Determine if the commitment impacts another discipline
3. Determine if the commitment is desirable/undesirable
4. Determine if Design or Construction is appropriate to be responsible for monitoring that commitment





5. Utilities

- Utility company comments
 - Point of contact and phone number
- Design Build firm comments
- Excuse Utility Representatives

6. Maintenance of Traffic (RFP review and discussion)

- Lane Closure Restrictions;
- Discussion of MOT Phasing;

7. Erosion Control and SW Pollution Prevention Plans

- Contractor Certification Forms (DOT Forms [650-040-05](#) and [650-040-07](#))
- South Florida Water Management District Permit – #;
- St. John's River Water Management District Permit – #;

8. Special Project Requirements

- Shop Drawing Schedule of Submittals (Due within 60 days of contract start);
- Provide routing charts for contractor's use;
- Providing the Department Pavement marking readings of reflectivity per the specification.

9. Dispute Review Board (DRB)

- FDOT Representative;
- Contractor Representative;
- FDOT Representative and Contractor Representative need to be contacted so that they can choose the third DRB member.

10. Partnering

- Schedule first partnering meeting (if applicable).

11. Design Schedule / Schedule of Design Component Submittals

- Schedule to be submitted prior to first submittal;
- Who to submit plans to;
- Distribution to technical reviewers;
- Review times for comments, responses to comments;
- ERC coordination and monitoring;
- Issue coordination and meetings.

12. Construction Schedule / Progress Chart Submittals (Review of 8-3.2 Specifications in contract)

- CPM schedule Review Submission of a Working Schedule Specification 8-3.2
 - Submit to the engineer within 30 calendar days after execution of the Contract.
 - Each schedule activity shall be cost loaded. (2008 specifications)

13. Monthly Invoicing

- Schedule of Values must be reviewed and accepted by FDOT prior to first invoice;
- Cut-Off date provided by the contractor;
- Certification of Disbursement of Previous Payments to Subcontractors due monthly for Estimate (provided in handouts).

14. Public Involvement Coordinator

- The Department plans on hiring a Public Information Coordinator part-time to handle issues with the public, area businesses, and lane closure announcements.

15. Design Progress Meetings

- Agreed upon date, time and location.

16. Other

- Cover SCC Items

Preconstruction Conference Agenda
SR – Job Description
Contract No.
FM No.
Date Time Location

Note: The items highlighted in red are new specification requirements. The matrix was requested by the industry and SCO.

1. Introductions (Note: This meeting is being recorded)

- Name, Company;
- Please make sure that everyone has signed the attendance list.

2. Description of Project

- This project consists of :

Contractor: _____
Total Contract Amount \$ _____ (A+B Bid)
Contract Calendar Days _____ Days

3. Important Dates

- Project Award _____
- Execution _____
- Notice to Proceed _____
- First Chargeable Contract Day will be _____
- Contractor's anticipated start date _____

4. Delineation of Lines of Authority

FDOT

- | | | |
|-------------------------------------|-------|------|
| • Resident Engineer/Project Manager | Phone | Cell |
| • Project Administrator | Phone | Cell |
| • Inspector(s) | Phone | Cell |
| • Office Specialist | Phone | Cell |
| • Resident Asphalt Specialist | Phone | Cell |

Contractor

- Project Manager
- Superintendent
- QC Manager
- Emergency Phone Numbers (Day and Night)

Issue Escalation/Communication Matrix

Max. Time Hours/Days	FDOT Construction	Consultant CCEI	Designer	Contractor

5. Utilities

- Utility company comments
 - Status of each utility
 - Point of contact and phone number
- Resident Utility Coordinator comments
 - Review of Utility Issues
 - Schedule of Utility Meetings (See No. 29 – Utility Meetings will be combined with Progress Meetings)
- Contractor comments
- Excuse Utility Representatives

6. Minority Programs by _____, Resident Compliance Officer

- EEO Requirements;
- Labor Interview Requirements;
- Other Requirements (On-The-Job Training);
- EEO Meeting.
- Beginning with Projects Let 2005; submit [Form 700-011-13](#) on a monthly basis the Friday prior to monthly estimate cut-off (See form for instructions).

7. Errors or Omissions in the Plans

- Any errors or omissions noted by the contractor.

8. Maintenance of Traffic (plans review and discussion)

- Lane Closure Restrictions;
- Discussion of MOT Phasing;
- Certified Maintenance of Traffic (MOT) Review Report ([DOT Form 700-010-08](#)) due on a weekly basis. See Supplemental Specifications 102-3.2 for more details;
- Name of certified worksite supervisor, certification, 24 hour contact information; in accordance with specification 102 & 105-5.3. <http://www.dot.state.fl.us/rddesign/mot/MOT.shtm>
-
- Spec. 710-4.1- Reapply all traffic stripes and markings a minimum of 30 days after first application but prior to final acceptance of the project in accordance with the plan note.
- Law Enforcement.

9. Review of Plans and special requirements:

- **Earthwork**
- **Pipe/Drainage**
 - **Spec. 430-4.8 Final Pipe Inspection:** Based on Contract pavement type, upon completion of placement of concrete pavement or the placement of structural asphalt, but prior to placement of asphalt friction course, dewater installed pipe and provide the Engineer with a video recording schedule allowing for pipe videoing and reports to be completed and submitted to the Department and reviewed prior to continuation of pavement. For pipe 48 inches or less in diameter, provide the Engineer a video DVD and report using low barrel distortion video equipment with laser profile technology, non-contact video micrometer and associated software to meet the requirements of the specification.

10. 347 Concrete Specification

- As directed in the contractor's QC Plan
- Concrete Mix Design Submittal Process – must be submitted with QC Plan or as an addendum, from the contractor to the PA, from the PA to James Kirkland, M&R will approve and send an e-mail to the PA and producer. For transfer requests use the Contractor Quality Control Concrete Mix Design Issue Form.

11. Bridge Work

- Level II Concrete Plan;
- Pile Installation Plan;
- Drilled Shaft Installation Plan.

12. Asphalt Paving – _____, Resident Asphalt Specialist

- Superpave asphalt;
- Asphalt mix designs;
- Pre-paving Meeting;
- 48 hours notice given to CEI before any paving will be allowed;
- Asphalt QC Plan approved by the District Bituminous Engineer (this item is listed under #23 – Requested Documentation from Contractor).

13. Erosion Control and SW Pollution Prevention Plans

- Contractor Certification Forms (DOT Forms [650-040-05](#) and [650-040-07](#))
- See contract, page ___ for details on the Storm Water Pollution Prevention Plans;
- All permits must be posted;
- South Florida Water Management District Permit – #;
- St. John's River Water Management District Permit – #;
- Contractor is required to inspect and maintain controls weekly and within 24 hours after a rainstorm in excess of 0.50 inches. The contractor shall report all inspection findings and corrective actions taken as a result of the inspection. Inspection reports ([650-040-03](#)) shall be signed by the contractor and submitted weekly to the engineer at the progress meetings along with the name and certificate number of the person signing this form;
- DEP- disposal of debris: Off-site contractor is liable even with a letter of approval from the property owner. Contractor can request the DEP review the site and the Contractor needs to get a permit from the property owner to allow the area(s) to be filled;
- Review of Specification 110-9.1 (Contractor required to follow Local, State and Federal Regulations).
- Environmental Permitting – if the permit requires permeability tests make sure the contractor is aware and running the test.

14. Signal Installation

- In accordance with 611-5, the Contractor is required to provide a 90 day Warranty/Maintenance Bond prior to final acceptance;
- Contractor to coordinate with the maintaining agency and the department's representative prior to the final inspection.
- Furnish as-built drawings in accordance with 611-2.3.
- Notify District Traffic Operations (10) working days prior to beginning work on the Traffic Monitoring System.
- Immediately upon completion of the Traffic Monitoring System contact District Traffic Operations (Rubie Frase).

15. Special Project Requirements

- Shop Drawing Schedule of Submittals (Due within 60 days of contract start);
- Provide routing charts for contractor's use;
- Providing the Department Pavement marking readings of reflectivity per the specification.
- When contract has the Directional Bore pay item the contractor must provide the Department with a boring path report and as-built plans in accordance with 555-6.
- When contract has the Jack and Bore pay item the contractor must provide the Department with a boring path report and as-built plans in accordance with 556-6.

16. Landscaping Projects

- **Review Specification 580-3.6 Inspection Requirements.** Certify monthly on a form provided by the Department that the plants have been installed and are being maintained per Contract Documents. A **Registered Landscape Architect** acting as the Contractor's Landscape Quality Control representative will oversee the establishment period. The Contractor's Landscape Quality Control representative must perform **quarterly inspections** of planting areas and submit findings in report form to the Department. Information to be included in inspection report from the Contractor's Quality Control representative must include as a minimum the following:

17. Subletting Work/Rental Agreements/Purchase Orders/Letters of Entry

- <http://www.dot.state.fl.us/construction/Manuals/cpam/New%20Clean%20Chapters/Chapter5s5.pdf>
- Procedures for subletting (provided in handouts);
- Certification of Sublet Work ([DOT Form 700-010-36](#)), submit to District Operations Contracts Office (DOCO) Representative.
- Have the certifications been submitted?
- List of subcontractors.
- Procedures for Rental Agreements/Purchase Orders/Letters of Entry ([DOT Form 700-010-11](#))

18. Contract Time

- _____ Days
- Alternative Contract; review provision and incentive/disincentive bonus if applicable;
- Automatic work days- if the contractor would like to work on any of these days they must submit a written request to work within 10 days of the automatic suspension days listed in Section 8-6.4 of the Supplemental Specifications. The engineer must approve the request; time will be charged regardless;
- Weather Days – In accordance with 8-7.3.2 in the Standard Specifications.
- One day of inclement weather = One day of time granted.
- Projects let January 2006 and after, 8-6.4 and 8-7.3.2, review the specification.

19. Dispute Review Board (DRB)

- FDOT Representative;
- Contractor Representative;
- FDOT Representative and Contractor Representative need to be contacted so that they can choose the third DRB member.

20. Partnering

- Schedule first partnering meeting (if applicable).

21. Construction Schedule / Progress Chart Submittals (**Review of 8-3.2 Specifications in your contract**)

- CPM schedule Review Submission of a Working Schedule Specification 8-3.2
 - Submit to the engineer within 30 calendar days after execution of the Contract or at the preconstruction conference, whichever is earlier.
 - **Each schedule activity shall be cost loaded. (2008 specifications)**
 - **In accordance with 8-3.2.8 As-Built Schedule (2008 Specifications)**
 - **As a condition for release of any retainage, submittal of an as-built schedule which describes the actual order, start and stop times for all activities by the Contractor is required.**
- Night work, Day Work;
- Provide updated schedules at the progress meetings on monthly cutoff dates;

- Provide two-week look ahead schedules at the progress meetings;
- If the time granted by Supplemental Agreement is 15 days or greater a Revised Schedule is required.

22. Controlling Items of Work

- To be given to the Project Administrator every two weeks at the progress meeting or provide a signed two week look ahead (may be optional for some projects with CPM schedule).

23. Vehicle Registration in Florida ([DOT Form 700-010-52](#))

- Due the first working day of the project.

24. Contractor Past Performance Rating (CPPR)

- Discussion of the new CPPR system.

25. Equipment Specifications

- Place a 2" minimum alphanumeric identification number on both sides of all equipment (other than small tools). Number should sharply contrast with background. This applies to prime and sub-contractor equipment;
- Provide all trucks with numbers and certify that all trucks have a manufacturer's certification or permanent decal showing the trucks capacity rounded to the nearest 1/10th of a CY. Provide a certified list at the Pre-construction Conference.

26. Request for partial payment for stockpiled material

- Request for Payment for Stockpiled Materials ([DOT Form 700-010-42](#)) due with the required documentation on the Tuesday before a monthly cut off.

27. Requested Documentation from Contractor

- The following documentation needs to be submitted:
 - CPM Schedule(s) or work progress schedule as required by the contract
 - List of subcontractors;
 - Shop Drawing Schedule of Submittals (w/in 60 days of contract start);
 - Lighting Plan showing the type and location of lights to be used for night work;
 - Erosion Control Plan submitted and approved by the governing water management agency;
 - Asphalt QC Plan approved by the District Bituminous Engineer;
 - Vehicle Registrations ([DOT Form 700-010-52](#));
 - Maintenance of traffic plans;
 - Emergency phone list;
 - ATSSA Worksite Traffic Supervisor name, 24 hr/day phone, certifications;
 - Letters to local police, fire and ambulance departments nearby the project;
 - Level II Concrete Plan;
 - Pile Installation Plan;
 - Drilled Shaft Installation Plan;
 - Quality Control Plan.
 - List of officer or director within your company that has the authority to bind your company.
- In accordance with Specification 4-3.2.1, At the Preconstruction conference, certify to the Engineer the following:
 - A listing of on-site clerical staff, supervisory personnel and their pro-rated time assigned to the contract,
 - Actual Rate for items listed in Table 4-3.2.1,
 - Existence of employee benefit plan for Holiday, Sick and Vacation benefits and a Retirement Plan, and,
 - Payment for Per Diem is a company proactive for instances when compensation for Per Diem is requested.
 - Such certification must be made by an officer or director of the Contractor with authority to bind the Contractor. Timely certification is a condition precedent to any right of the Contractor to recover compensations for such costs, and failure to timely submit the certification will constitute a full, complete, absolute and irrevocable waiver by the Contractor of any right to recover such costs. Any subsequent changes shall be certified to the Engineer as part of the cost proposal or seven calendar days in advance of performing such extra work.

28. Handouts to Contractor

- Contractor's time extension request ([DOT Form 700-010-56](#));
- Controlling Item of Work Plan ([DOT Forms 700-010-15](#));
- CPPR (Discuss Rating Procedures) <http://www.dot.state.fl.us/construction/cppr/CPPRGuidelinesMain.shtm>
- Certification and Request for Payment for Stockpiled Materials ([DOT Form 700-010-42](#));
- Monthly Estimate cut-off dates
- Certification of Disbursement of Previous Payments to Subcontractors (Due Monthly for Estimate)
- Certification Compliance With Equal Employment Opportunity (EEO) ([DOT Form 700-011-13](#));
- Construction Compliance with Specifications and Plans (w/exemption examples) (Due Monthly for Estimate);
- Contractor's Certification of MOT Quantities (log forms) (Due Monthly for Estimate);
- Contractor's Certification of Bituminous Materials (Due Monthly for Estimate);
- Maintenance of Traffic Review Report (DOT Form);
- QA (Quality Assurance) Guidelines (for information only) Located at the following website: <http://www.dot.state.fl.us/construction/CONSTADM/Guidelist/GuideIndex.shtm> ;
- Procedures for subletting (Certification of Sublet Work – [DOT Form 700-010-36](#)).

29. Monthly Estimates

- Cut-Off dates provided to the contractor (provided in handouts);
- Certification of Disbursement of Previous Payments to Subcontractors due monthly for Estimate (provided in handouts);
- Construction Compliance with Specifications and Plans due monthly for Estimate (provided in handouts);
- Contractor's Certification of MOT Quantities (log forms) due monthly for Estimate (provided in handouts);
- Contractor's Certification of Bituminous Materials due monthly for Estimate (provided in handouts);

30. Public Information Coordinator

- The Department plans on hiring a Public Information Coordinator part-time to handle issues with the public, area businesses, and lane closure announcements.

31. Progress Meetings

- Agreed upon date, time and location (Progress Meetings will be combined with Utilities Meetings).

32. Emergency Evacuation Plan

- In case of a hurricane or other emergency affecting the project, there will need to be a plan to secure the project, list responsibilities, etc.

33. Other

- Discussion of Station boards need to placed throughout the project limits;
- Discussion of CQC.
- Contractor to discuss any Value Engineering Change Proposal (VECP) process Engineering Change Proposals.
- Discuss actions to be taken if an unpaid bill letter is received by the Department.
- **In accordance with 5-12.7 Mandatory Claim Records (2008 Specifications)**
 - **Once a notice of intent to claim has been timely filed, and not less than weekly thereafter as long as appropriate, provide the Engineer a copy of the Contractor's daily records and be likewise entitled to receive a copy of the Department's daily records.**
- In accordance with 5-7.5; prior to final acceptance of the project, mark, in a permanent manner on the surface of the completed work, all horizontal control points originally furnished by the Department.



Florida Department of Transportation
District V

EXAMPLE

**DESIGN/BUILD
REQUEST FOR PROPOSAL**

For

**Widening of I-95 to six lanes from south of Malabar
To north of Palm Bay Road**

Brevard County

Financial Projects Number(s): 405506-3-52-01

Federal Aid Project Number(s): ARRA 281 B

Contract Number: E5N19

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ATTACHMENTS

Division I (General Requirements and Covenants)
Design/Build Utility Agreements
Right of Way Maps
Permits
Typical Section Package
Pavement Design
Design Variations (sight distance, vertical distance, vertical alignment)
Section 725, Value Added Highway Lighting System
Section 475, Value Added Bridge Component
Special Provision – SP0070111ES
Special Provision – SP0090503ES
Special Provision – SP0090801ES

The attachments listed in the table of contents are by this reference hereby incorporated into and made a part of this RFP as though fully set forth herein.

Other Documents

The following documents are being provided with this RFP. Except as specifically set forth in the body of the RFP, these documents are provided for general information only. They are not being incorporated into and are not being made a part of the RFP, the contract documents or any other document that is connected or related to this project except as otherwise specifically stated therein. Nothing contained in these documents shall be construed as a representation of any field condition or of any state of facts upon which the Design/Build Firm can rely in performing under the contract. All information contained in these documents must be verified by a proper factual investigation and no claims for damages, time, or any other impacts may be based on these documents.

Signing Plans updated by FDOT
Straight Line Diagrams
Geotechnical Data
Pond Siting Report
Lighting Reports
Survey Information
Bridge Development Reports
Bridge Inspection Reports
Concept Plans (roadway, structures, signing and pavement marking, ITS, lighting)

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 widening of I-95 from south of SR 514 (Malabar Road) to north of Palm Bay Road in Brevard County, Florida.

Description of Work

The project involves the widening of existing four-lane Interstate 95 to a six-lane Interstate highway from south of SR 514 (Malabar Road) (MP 12.415) to north of Palm Bay Road (MP 16.588). The project work includes new pavement, drainage system improvements, bridge modification, ITS modifications, median barriers (temporary concrete barriers during all phases of construction and double-faced guardrail with rub rail when the project is complete), signing and pavement markings, milling and resurfacing, and lighting.

Roadway work includes new asphalt pavement and milling and resurfacing of the existing pavement including ramps at Malabar and Palm Bay Road. The roadway work also includes acceleration and deceleration lanes that meet Department requirements at all ramps. Drainage work includes all work necessary to comply with the permit requirements for water quality and quantity. Stormwater management facilities must be located within the right-of-way owned by the Department and as defined in this RFP. Structural work includes modification of the I-95 Bridge over SR 514 (Malabar Road), widening of the bridges over Melbourne-Tillman Canal and foundations for cantilever signs. ITS work will involve any necessary modifications to existing infrastructure. Modifications may include, but not be limited to, ITS equipment or communication such as fiber optic lines, DMS, CCTV, detection loops, equipment cabinets, junction or pull boxes, etc. located in areas with construction by the Design/Build Firm. Signing will require upgrading the signing to meet current Department standards to include cantilever signs at 5 interchanges: SR 514 (Malabar Road), Palm Bay Road N.E., US 192, SR 518 (Eau Gallie) and CR 509-Wickham Road interchanges. Pavement rehabilitation includes mainline I-95 and the interchange ramps to the limits as indicated on the Concept Plans. Interchange lighting shall be designed and constructed at the SR 514 (Malabar Road), Palm Bay Road N.E., US 192, SR 518 (Eau Gallie) and SR 528 (Beach Line) interchanges. Lighting shall be provided on the cross roads to the limits indicated on the Concept Plans. Under-deck bridge lighting shall be designed and constructed in accordance with the Concept Plans.

The Traffic Control Plans for the project shall meet the requirements of the Plans Preparation Manual, Department Standard Indices and special requirements included in this RFP in Section VI.L.

This project will include partnering.

The Design/Build Firm shall be responsible for trash pick-up and mowing within the limits of right-of-way on a 30-day cycle commencing at the Notice to Proceed and continuing through Final Acceptance of the project.

Any changes to requirements of this RFP by a Design/Build Firm must be received by the information cut-off date and approved by the Department. A change is defined as any deviation from the requirements of this RFP. These changes will be shared with other Design/Build Firms. Innovative concepts will not be shared with other Design/Build Firms. An innovative concept or idea is defined as the Design/Build Firm's means and methods in constructing the project and are not a part of the approved

changes to the RFP. The Department will determine if information submitted by the Design/Build Firm constitutes a change that is required to be shared with the other Design/Build Firms. All accepted variations and/or exceptions will be shared with the other shortlisted Design/Build Firms.

A. Design/Build Responsibility

The Design/Build Firm shall be responsible for survey, geotechnical investigation, design, acquisition of all permits not acquired by the Department, any required modification of permits acquired by the Department, maintenance of traffic, demolition, and construction on or before the date indicated in their proposal. The Design/Build Firm will coordinate all utility relocations.

The Design and Construction Criteria (Section VI) 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 environmental permitting agencies, and the public.

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.

As this project is an Economic Stimulus project, it will require reporting of new jobs being created by the contractor. As a result, the following special provisions have been included in this contract: Special Provisions SP0070111ES, SP0090503ES, and SP0090801ES.

This project is funded through the American Recovery and Reinvestment Act of 2009 (ARRA). Sections 1201 and 1512 of the American Recovery and Reinvestment Act require states to fulfill employment reporting obligations for each ARRA funded project. The Design/Build Firm on each ARRA project will provide the initial employment reporting information within five calendar days after the notice to proceed is issued by the Department. Thereafter, the reporting information will be due on a monthly basis on or before the 10th of each month until completion of the contract. Design/Build Firms are required to provide the necessary employment information (employees, hours, and payroll wages) for their own workforce as well as the workforce of all subcontractors that are active on their ARRA funded project(s) for the reporting month. FDOT has automated the form which will be used to collect employment information. The prime contractor can access FDOT's ARRA Employment Reporting System from the following website: <http://www2.dot.state.fl.us/ARRAEmploymentReporting> Failure to timely report the required information may be cause for rejection of the monthly invoice for contract payment.

Please refer to the informational brochure available at the following link, which provides summary information on the employment reporting requirements for ARRA:
<http://www.dot.state.fl.us/inspectorgeneral/ARRA/ARRABrochureFinalVersion.pdf>

Additional training information on ARRA employment reporting can also be accessed at:
<http://www.dot.state.fl.us/inspectorgeneral/ARRA.shtm>

A critical reporting component which is a requirement for prime consultants/contractors to have is a Dun and Bradstreet (DUNS) number. This is a unique nine-digit firm identification number

issued by Dun & Bradstreet. It is not the same as a firm's Tax ID Number. Design/Build Firms who don't already have a DUNS number can register for it thru the following website: <http://www.dnb.com/us/>

Design/Build Firms who do not already have a DUNS number should begin the application process. According to the D&B website, it takes a minimum of 30 business days for a new D&B DUNS Number to be processed.

B. Department Responsibility

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

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
<u>May 18, 2009</u>	Shortlist meeting
<u>June 1, 2009</u>	Deadline for submission of written questions prior to the pre-proposal meeting
<u>June 2, 2009</u>	Pre-proposal meeting at 10:00 a.m. local time in Cypress A Conference Room, 1 st Floor of the District V Administration Building (District Office), 719 S. Woodland Blvd, Deland, Florida 32720
<u>June 26, 2009</u>	Information cut-off date and Final deadline for submission of questions at 5:00 pm local time
<u>July 14, 2009</u>	Technical Proposals due in District Office by 5:00 p.m. local time
<u>August 4, 2009</u>	Question and Answer Session in the Osceola County Conference Room, 4 th floor of the District V Administration Building (District Office), 719 S. Woodland Blvd, Deland, Florida 32720. Times will be assigned during the pre-proposal meeting. One hour will be allotted for questions and responses.
<u>August 14, 2009</u>	Price Proposals due in District Office by 9:00 p.m. local time.
<u>August 14, 2009</u>	Public announcing of Technical Scores and opening of Price Proposals at 10:00 p.m. local time in Osceola County Conference Room, 4 th floor of the District V Administration Building (District Office), 719 S. Woodland Blvd, Deland, Florida 32720
<u>August 24, 2009</u>	Public Meeting of Selection Committee to determine intended Award
<u>August 24, 2009</u>	Posting of the Department's intended decision to Award (will remain posted for 72 hours)
<u>August 31, 2009</u>	Anticipated Award Date

<u>Sept 22, 2009</u>	Anticipated Execution Date
<u>October 6, 2009</u>	NTP

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

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 bid guaranty in an amount of not less than five percent of the total bid amount shall accompany each Proposer's Price Proposal. The 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 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 guaranty shall be a liquidated sum, which shall be due in full in the event of default, regardless of the actual damages suffered. The bid guaranty of all Proposers' shall be released at such time as the successful Proposer has complied with the condition stated herein, but not prior to that time.

D. Pre-Proposal Meeting

Attendance at the pre-proposal meeting is mandatory and any short listed Proposer who fails to attend will be deemed non-responsive and automatically disqualified from further consideration. All questions of Proposers to be discussed at the pre-proposal meeting must be submitted in writing by the deadline stated in the Schedule of Events. The purpose of this meeting is to provide a forum for all concerned parties to discuss the proposed project, answer questions on the design and construction criteria, CPM schedule, and method of compensation, instructions for submitting proposals, and other relevant issues. In the event that any discussions or questions 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 summary of questions and answers or an 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. The Proposers shall direct all questions via email to the Department's Question and Answer website: www2.dot.state.fl.us/construction/bidquestionmain.asp

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 prior to the information cutoff date, 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 Session

The Department shall meet with each Proposer, formally, for a Question and Answer session. FHWA shall be invited on FA Oversight Projects. The purpose of the Q & A session is for the Technical Review Committee to seek clarification and ask questions, as it relates to the Technical Proposal, of the Proposer. The Question and Answer sessions will occur a minimum of two (2) weeks after the date the Technical Proposal are due, and be part of the Overall Technical Proposal Scoring. The Proposers shall be given a minimum of one (1) week after the Question and Answer session to submit their Price Proposal. The Department will terminate the presentations promptly at the end of the allotted time. The Department may tape record or videotape all or part of the presentations. The Question and Answer session will not constitute "discussions" or negotiations. Proposers will not be permitted to ask questions of the Department except to ask the meaning of a clarification question posed by the Department. No additional time will be allowed to research answers.

Proposing firms will be limited to a maximum of nine (9) staff members (including the firm's principal and sub-consultants) at the Question and Answer Session. It is highly recommended that the key technical staff members, particularly the Project Manager, who will actually be providing the services, be included in the session.

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 receipt of this Request for Proposals. 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, Room 562
Tallahassee, Florida 32399-0458

The formal written protest must state with particularity the facts and law upon which the protest is based and be legible, on 8 ½ x 11-inch white paper and contain the following:

1. Name, address, telephone number, and Department identifying number on the Notice, if known, and name, address and telephone number of a representative, if any; and
2. An explanation of how substantial interest will be affected by the action described in the Request for Proposals; and

3. A statement of when and how the request for Proposals was received; and
4. A statement of all disputed issues of material fact. If there are none, this must be indicated; and
5. A concise statement of the ultimate facts alleged, as well as the rules and statutes, which entitle to relief; and
6. A demand for relief; and
7. Conform to all other requirements set out in Florida Statutes (F.S.), Chapter 120 and F.A.C., Chapter 28-106, including but not limited to Section 120.57 F.S. and Rules 28-106.301, F.A.C., as may be applicable.

A formal hearing will be held if there are disputed issues of material fact. If a formal hearing is held, this matter will be referred to the Division of Administrative Hearings, where witnesses and evidence may be presented and other witnesses may be cross-examined before an administrative law judge. If there are no disputed issues of material fact, an informal hearing will be held, in which case the person filing the protest will have the right to provide the Department with any written documentation or legal arguments which they wish the Department to consider.

Mediation pursuant to Section 120.573, F.S., may be available if agreed to by all parties, and on such terms as may be agreed upon by all parties. The right to administrative hearing is not affected when mediation does not result in a settlement.

Failure to file a protest within the time prescribed in Section 120.57(3), F.S., shall constitute a waiver of proceedings under Chapter 120, F.S.

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.

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. The Department, at their discretion, may elect to consider those variations in awarding points to the proposal rather than rejecting the entire proposal.
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. Proposers 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 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. Proposers shall examine boring data, where available, and make their own interpretation of the subsoil investigations and other preliminary data, and shall base his bid on his own opinion of the conditions likely to be encountered. The submission of a proposal is prima facie evidence that the Proposer has made an examination as described in this provision.

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 point one percent (8.1%) race-neutral DBE goal. This means that the State's goal is to spend at least 8.1% 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 8.1% 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 8.1% 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.

B. Anticipated DBE Participation Statement:

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. This statement shall be submitted to the District Contract Compliance Manager/ Resident Compliance Officer who will then submit it electronically to the Equal Opportunity Office. Although these statements WILL NOT become a mandatory part of the contract, they will assist the Department in tracking and reporting

planned or estimated DBE utilization.

C. Equal Opportunity Reporting System:

The Design/Build Firm is required to report monthly, through the Department's Equal Opportunity Reporting System on the Internet at, <http://www.dot.state.fl.us/equalopportunityoffice/> actual payments, minority status, and the work type of all subcontractors and suppliers. All DBE payments must be reported whether or not the prime initially planned to utilize the company. Each month the prime must report actual payments to all DBE and MBE subcontractors and suppliers. In order for the race neutral DBE Program to be successful, cooperation is imperative.

D. 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.

E. DBE Affirmative Action Plan:

A DBE Affirmative Action Plan must be approved and on file with the Equal Opportunity Office prior to award of the contract for each prime Design/Build Firm. Update and resubmit the plan every three years. No Contract will be awarded until the Department approves the plan. The DBE Affirmative Action Plan must be on your company's letterhead, signed by a company official, dated and contain all elements of an effective DBE Affirmative Action Plan. These Plans should be mailed to:

Florida Department of Transportation
Equal Opportunity Office
605 Suwannee Street, MS 65
Tallahassee, FL 32399-0450

Questions concerning the DBE Affirmative Action Plan may be directed to the Equal Opportunity Office by calling (850) 414-4747.

F. 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. The Department is now in the process of collecting this data.

On the Bidders Opportunity Form if the answers to numbers 2, 3, 4, or 5 are not known, leave them blank and the Department will complete the information. This information should be returned with the bid package or

proposal package or submitted to the Equal Opportunity Office within three days of submission. It can be mailed to the Equal Opportunity Office or faxed to (850) 414-4879.

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 Design Standards and Design Standards Modifications. The Design/Build Firm shall use the edition of the Design Standards and Design Standard Modifications that is in effect at the time the bid price proposals are due in the District Office. 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
<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 Surveying Procedure
<http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/550030101.pdf>
4. Florida Department of Transportation EFB User Guide (Electronic Field Book)
<http://www.dot.state.fl.us/surveyingandmapping/downloads.shtm>
5. Florida Department of Transportation Drainage Manual
<http://www.dot.state.fl.us/rddesign/dr/Manualsandhandbooks.shtm>
6. Florida Department of Transportation Soils and Foundations Handbook
<http://www.dot.state.fl.us/structures/Manuals/SFH.pdf>
7. Florida Department of Transportation Computer Aided Design and Drafting (CADD) Production Criteria Handbook Roadway Standards
<http://www.dot.state.fl.us/ecso/downloads/publications/CriteriaHandBook/>
8. Florida Department of Transportation Production Criteria Handbook CADD Structures Standards
<http://www.dot.state.fl.us/ecso/downloads/publications/CriteriaHandBook/>
9. Florida Department of Transportation Structures Manual including Temporary Design Bulletins
<http://www.dot.state.fl.us/structures/manlib.shtm>
10. AASHTO – A Policy on Geometric Design of Highways and Streets
https://bookstore.transportation.org/item_details.aspx?ID=110
11. MUTCD
<http://mutcd.fhwa.dot.gov/>

12. Elders Road User Program
<http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/000750001.pdf>
<http://www.dot.state.fl.us/trafficoperations/Operations/ElderRdUser.shtm>
13. American Disabilities Act
<http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/625020015.pdf>
14. Florida Highway Landscape Guide
<http://www.dot.state.fl.us/emo/beauty/landscap.pdf>
15. Florida Department of Transportation Florida Sampling and Testing Methods
<http://www.dot.state.fl.us/statematerialsoffice/administration/resources/library/publications/fstm/disclaimer.shtm>
16. Florida Department of Transportation Pavement Coring and Evaluation Procedure
<http://www.dot.state.fl.us/statematerialsoffice/administration/resources/library/publications/materialsmanual/documents/v1-section32-clean.pdf>
17. Florida Department of Transportation District Design Guidelines
<http://www.dot.state.fl.us/rddesign/updates/files/updates.shtm>
18. Florida Department of Transportation Utility Accommodation Manual
<http://www.dot.state.fl.us/rddesign/utilities/UAM.shtm>
19. AASHTO – Specifications for Highway Bridges
https://bookstore.transportation.org/category_item.aspx?id=BR
20. Florida Department of Transportation Construction Project Administration Manual
<http://www.dot.state.fl.us/construction/Manuals/cpam/CPAMManual.shtm>
21. Florida Department of Transportation Flexible Pavement Design Manual
<http://www.dot.state.fl.us/pavementmanagement/PUBLICATIONS.shtm>
22. Florida Department of Transportation Rigid Pavement Design Manual
<http://www.dot.state.fl.us/PavementManagement/pcs/RigidPavementDesignManualJAN2006.pdf>
23. Florida Department of Transportation Pavement Type Section Manual
<http://www.dot.state.fl.us/PavementManagement/pcs/PavementTypeSelectionMarch152008.pdf>
24. Florida Department of Transportation Right of Way Manual
<http://www.dot.state.fl.us/rightofway/Documents.shtm>
25. Florida Department of Transportation Intelligent Transportation System Guide Book
http://www.dot.state.fl.us/TrafficOperations/Doc_Library/Doc_Library.shtm
26. 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>
27. Florida Department of Transportation Bicycle Facilities Planning and Design Handbook
<http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/625010050.pdf>
<http://www.dot.state.fl.us/emo/pubs/pdeman/pt2ch14.pdf>
28. Federal Highway Administration Hydraulic Engineering Circular Number 18 (HEC 18).
http://www.fhwa.dot.gov/engineering/hydraulics/library_arc.cfm?pub_number=17

29. 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/2005/2005FloridaGreenbook.pdf>
30. 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 clearly identified 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 will be responsible for identifying and performing any geotechnical investigation, analysis, and design dictated by the project needs. All geotechnical work necessary shall be performed in accordance with the governing regulations.

The Design/Build Firm shall provide the Department signed and sealed design and construction reports. The reports shall be a record set of all geotechnical information, including relevant support data.

2. Pile Foundations

The Design/Build Firm shall provide Geotechnical Consultant Services in accordance with the Department standards, policies and procedures to perform geotechnical design, foundation construction services and dynamic testing. In addition to the standard policies, the following qualifications are required:

- Production pile lengths and driving criteria shall be developed by the same engineering firm performing the dynamic pile testing under the direct supervision of a Registered Professional Engineer in the State of Florida. This Engineer must have been in responsible charge of the geotechnical foundation construction engineering and dynamic testing work on at least 5 Department bridge projects, including Department Structures Design Category 2 bridge projects, having driven pile foundations. The Engineer's experience shall include the pile type being proposed in the Technical Proposal. This "responsible charge" experience shall include verifiable and successful static, Osterberg Cell and/or Statnamic load test (as will be utilized on the project) experience, as well as Pile Driving Analyzer (PDA), WEAP computer program and CAPWAP computer program experience. Production pile lengths and driving criteria shall be authorized in a letter signed and sealed jointly by the Engineer responsible for the dynamic testing and the Geotechnical Foundation Design Engineer of Record.

- The pile foundation installation shall be supervised and certified by the Geotechnical Foundation Design Engineer of Record. These services shall include providing CTQP-certified Pile Driving Technicians in the numbers necessary to comply with Department specifications for recording pile driving records. Provide pile-driving logs to Department within 24 hours of completing the driving of each pile. The Geotechnical Foundation Design Engineer of Record shall be responsible for addressing any foundation installation problems with the assistance and concurrence of the Engineer responsible for the dynamic testing.

3. Drilled Shaft Foundations for Bridges and Major Structures

The Design-Build Firm is responsible for identifying and performing all geotechnical investigation, analysis, and design required for the project in accordance with FDOT guidelines, procedures, and specifications. The Design-Build Firm shall employ geotechnical and drilled shaft testing consultants with the following minimum qualifications:

- Use professional engineers registered in the State of Florida with at least 3 years of post-registration experience in drilled shaft foundation design and construction. The Geotechnical Foundation Design Engineer of Record must have designed and worked on at least three (3) FDOT bridge projects, including at least one (1) FDOT Structures Design Category 2 bridge project with drilled shaft foundations. This “responsible charge” experience shall include verifiable and successful implementation of static, Osterberg Cell and/or Statnamic load test results, and evaluation of pilot hole data. All designs must be signed and sealed by the Geotechnical Foundation Design Engineer of Record.
- The drilled shaft installation shall be supervised and certified by the Geotechnical Foundation Design Engineer of Record. These services shall include providing CTQP-qualified Drilled Shaft Inspectors in the numbers necessary to comply with Department specifications for recording drilled shaft construction records. Provide drilled shaft construction logs to FDOT within 24 hours of completing the shaft.
- Use drilled shaft superintendents in responsible charge of drilling operations experienced in drilled shaft installation and testing in the State of Florida. This “responsible charge” experience shall include at least three (3) FDOT bridge projects, including at least one (1) FDOT Structures Design Category 2 bridge project with drilled shaft foundations.

The Design-Build Firm shall submit qualification statements for the geotechnical and non-destructive testing firms to be used on the project for approval by the District Geotechnical Engineer at least 30 calendar days before beginning the design. Acceptance of the contractor’s personnel does not relieve the Design-Build Firm of the responsibility for obtaining the required results in the completed work.

4. Drilled Shaft Foundations for Miscellaneous Structures

The Design-Build Firm is responsible for identifying and performing all geotechnical investigation, analysis, and design required for the project in accordance with FDOT guidelines, procedures, and specifications. The Design-Build Firm shall employ geotechnical and drilled shaft testing consultants with the following minimum qualifications:

- Use professional engineers registered in the State of Florida with at least 3 years of post-registration experience in drilled shaft foundation design and construction.
- The drilled shaft installation shall be supervised and certified by the Geotechnical Foundation Design Engineer of Record. These services shall include providing CTQP-qualified Drilled Shaft Inspectors in the numbers necessary to comply with Department specifications for recording drilled shaft construction records. Provide drilled shaft construction logs to FDOT within 24 hours of completing the shaft.
- Use drilled shaft superintendents in responsible charge of drilling operations experienced in drilled shaft installation and testing in the State of Florida. This “responsible charge” experience shall include at least three (3) FDOT projects with drilled shaft foundations of similar size.

D. Environmental Permits:

1. Storm Water and Surface Water:

Plans shall be prepared in accordance with Chapter 62-25, Regulation of Storm water Discharge, Florida Administrative Code.

2. Permits:

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, 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. 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 will obtain permits while acting as an authorized representative for the “Department” for permitting purposes only. 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 is approved.

The Design/Build Firm shall be responsible for an assessment of all potential gopher tortoise habitat that could be impacted by the project. The habitat will be systematically surveyed according to the current guidelines published by the Florida Fish and Wildlife Conservation Commission (FWC). If gopher tortoise burrows are found, all practicable measures will be employed to avoid impacts. The Design/Build Firm shall be responsible for obtaining an FWC permit for the relocation of gopher tortoises and commensals from burrows which cannot be avoided, and relocation shall be performed at a time as close as practicable to the start of construction activities at the site of the burrows. If new burrows are found after relocation, their occupants will also be relocated. A copy of the permit and any subsequent reports to FWC must be provided to the District 5 Environmental Management Office.

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.

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 his 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.

3. As-Built Drawings

Upon substantial completion of the project and before its final acceptance, the Design/Build Firm shall submit to the engineer two signed and sealed copies of as-built drawings of all installed and constructed drainage control systems as required by Environmental Regulatory Agency permit. The as-built drawings shall be based on the Water Environmental Regulatory Agency permitted construction drawings revised to reflect any changes made during construction that affects the drainage system. Both the original design and constructed condition must be clearly shown. The plans need to be clearly labeled as "as-built" or "record" drawings.

All surveyed dimensions and elevations required shall be verified and signed, dated and sealed by a Florida registered professional surveyor or professional engineer. Indicate the location of the benchmark(s) used to determine the information on the record drawings (40E-4.381(1)(f), F.A.C. Code). All elevations should be according to National Geodetic Vertical Datum (NGVD).

Final payment will be contingent upon acceptance of the as-builts by the permitting agency.

The following information, at a minimum, shall be verified on the as-built drawings, and supplemental documents if needed:

- a. Discharge structures – structure identification number, type, locations, dimensions and elevations of all, including weirs, bleeders, orifices, gates, pumps, pipes, and oil and grease skimmers;
- b. Side bank and underdrain filters, or exfiltration trenches – locations, dimensions and elevations of all, including clean-outs, pipes, connections to control structures and points of discharge to receiving waters;
- c. Storage areas for treatment and attenuation – storage area identification number, dimensions, elevations, contours or cross-sections of all, sufficient to determine stage-storage relationships of the storage area and the permanent pool depth and volume below the control elevation for normally wet systems;
- d. System grading – dimensions, elevations, contours, final grades or cross-sections to determine contributing drainage areas, flow directions and conveyance of runoff to the system discharge point(s);

- e. Conveyance – dimensions, elevations, contours, final grades or cross-sections of systems utilized to divert off-site runoff around or through the new system;
- f. Water levels – existing water elevation(s) and the date determined;
- g. Benchmark(s) – location and description (minimum of one per major water control structure); and
- h. Wetland mitigation or restoration areas (if any) – Show the plan view of all areas, depicting a spatial distribution of plantings conducted by zone (if plantings are required by permit), with a list showing all species planted in each zone, numbers of each species, sizes, date(s) planted and identification of source of material; also provide the dimensions, elevations, contours and representative cross-sections depicting the construction.

E. Railroad Coordination: Not Applicable to this project

F. 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 61G17, Florida Administrative Code (F.A.C.), pursuant to Section 472.027, Florida Statutes (F.S.) and any special instructions from the Department. This survey also must comply with the Department of Environmental Protection Rule, Chapter 18-5, F.A.C. pursuant to Chapter 177, F.S., and the Department of Environmental Protection.

G. 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.

H. Submittals:

Plans:

Plans must meet the minimum contents of a particular phase submittal prior to submission for review. The

Design/Build Firm shall provide copies of the required documents as listed below for each review.

Component submittals must be accompanied by sufficient information for adjoining components or areas of work to allow for proper evaluation of the component submitted for review. Bridge submittals may be broken into smaller submittals consisting of the following: foundation layouts, approach span substructure, approach span superstructure, main unit substructure, main unit superstructure, and miscellaneous items (barriers, bearings, expansion joints, walls, etc.). Submittals for unique portions of the structure (ex. Pier 2, Span 4, etc) will not be accepted.

Initial Component Plans

- 11 sets of 11" X 17" roadway plans
- 6 sets of 11" X 17" structure plans
- 3 sets of 11" X 17" each component set (i.e. S&PM, lighting, etc.)
- 3 sets of 11" X 17" ITS plans
- 4 copies of Final Geotechnical Report
- 2 sets of documentation – roadway/drainage
- 2 sets of documentation - structures
- 3 copies of Technical Special Provisions
- 3 copies of Bridge Load Rating

Final Component Plans

- 11 sets of 11" X 17" roadway plans
- 6 sets of 11" X 17" structure plans
- 3 sets of 11" X 17" ITS plans
- 8 sets of 11" X 17" each other component plans,
- 4 copies of Final Geotechnical Report (if different than Initial)
- 2 sets of documentation – roadway/drainage (if different than Initial)
- 6 set of documentation – structures (if different than Initial)
- 3 copies of Technical Special Provisions (if different than Initial)
- 3 copies of Bridge Load Rating (if different than Initial)

Construction Set:

- Original signed & sealed component plans (to be stamped RFC by the Department)
- Signed and Sealed documentation and reports
- 1 signed and sealed Specifications Package
- 2 sets of electronic copies of Technical Special Provisions on CD
- 1 Signed and Sealed Bridge Load Rating

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 final signed and sealed plans will be delivered to the Department's Project Manager a minimum of 5

working days prior to construction of that component. The Department's Project Manager will send the final signed and sealed plans to the appropriate office for review and stamping "Released for Construction". Only signed and sealed plans stamped "Released for Construction" are valid and all work that the Contractor performs in advance of the Department's stamping plans "Released for Construction" will be at the Contractor'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 reflecting changes during construction
- 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

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 job and signed/sealed changes are by the EOR. The record set shall reflect all changes initiated by the Design/Build Firm or changes for which the Design/Build Firm was compensated. The CEI shall do 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)

I. Contract Duration:

The Design/Build Firm shall establish the contract duration for the subject project. In no event shall the contract duration exceed the maximum allowable contract time of **500** calendar days. The schedule supporting the proposed contract duration will be submitted with the Technical Proposal but may be amended in the bid proposal as long as it does not exceed the maximum allowable contract days. Any technical proposal which exceeds the established maximum allowable days stated above shall be deemed non-responsive.

The contract duration is a graded criterion. Since the final proposed contract days will be submitted with the bid proposal, final grades will be calculated at the bid opening meeting.

J. Project Schedule:

The Design/Build Firm shall submit a project schedule, in accordance with Sub article 8-3.2 (Design/Build Division I Specifications), to establish contract duration as part of the Technical Proposal. The minimum number of activities shall be those listed in the payout schedule and those listed below:

- Anticipated Award Date
- Design Submittals

- Design Survey
- Design 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
- Intelligent Transportation System Design
- Intelligent Transportation System Construction
- Maintenance of Traffic Design
- Maintenance of Traffic Set-Up (per duration)
- Erosion Control
- Additional Construction Milestones as determined by the Design/Build Firm
- Final Completion Date for All Work

The DESIGN BUILD FIRM'S schedule should allow for a fifteen (15) calendar day (excluding Holidays as defined in section 1-3 of the Specifications) review time for the Department's review design submittals with the exception of Category II structures. The review of Category II structures requires Central Office involvement and the schedule shall allow twenty (20) calendar days (excluding Holidays as defined in section 1-3 of the Specifications) for these reviews. The review period commences upon the Department's receipt of the valid submittal or re-submittal and terminates upon the transmittal of the submittal back to the Design/Build Firm. The Departments review is not meant to be a complete and detailed review.

K. 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.

L. 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

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.

M. Public Involvement:

1. General:

Public involvement is an important aspect of the project. Public involvement includes communicating to all interested persons, groups, and government organizations information regarding the development of the project. The Design/Build Firm will coordinate public involvement efforts with the Department as described below.

2. Community Awareness:

The Design/Build Firm will prepare a Community Awareness Program for the project.

3. Public Meetings:

The Design/Build Firm shall provide all information and support necessary to hold various public meetings, which may include:

- Metropolitan Planning Organization (MPO) Meetings
- Public Information Meetings
- Elected and appointed officials
- Special interest groups (private groups, homeowners associations, environmental groups, minority groups and individuals)

The Design/Build Firm shall include up to two (2) public information meetings with the general public during the contract. In addition, up to two (2) smaller group meetings/presentations may be required.

For any of the above type meetings the Design/Build Firm shall provide all technical assistance, data and information necessary for the Design/Build Firm to produce display boards, printed material, video

graphics, computerized graphics, etc., and information necessary for the day-to-day exchange of information with the public, all agencies and elected officials in order to keep them informed as to the progress and impacts that the proposed project will create.

The Design/Build Firm shall, on an as-needed basis, attend the meetings with an appropriate number of his personnel to assist the Department's Project Manager. The Design/Build Firm shall forward all requests for group meetings to the Department. The Design/Build Firm shall inform the Department of any meetings with individuals that occur without prior notice.

4. Public Workshops, Information Meetings:

The Design/Build Firm shall provide all the support services listed in No. 3 above. All legal/display ads announcing workshops, information meetings, and public meetings will be prepared and paid for by the Design/Build Firm. All advertisements must be approved by the Department prior to publication.

The Design/Build Firm will be responsible for preparing and mailing (includes postage) for all letters announcing workshops and information meetings. All letters must be approved by the Department prior to mailing.

5. Public Involvement Data:

The Design/Build Firm is responsible for the following:

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

The collection of public input occurs throughout the life of the project and requires maintaining files, newspaper clippings, letters, and especially direct contacts before, during and after any of the public meetings. Articles such as those mentioned shall be provided to the Department for their use and records.

In addition to collecting public input data, the Design/Build Firm may be asked by the Department to prepare responses to any public inquiries as a result of the public involvement process. The Department shall review all responses prior to mailing.

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 Twenty (20) calendar days (excluding Holidays as defined in section 1-3 of the Specifications) 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 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), 21 calendar days prior to commencement of construction. Update the Job Guide Schedule and submit it to the Engineer prior to each monthly progress estimate. The Department may not authorize payment of any progress estimate not accompanied by an up-to-date Job Guide Schedule. Maintain the Job Guide Schedule throughout the project including the quantity placed since the previous submittal, and total to date quantity and any additional materials placed. Do not commence work activities that require testing until the Job Guide Schedule has been reviewed and accepted by the Engineer. At final acceptance, submit a final Job Guide Schedule that includes all materials used on the project in the same format as the monthly reports.

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. 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.

P. 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 XM 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.

Q. 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.

R. Testing:

The Department or its representative will perform verification and resolution testing services in accordance with the latest Specifications. On all Federal Aid Projects, the Department or its representative shall perform verification sampling and testing on site as well as off site locations such as pre-stress plants, batch plants, structural steel and weld, fabrication plants, etc.

S. Design/Build Firm Contractor Guaranteed/Value Added:

The Design/Build Firm may provide a Contractor Guaranteed/Value Added, in accordance with Section 5-14 of the Specifications for the following features:

- Roadway features
- Roadway Drainage Features
- Approach slabs
- Superstructure
- Substructure
- Concrete defects
- And any other products or features the Design/Build firm desires

The Design/Build Firm shall develop the Contractor Guaranteed/Value Added criteria, measurable standards, and remedial work plans in the Design/Build Firm's proposal.

The Design/Build Firm shall guarantee the performance of all structural components in accordance with Section 475, Value Added Bridge Component.

The Design/Build Firm shall guarantee the performance of all Highway Lighting components in accordance with Section 725, Value Added Highway Lighting System.

T. 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. The Department has let a Design/Build contract for the widening of I-95 abutting this project on the north end. The Department has also let a construction project for improvements to Palm Bay Road on the north limit of this project. There are various other construction projects along I-95 and along surface streets that may impact construction activities.

U. 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 working days to answer, resolve or address the issue. This three day window 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 working days. The Design/Build Firm shall provide any available supporting documentation.

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

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

V. 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 District Resident Engineer will be responsible for review and response within 10 working days. The District Resident Engineer will either concur with the proposed solution or, if the District 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 District 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 working days. The District Construction Office will either concur with the proposed solution or, if the District 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 working days to answer, resolve or address the issue. This three day window 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 working days. The Design/Build Firm shall provide any available supporting documentation.

The Design/Build Firm shall provide a similar chain of command for his 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.

W. Liaison Office:

The Department and the Design/Build Firm will each designate a Liaison Office and a Project Manager

who shall be the representative of their respective organizations for the project.

Engineer's Field Office:

The Design-Build firm shall provide, furnish and maintain a minimum 900 square foot (900 ft²) on-site Engineer's Field Office for exclusive use by the Department in accordance with Section 109 of the Specifications. If the Design-Build Firm sets an on-site field office, the Engineer's Field Office shall be located in the same fenced/enclosed area as the Design-Build firm's field office.

The first paragraph of Section 109-2.3 Occupancy and Maintenance is revised as follows:

109-2.3 Occupancy and Maintenance: Provide a field office for Department use, beginning twenty (20) calendar days before construction begins and remaining for 30 days after final acceptance, unless the Department requests removal earlier. Do not begin work before the field office is available for Department use.

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 and superstructure spans. Roadway submittals may be broken down into grading, drainage, walls, ITS, signing & pavement marking, signalization, landscaping 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.

Prior to submittal to the Department, all Category level II bridge plans shall have a peer review analysis by an independent engineering firm not involved with the production of the design or plans, prequalified in accordance with Chapter 14-75. The peer review shall consist of an independent design check, a check of the plans, and a verification that the design is in accordance with AASHTO and FDOT criteria. The independent peer review engineer's comments and comment responses shall be included in the 90% plans submittal. At the final plans submittal, the independent peer review engineer shall sign and seal a cover letter certifying the final design and stating that all comments have been addressed and resolved.

All design and construction documents shall be prepared using the English system.

All Type B fence (chain link) shall be black vinyl clad.

1. Preliminary Plans: Concept Plans are being provided to Proposers together with this RFP. These concept plans provide the Design/Build Firm with a depiction of one approach that is generally consistent with the Department's intent for this project; however, the Department makes no representation, guarantee, or warranty of any nature whatsoever that these concept plans comply with the requirements of this RFP or any other requirements. In addition, nothing in the concept plans shall be construed as a representation of any field condition or of any state of facts upon which a design can be based or the project constructed without proper factual investigation and the proper application of independent engineering judgment. The Design/Build Firm shall be fully and independently responsible for the design and construction of the project in accordance with the applicable requirements regardless of the content of the concept plans. The concept plans are provided for general information only and do not form a part of the design criteria or any other document that is connected or related to this project. Any reference on the concept plans to specific bid item numbers, pay items or other payment options are incidental to the information provided and are not applicable to this lump sum project.

2. **Vibrations:** Any equipment used by the Contractor for this project shall not produce vibration levels exceeding 0.20 inches / per second at any point between the right of way and 300 feet outside of the right of way. Provide vibration monitoring equipment capable of detecting velocities of 0.1 in/s or less. Employ a qualified Specialty Engineer to monitor and record vibration levels produced by vibratory construction equipment used on this project. The monitoring shall be taken at locations between the right of way and 300 feet outside of the right of way line during all construction activities involving the use of equipment that produces vibration. Furnish these records to the Project Engineer to assure compliance within 24 hours of performing each activity. The Contractor shall perform Pre-Construction survey with the use of video and still photography on each property, located within 300 feet from the right of way, identifying the existing structural conditions of the property or any other improvement of such property that may be affected by vibration. In addition, the Contractor shall provide each owner with a copy of the survey and have each owner sign an affidavit acknowledging the results of the survey. No construction operations will be allowed until the Pre-Construction Survey is completed and submitted to the Engineer.

Once vibration-producing construction activities are complete, perform a Post-Construction Survey for each property in the Pre-Construction Survey identifying any new or additional damage to the property, or to any improvements on such property, as compared to the Pre-Construction survey. Provide each property owner with a copy of the Post-Construction Survey for his property, and the Specialty Engineer's assessment indicating the presence of damage or no damage, and in the event of damage, the Specialty Engineer's assessment of whether the observed damage in relation to the Pre-Construction Survey is or is not the result of construction vibrations, and have each owner acknowledge receipt. For each property where no new or additional damage is identified in the Post-Construction Survey, the Contractor's Specialty Engineer shall, within 30 calendar days, certify no damage was caused by construction vibrations. In the event this certification is disputed by a property owner, resolve such dispute in good faith within 30 calendar days of notification of the dispute. Disclose any related unresolved disputes or suits after Final Acceptance as specified in Article 9-8(c) of the Specifications. Should the Contractor fail to resolve the dispute within 30 days, in accordance with Article 7-11.2 the Engineer may, upon 48 hours notice, proceed to repair, rebuild, or otherwise restore such property as may be deemed necessary, and the Department will deduct the cost thereof from any monies due or which may become due the Contractor

under the Contract. For each property where new or additional damage is identified in the Post-Construction Survey, the Specialty Engineer shall, within 30 calendar days, determine if the damage could be reasonably attributable to vibration from the Contractor's operations, and if such is the case, repair the damage or settle any just claim for repairs from damage within 30 days, and provide evidence to the Engineer of such settlement, or of the property owner's agreement and acceptance of repairs, before Final Acceptance. In the event of disputes over damage with a property owner, resolve such dispute in good faith within 30 calendar days of notification of the dispute. Disclose any related unresolved disputes or suits after Final Acceptance as specified in Article 9-8(c) of the Specifications. Should the Contractor fail to resolve the dispute within 30 days, in accordance with Sub article 7-11.2 of the specifications, the Engineer may, upon 48 hours notice, proceed to repair, rebuild, or otherwise restore such property as may be deemed necessary, and the Department will deduct the cost thereof from any monies due or which may become due the Contractor under the Contract. Furnish Post-Construction Survey and related certifications as described above to the Engineer prior to the date of final acceptance per Article 5-11 of the specifications.

3. Available Materials: The following guardrail materials have been purchased by the Department and shall be incorporated into the project:

- 2 ea. - Type Parallel Anchor
- 2 ea. – Type 2 Anchor
- 2 ea. – Bridge Anchorage (Detail J)
- 1,775 LF – Single Face Guardrail
- 20,375 LF – Double Face Guardrail with rub rail one side

This material is stockpiled at FDOT Brevard Operations, Camp Road, Cocoa. The contractor should include all costs to load, transport and install this guardrail into the finished work into their contract price.

B. Geotechnical Services

1. Driven Pile Foundations for Bridges and Major Structures

The Design/Build Firm shall perform a subsurface investigation, analysis and design for all aspects of the project in accordance with Department standards, policies and procedures. Existing subsurface information may be used. Supplemental subsurface investigation and testing will be required to ensure all aspects of the project are covered.

Production Piles driven to less than the Nominal Bearing Resistance and accepted based on a set check performed more than 72 hours after initial drive, calculate the Nominal Bearing Resistance using the appropriate Resistance Factor from the table below titled "Resistance Factors for Pile Installation Using Soil Setup (all structures)".

Production Piles driven to less than the Nominal Bearing Resistance at the End of Initial Drive (EOID) may be accepted without set-checks if and only if the following criteria are met:

1. Pile tip is deeper than the Minimum Penetration Elevation stated in this RFP.
2. EOID resistance exceeds 1.10 times the Factored Design Load for the pile bent/pier.
3. The Resistance Factor for computing Nominal Bearing Resistance is taken from the following table:

Resistance Factors for Pile Installation Using Soil Setup (all structures)			
Loading	Design Method	Construction QC Method	Resistance Factor, ϕ
Compression	Davisson Capacity	PDA and CAPWAP ¹	0.55
		Static Load Testing ²	0.65
		Statnamic Load Testing ²	0.60
Uplift	Skin Friction	PDA and CAPWAP ¹	0.45
		Static Load Testing ²	0.55
¹ Dynamic Load Testing and Signal Matching Analysis			
² Used to confirm the results of Dynamic Load Testing and Signal Matching Analysis			

4. At least one test pile is driven at each bent and one of the following sets of dynamic load testing conditions are met:
 - a. At least 10% of piles in bent/pier (round up to the next whole number), are instrumented, and all test piles & instrumented drives demonstrate pile resistance exceeds the Nominal Bearing Resistance within 7 days.
 - b. At least 20% of piles in bent/pier (round up to the next whole number), are instrumented, and all test piles & instrumented drives demonstrate pile resistance exceeds the Nominal Bearing Resistance within 21 days.

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

1. Selection of pile type.
2. Selection of test pile lengths and locations.
3. Selection of the hammer driving system(s).
4. Handling and driving piles without damage.
5. Performance of the 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 in accordance with the specifications.
8. Development of a Foundation Plan (FP) for the Installation of Piles.
9. Upon completion of the test pile program, selection of the production pile lengths and driving criteria development, the Department shall be given one copy of the dynamic testing data and engineering analysis. At least five calendar days prior to beginning production pile driving, submit the authorized pile lengths, authorized driving criteria, dynamic testing data and engineering analyses to the Department. Include the following electronic files (on Windows compatible 5-1/4 inch CD ROM or DVD) in the driving criteria submittal: PDA data, CAPWAP data and results, and Wave Equation data and results.
10. Driving piles to the required capacity and minimum penetration depth.
11. Recording the pile driving information and keeping a pile-driving log for each pile driven.
12. Submitting the Foundation Certification Packages: Submit two copies of a certification of pile foundations signed and sealed by the Geotechnical Foundation Design Engineer of Record to the Department within 1 week of

finishing each foundation unit and prior to Pile Verification Testing. The Foundation Certification shall cover axial capacity, lateral stability, pile integrity, and foundation settlement. A foundation unit is defined as all the piles within one bent or pier for a specific bridge. Each Foundation Certification Package shall contain an original signed and sealed certification letter, and clearly legible copies of all pile driving logs, all supplemental dynamic testing data and analyses for the foundation unit. The certification shall not be contingent on any future testing or approval by Department.

13. Within two working days of receipt of the Foundation Certification Package, the Department will examine the certification package and determine whether piles in that foundation unit will be selected for dynamic testing. For bridge widening, the Department may select a maximum of 10% (minimum of two (2) per bridge) of the total number of piles (rounded up to the nearest whole number) for dynamic load testing. For new bridges, the Department may select a maximum of 10% (minimum 1 per foundation unit) of the production piles (rounded up to the nearest whole number) for dynamic load testing.
14. In the event a foundation unit has more than one design pile load, the Department may select and test one pile for each loading case (these additional tests are not considered part of the 10% maximum).
15. The Department shall provide the dynamic load test equipment (i.e. PDA, etc.) and personnel for the Pile Verification Testing. The Design/Build Firm shall provide the driving equipment and pile driving crew(s) for the Pile Verification Testing and provide support as needed to prepare the piles for testing. The Department shall determine whether Verification Testing shall be accomplished by dynamic load testing during set check, over the shoulder review of the pile driving operation and/or other means acceptable to both the Design/Build Firm and the Department.
16. If the capacity or integrity of any pile is found to be deficient, the Design/Build Firm shall correct the deficiency (i.e. re-drive or replace) and/or modify the design to compensate for the deficient pile capacity. After the Design/Build Firm corrects the deficiency, the pile shall be retested. If the capacity or integrity of a verification pile is found to be deficient, an additional pile (not considered part of the 10% maximum) shall be verified by dynamic testing. This process shall continue until no more pile capacity or integrity deficiencies are detected and all previous deficiencies have been corrected and retested or the design is modified accordingly. Piles shall not be cut-off nor bent/pier caps placed prior to successful completion of the Pile Verification Testing Program for that foundation unit. In case of disagreement of PDA test results, the Department's results will be final and will be used for acceptance.

After the Pile Verification Testing for a foundation unit is performed, the Department will provide the results and, as necessary, provide requirements for additional verification testing within two working days.

The Design/Build Firm shall develop a FP for the installation of piles. Submit the proposed FP to the District Geotechnical Engineer for approval. The FP is intended to establish process control standards and quality assurance for the installation of piles. The Design/Build Firm shall establish a FP to ensure: (1) the operation of the pile driving system(s) during production pile driving compares to the pile driving

system(s) during the test pile program, (2) the proper operation and maintenance of the driving system, (3) the replacement of hammer/pile cushions to comply with the Specifications, and (4) a dynamic monitoring program is established for production piles at a pre-determined frequency and after re-working/modifying the pile driving system.

The FP will be used to govern all piling installation. In the event that deviations from the FP are observed, the Department may perform Independent Verification Testing/Review of the Design/Build Firm's equipment, procedures, personnel and pile installation FP at any time during production pile driving. If dynamic testing is performed by the Department, the Department will provide the results within two working days. If, as determined by the Department, pile driving equipment, procedures and/or personnel for the FP is deemed inadequate to consistently provide undamaged driven piling meeting the contract requirements, the Design/Build Firm's FP approval may be withdrawn pending corrective actions. Production driving shall then cease and not restart until corrective actions have been taken and the FP re-approved.

2. Drilled Shaft Foundations for Bridges and Major Structures

The Design-Build Firm shall perform a subsurface investigation, analysis and design for all aspects of the project in accordance with FDOT standards, policies and procedures. Unless Load Tests are performed, drilled shafts resistance analysis shall be in accordance with the methods published in the most current FDOT Soils and Foundations Handbook or FHWA Publication FHWA-IF-99-025. Existing subsurface information may be used. Supplemental subsurface investigation and testing will be required to ensure all aspects of the project are covered. The Department reserves the right to observe and perform verification testing on any drilled shafts during any phases of the foundation operation.

The Design-Build Firm shall develop a Foundation Plan (FP) for drilled shaft construction. Submit the proposed FP to the CEI Geotechnical Engineer for review and recommendation to the District Geotechnical Engineer for approval. The FP is intended to establish process control standards and quality assurance for drilled shaft construction. Include in the FP the items required in Specification 455-15.1.2 (Drilled Shaft Installation Plan), the equipment and procedures for visual inspection of drilled shaft excavations, and any additional methods to identify and remediate drilled shaft deficiencies. If the FP is updated based on the construction of the test shaft(s), or other changes in circumstances, the update will not be in effect until approved by the CEI Geotechnical Engineer.

The FP will be used to govern all drilled shaft construction activities. In the event that deviations from the FP are observed, the CEI Geotechnical Engineer may perform Independent Verification Testing/Review of the Design-Build Firm's equipment, procedures, personnel and drilled shaft construction FP at any time during production drilled shaft construction. If, as determined by the CEI Geotechnical Engineer, drilled shaft construction equipment, procedures and/or personnel for the FP are deemed inadequate to consistently provide drilled shafts meeting the contract requirements, the Design-Build Firm's FP approval may be withdrawn pending corrective actions. All drilled shaft construction activities shall then cease and not restart until corrective actions have been taken and the FP has been re-approved.

a. Drilled Shaft Foundation for Bridges and Major Structures

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

- Evaluating geotechnical conditions and designing the foundations including the drilled shaft diameter and length, and construction methods to be used.
- Determining whether the resistance factors used for drilled shaft design will be based on load testing. Before the resistance factors for load testing may be used for drilled shafts in the project, successful load tests must be performed in representative locations.
- Completing the subsurface investigation and drilling pilot holes prior to establishing the drilled shaft tip elevations and socket requirements.
- Determining the location of the test shaft(s) and the types of tests that will be performed on the test shaft(s).
- Providing test hole pilot boring results to the District Geotechnical Engineer at least 48 hours before beginning test shaft construction.
- Constructing the method shaft (test hole) successfully and conducting integrity tests on the shaft using both crosshole sonic logging and gamma-gamma density logging test methods. More than one test hole will be required when there are shafts both on land and in water. When there is more than one size of drilled shaft, perform a test hole for the largest diameter for each condition (land and water).
- Providing all personnel and equipment to perform a load test program on the test shaft(s). The frequency of static tests, Osterberg Cell tests or Statnamic tests will be dictated by the variability of the geology and the size of the project. Provide sufficient instrumentation to determine side friction components in segments not longer than five ft and the end bearing component. Provide a caliper tool or system to measure accurately and continuously the actual shape of test shafts prior to placing concrete.
- Determining the production shaft lengths. Production shaft lengths may be based on the load transfer characteristics measured during the load test. End bearing characteristics may be based on load test results if the properties of the material below the tips of the production shafts meet or exceed the strength of the materials below the tip of the test shaft. If the theoretical bearing strength of the material below the tips of the production shafts is less than the theoretical bearing strength of the materials below the tip of the test shaft, the production shafts shall be extended to meet design capacity by side shear only, unless the end bearing resistance of the weaker material is verified by additional load testing.
- Documenting and providing a report that includes all test shaft data, analysis, and recommendations to the District Geotechnical Engineer. The report should include but not be limited to the following: results of the load testing program, crosshole sonic logging, gamma-gamma density logging, pilot borings for all drilled shafts, and recommended production drilled shaft tip elevations and socket requirements. This report shall be signed and sealed by a Florida licensed Professional Engineer and shall be submitted to the District Geotechnical Engineer for review and approval at least five working days prior to beginning production shaft construction. Additional data or analysis may be required by the Engineer.
- Constructing all drilled shafts to the required tip elevation and socket requirements.
- Verifying level and clean hole bottom conditions and properties of the drilling fluid at the time of concrete placement.

- Furnishing and using an underwater television camera or any other approved Shaft Inspection Device to continuously videotape the inspection of each excavation for a drilled shaft bridge foundation after final cleaning. By audio or other means, recordings shall clearly identify the location and items being observed.
- Documenting and submitting the drilled shaft excavation and concreting logs to the District Geotechnical Engineer within 24 hours of concrete placement. The documentations shall include the drilled shaft installation procedures and sequencing as well as any problems encountered during construction and concrete placement. Allow three working days for the District Geotechnical Engineer to review the data before any further construction on the shafts.
- Allow three working days for the District Geotechnical Engineer to review the data before any further construction on the tested shafts.
- Perform Cross-Hole Sonic Logging (CSL) tests on all non-redundant drilled shafts supporting bridges. For redundant drilled shaft bridge foundations and drilled shaft foundations for miscellaneous structures, perform CSL on at least 30% of the shafts (rounded up to the next whole number) on shafts selected by the Department.
- Repairing all detected defects and conducting post repair integrity testing using 3D tomographic imaging and gamma-gamma density logging. Submitting all results to the District Geotechnical Engineer within five days of test completion.
- Submitting the Foundation Certification Packages.
 - Each Foundation Certification Package shall contain an original signed and sealed letter certifying capacity and integrity of all drilled shafts, and clearly legible copies of all shaft excavation and concreting logs, video-tapes of visual shaft bottom inspections, all CSL reports and electronic data, slurry test data, supplemental testing data and analyses for the foundation unit. The certification shall not be contingent on any future testing or approval by FDOT.
 - Submit two copies of the Foundation Certification Package signed and sealed by the Geotechnical Foundation Design Engineer of Record to FDOT within three weeks of finishing each foundation unit and prior to Verification Testing. A foundation unit is defined as all the shafts within one bent or pier for each phase of each bridge.
- Providing safe access and needed equipment, and cooperating with and working with the Department in verification of the drilled shafts, both during construction of shafts and after submittal of the certification package.
 - The Department may verify the bottom cleanliness of all drilled shaft excavations prior to and at the time of concreting. The Department may verify bottom cleanliness by over the shoulder review of the Design-Build Firm's visual inspection methods and/or by independent means.
 - The Department may verify properties of drilling fluid at the time of concreting. The Department shall determine whether verification of drilling fluid properties shall be accomplished by over the shoulder review of the Design-Build Firm's slurry testing and/or by independent means.
 - Within two working days of receipt of a Foundation Certification Package, the Department will examine the certification package and determine whether shafts in that foundation unit will be selected for Verification Testing. The Department may select every shaft for Verification Testing, if defects are suspected. The Department will provide equipment and personnel as needed for Verification Testing. Methods used for Verification Testing of a completed shaft are at the discretion of the

Department and may include coring, cross-hole sonic logging, gamma-gamma density logging, low-strain dynamic integrity testing, or other methods.

- After Verification Testing for a foundation unit is performed, the Department will provide the results within five working days. Integrity testing access tubes shall not be grouted and construction of footings, caps, columns or any superstructure elements shall not occur until the Department has notified the Design-Build Firm that additional Verification Testing is not required.
- If any shaft is found to be deficient, the Design-Build Firm shall correct the deficiency (i.e. repair or replace the shaft) and/or modify the design to compensate for the deficiency. After the deficiency is corrected, the shaft shall be retested and recertified by the Design-Build Firm. The Department may then perform additional Verification Testing. In case of disagreement of test results, the Department's results will be final and used for determination of acceptance.

b. Drilled Shaft Foundation for Miscellaneous Structures

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

- Evaluating geotechnical conditions and designing the foundations including the drilled shaft diameter and length, and construction methods to be used.
- Completing the subsurface investigation and drilling pilot holes prior to establishing the drilled shaft tip elevations and socket requirements.
- Constructing the method shaft (test hole) successfully and conducting integrity tests on the shaft using both crosshole sonic logging and gamma-gamma density logging test methods.
- Determining the production shaft lengths.
- Documenting and providing a report that includes all analysis, and recommendations to the District Geotechnical Engineer. The report should include but not be limited to the following: pilot borings for all drilled shafts, and recommended production drilled shaft tip elevations and socket requirements. This report shall be signed and sealed by a Florida licensed Professional Engineer and shall be submitted to the District Geotechnical Engineer for review and approval at least five working days prior to beginning production shaft construction. Additional data or analysis may be required by the Engineer.
- Constructing all drilled shafts to the required tip elevation and socket requirements.
- Verifying level and clean hole bottom conditions and properties of the drilling fluid at the time of concrete placement.
- Documenting and submitting the drilled shaft excavation and concreting logs to the District Geotechnical Engineer within 24 hours of concrete placement. The documentations shall include the drilled shaft installation procedures and sequencing as well as any problems encountered during construction and concrete placement. Allow three working days for the District Geotechnical Engineer to review the data before any further construction on the shafts.
- Perform Cross-Hole Sonic Logging (CSL) on at least 50% of the shafts (rounded up to the next whole number) selected by the Department.

- Repairing all detected defects and conducting post repair integrity testing using 3D tomographic imaging and gamma-gamma density logging. Submitting all results to the District Geotechnical Engineer within five days of test completion.
- Submitting the Foundation Certification Packages.
 - Each Foundation Certification Package shall contain an original signed and sealed letter certifying capacity and integrity of all drilled shafts, and clearly legible copies of all shaft excavation and concreting logs, all CSL reports and electronic data, slurry test data, supplemental testing data and analyses for the foundation unit. The certification shall not be contingent on any future testing or approval by FDOT.
 - Submit two copies of the Foundation Certification Package signed and sealed by the Geotechnical Foundation Design Engineer of Record to FDOT within three weeks of finishing each foundation unit and prior to Verification Testing. A foundation unit is defined as all the shafts within one bent or pier for each phase of each bridge.
- Providing safe access and needed equipment, and cooperating with and working with the Department in verification of the drilled shafts, both during construction of shafts and after submittal of the certification package.
 - The Department may verify the bottom cleanliness of all drilled shaft excavations prior to and at the time of concreting. The Department may verify bottom cleanliness by over the shoulder review of the Design-Build Firm's visual inspection methods and/or by independent means.
 - The Department may verify properties of drilling fluid at the time of concreting. The Department shall determine whether verification of drilling fluid properties shall be accomplished by over the shoulder review of the Design-Build Firm's slurry testing and/or by independent means.
 - Within two working days of receipt of a Foundation Certification Package, the Department will examine the certification package and determine whether shafts in that foundation unit will be selected for Verification Testing. The Department may select every shaft for Verification Testing, if defects are suspected. The Department will provide equipment and personnel as needed for Verification Testing. Methods used for Verification Testing of a completed shaft are at the discretion of the Department and may include coring, cross-hole sonic logging, gamma-gamma density logging, low-strain dynamic integrity testing, or other methods.
 - After Verification Testing for a foundation unit is performed, the Department will provide the results within five working days. Integrity testing access tubes shall not be grouted and construction of footings, caps, columns or any superstructure elements shall not occur until the Department has notified the Design-Build Firm that additional Verification Testing is not required.
 - If any shaft is found to be deficient, the Design-Build Firm shall correct the deficiency (i.e. repair or replace the shaft) and/or modify the design to compensate for the deficiency. After the deficiency is corrected, the shaft shall be retested and recertified by the Design-Build Firm. The Department may then perform additional Verification Testing. In case of disagreement of test results, the Department's results will be final and used for determination of acceptance.

C. Utility Coordination

The Design Build Firm shall insure FDOT standards, policies, procedures, and design criteria are followed concerning utility coordination. The FDOT standards, policies, procedures, and design criteria

are contained in the current adopted Design Standards, Standard Specifications for Road and Bridge Construction, Rule 14-46.001 (Utility Accommodation Manual), and any Supplemental Specification, Provision, or Agreement attached to this RFP.

The Design/Build Firm may employ more than one individual or utility engineering consultant to provide utility coordination and engineering design expertise. However, the Design/Build Firm shall employ and identify a single dedicated person responsible for managing all utility coordination and design activities. This person shall be contractually referred to as the Utility Coordination Manager and shall be identified in the Design/Build Firm's proposal. The **Utility Coordination Manager** shall be required to satisfactorily demonstrate to the Department's Project Manager having 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 District utility coordination practices,
3. Knowledge of Department agreements, standards, policies, and procedures.

The Design/Build Firm's Utility Coordination Manager shall be responsible for, but not limited to, the following:

1. Ensuring that Utility Coordination and design is conducted in accordance with the Department's standards, policies, procedures, and design criteria.
2. Assisting the engineer of record in identifying all existing utilities and coordinating any new installations.
3. Scheduling utility meetings, keeping and distribution of minutes of all utility meetings, and ensuring expedient follow-up on all unresolved issues.
4. Distributing all plans, conflict matrixes and changes to affected utility owners and making sure this information is properly coordinated.
5. Identifying and coordinating the completion of any Department or utility owner agreement that is required for reimbursement, or accommodation of the utility facilities associated with the Design/Build project.
6. Assisting the Engineer of Record and the contractor with resolving utility conflicts.
7. Review of all Utility Work Schedules.
8. Handling reimbursable issues inclusive of betterment and salvage determination.
9. Obtaining and maintaining Sunshine State One Call Design to Dig Tickets.
10. QA Review of construction plans prior to construction activities for completeness
11. Acquisition/procurement of any required easements when stated in RFP and as required by design
12. Periodic project updates to the district utility office as needed

The Design/Build Firm is responsible for all costs associated with the relocation of any utility.

D. Roadway Plans:

General:

The Design/Build Firm shall prepare the Roadway Plans Package. This work effort includes the roadway design and drainage analysis needed to prepare a complete set of Roadway Plans, Traffic Control Plans,

Environmental Permits and other necessary documents.

Design Analysis:

The Design/Build Firm shall develop and submit a Project Design Report for review and concurrence by the Department and FHWA on this Federal Aid Oversight Project. The Department shall provide the following packages:

1. Typical Section Package:

The Department has developed an approved typical section package (an Attachment to this RFP) for this project. Any deviation from or revision to this approved typical section package is a change to the requirements of the RFP and must be submitted to the Department by the information cut-off date as shown in Section II, Schedule of Events, of the RFP and will require approval from FDOT and FHWA.

2. Pavement Design Package:

The Department has developed approved minimum pavement designs for asphalt pavements for use on this project. The minimum pavement designs are included as an Attachment to this RFP. Any modification of the pavement designs provided must be approved by the Department and FHWA. Any modification is a change to the requirements of the RFP and must be submitted to the Department by the information cut-off date as shown in Section II, Schedule of Events, of the RFP.

3. Roadway Widening:

The roadway widening shall add an additional through lane in each direction on the I-95 mainline based on the approved typical section. The widening and resurfacing shall include all cross slope corrections to meet Department criteria.

The roadway widening shall include the construction of a median barrier. Any guardrail median barrier shall include rub rail. Three strand cable barrier is not acceptable as the median barrier. Any existing median guardrail is new and shall be salvaged and reset after widening.

The right shoulders shall be maintained at a minimum of 4 feet paved and 2 feet stabilized for a total of 6 feet during all phases of construction.

Temporary rumble strips shall be constructed on all temporary shoulders.

No construction vehicles will be allowed to pull in or out of the construction zone without a lane closure or a temporary deceleration/acceleration lane

a. Milling and Resurfacing:

The existing I-95 mainline asphalt pavement and outside shoulder pavement throughout the project limits shall be milled and resurfaced in accordance with the approved asphalt pavement design provided by the Department. Ramps shall be milled and resurfaced to the limits shown on the Concept Plans (see Section VI – Design and Construction Criteria, A – General) in the last phase of the project.

b. Drainage Analysis:

The Design/Build Firm shall be responsible for designing the drainage and stormwater management systems. All design work shall be in compliance with the Department's Drainage Manual; Florida Administrative Code, chapter 14-86; Federal Aid Policy Guide 23 CFR 650A; district specific policies and criteria; and the requirements of the regulatory agencies. This work will include the engineering analysis necessary to design any or all of the following: cross drains, french drains, roadway ditches, outfall ditches, storm sewers, retention/detention facilities, interchange drainage and water management, other drainage systems and elements of systems as required for a complete analysis. Full coordination with all permitting agencies, the District Environmental Management section and Drainage Design section will be required from the beginning of the design phase. Full documentation of all meetings and decisions are to be submitted to the District Drainage Design section. These activities and submittals should be coordinated through the Department's Project Manager.

The determination of the exact number of drainage basins, outfalls and water management facilities (retention/detention areas, weirs, etc.) required will be the Design/Build Firm's responsibility.

The Design/Build Firm shall maintain positive drainage throughout the project duration.

The objective is to obtain approved stormwater treatment/attenuation design. This service shall include, but is not limited to the following:

- Provide for a drainage design and stormwater management system that can be accommodated within the right-of-way owned by the Department. The right-of-way available to the Design/Build Firm for stormwater management facilities is shown on the right-of-way maps, an Attachment to this RFP.
- Perform design and generate construction plans documenting the permitted systems function to criteria.

The Design/Build Firm shall check all existing cross drains to determine capacity and remaining design life. Flood flow requirements will be determined in accordance with the Department's procedures.

The Design/Build Firm will consider optional culvert materials in accordance with the Department's Drainage Manual Criteria. HDPE will not be permitted within the limited access right-of-way nor will it be permitted within the confines of a mechanically stabilized earth (MSE) wall.

Prior to proceeding with the Drainage Design, the Design/Build Firm shall meet with the District Drainage Engineer. The purpose of this meeting is to provide information to the Design/Build Firm that will better coordinate the Preliminary and Final Drainage Design efforts. This meeting is Mandatory and is to occur twenty (20) calendar days (excluding Holidays as defined in section 1-3 of the Specifications) prior to any submittals containing drainage components.

The Design/Build Firm shall provide the Department's District Drainage Engineer a signed and sealed Drainage Design Report and a copy of the signed and sealed Drainage Design Report of CD in .pdf format. It shall be a record set of all drainage computations, both hydrologic and hydraulic. The Design/Build Firm's engineer shall include all necessary support data.

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.

No design exceptions are anticipated for this project. Design variations approved for this project are included in the Attachments to this RFP. The approved design variations are as follows:

- Vertical Clearance – Palm Bay Road over I-95
- Vertical Alignment – I-95 crest curve at Malabar Road
- Stopping Sight Distance –I-95 from Palm Bay Road continuing to the north

Any modifications to these variations or additional variations or exceptions considered in the design of the facility are solely at the risk of the Design/Build Firm and must be submitted to and approved by the Department (variations and exceptions) and FHWA (exceptions) prior to the construction of that component.

F. Design Documentation, Computations and Quantities:

The Design/Build Firm shall submit to the Department design notes 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 notes and calculations 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. Superelevation Calculations
5. Stopping Sight Distance Calculations
6. Guardrail Placement Calculations
7. Documentation of decisions reached resulting from meetings, telephone conversations or site visits

G. Structure Plans:

1. **Bridge 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. 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.
- e. 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-work 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.

The Design/Build Firm shall design and construct, in general conformance with the Concept Plans (see Section VI – Design and Construction Criteria, A – General), improvements at the following bridge locations:

- I-95 over SR 514 (Malabar Road) - Bridge No. 700202 - modifying the lane configuration and relocating the median barriers.
- I-95 over Melbourne-Tillman Drainage Canal No. 1 - Bridge Nos. 700034 and 700110 – bridge widenings

H. **Specifications:**

Department Specifications may not be modified or revised. The Design/Build Firm shall 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 Supplement Specifications from the Specifications Workbook in effect at the time the bid price proposals are due in the District Office. 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.

The Design/Build Firm must account for a fifteen (15) calendar day review (excluding Holidays as defined in section 1-3 of the Specifications) time in its schedule. 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.

I. Shop Drawings:

The Design/Build Firm shall be responsible for the preparation and approval of all Shop Drawings. Shop Drawings shall be submitted to the Department and shall bear the stamp and signature of the Design/Build Firm's Engineer of Record (EOR), and Specialty Engineer and signed and sealed by the Design/Build Firm's EOR or the 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 and the EOR have both accepted 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.

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 an erosion control plan that complies with the Storm Water Pollution Prevention Plan (SWPPP) as required by the National Pollution Discharge Elimination System (NPDES). The Design/Build Firm shall refer to the Plans Preparation Manual for information in regard to the SWPPP and Florida Department of Environmental Protection (FDEP) Rule 62-25 for requirements on the erosion control plan. Detailed limits of the erosion control items will be necessary but may be shown on the roadway plans sheets. This plan shall be submitted along with the Design/Build Firm's Certification at least 15 working days prior to beginning construction activities.

L. Traffic Control Plan:

1. Traffic Control Analysis:

The Design/Build Firm shall design a safe and effective Traffic Control Plan to move vehicular traffic during all phases of construction. The areas 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 traffic control plan shall address how to assist with maintenance of traffic throughout the duration of the contract.

The 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.

The Design/Build Firm will not be allowed to use the "Shoulder Treatment" option on Sheet 6 of 10 of Standard Index 600 to protect drop-off conditions in the median. Temporary or permanent barrier wall or guardrail must be used.

Once a physical barrier (temporary or permanent barrier wall and/or guardrail) is established between directions of traffic, the barrier needs to be maintained between directions of traffic for the remainder of the project, unless the distance between opposing traffic is such that physical barriers are no longer required.

The Design/Build Firm will be required to protect the median work areas with temporary concrete barrier walls. The Design/Build Firm will be required to use temporary concrete barrier wall to separate opposing directions of travel at all times until the separation between directions of travel is greater than 88 feet.

2. 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 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 Traffic Control Plan.

3. Traffic Control Restrictions:

There will be NO LANE CLOSURES ALLOWED between the hours of 6:00AM to 9:00 PM on I-95. On SR 514 (Malabar Road) there are no restrictions on single lane closures and double lane closures are not permitted from 6:00 AM to 7:00 PM. No lane closures are permitted on SR 516 (Palm Bay Road N.E.) between 6:00 AM and 8:00 PM. A lane may be closed on these roadways only during active work periods. Rolling barricades on I-95 will be allowed from 1:00 AM to 4:00 AM. All lane closures,

including ramp closures, must be reported to the local emergency agencies, the media and the District Public Information Officer, Steve Olson at 386-943-5479 a minimum of seven (7) calendar days in advance. 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 or if the lane closure causes a driver delay greater than 20 minutes.

The Design/Build Firm shall coordinate all lane closures with local agencies. The Design/Build Firm shall be required to place Variable Message Signs advising the traveling public of proposed lane closures. These Variable Message Signs shall be operational for a minimum of seven (7) calendar days prior to the proposed lane closures. NO LANE CLOSURES are allowed on the days of **Special Events**. Special Event is defined as a festival, fair, run, race, motorcade, parade, civic activity, cultural activity, charity or fund drive, sporting event, or similar activity that could be negatively impacted as a result of the work. The Design/Build Firm shall be responsible for obtaining information concerning any Special Events that occur during the life of the contract. Special Events include, but are not limited to Space Shuttle launches from Kennedy Space Center. All Special Events will be handled in the same manner as Holidays and in accordance with this sub article.

M. Environmental Services/Permits/Mitigation:

The Design/Build Firm will be responsible for preparing designs and proposing construction methods that are permissible. 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 permit packages, agency rejection, agency denials, agency processing time, or any permit violations, except as provided in Section V.D.2, will be the responsibility of the Design/Build Firm, and will not be considered sufficient reason for time extension.

N. Signing and Pavement Marking Plans:

The Design/Build Firm shall prepare signing and pavement marking plans in accordance with Department criteria. The Design/Build Firm shall provide plans that are in general conformance with the Concept Plans (see section VI – Design and Construction Criteria, A – General) with the exception of those signs shown as an Attachment to this RFP. This file shows required changes from FDOT Traffic Operation Department and consequently supersedes the Concept Plans.

Cantilever exit signs shall be installed at the following interchanges:

- Malabar Road
- Palm Bay Road
- SR 500/US 192
- Eau Gallie Blvd
- Wickham Road

All overhead signs shall be lighted unless the sheeting used for these overhead signs meet or exceed the Intensity Values shown in the table below

MINIMUM REFLECTIVE INTENSITY VALUES FOR
--

RETROREFLECTIVE SHEETING ON OVERHEAD SIGNS WITHOUT LIGHTING

Minimum Coefficient of Retroreflection·(R_A)_{cd/(lx·m²)}

Per ASTM E-810 (Average of 0 and 90 degree orientation)

Observation Angle°	Entrance Angle°	White	Yellow	Fluor. Yellow	Fluor. Yellow-Green	Red	Green	Blue	Fluor. Orange
0.2	-4	570	425	340	455	114	57	45	200
0.2	30	215	160	130	170	43	21	28	75
0.2	40	100	75	60	80	20	10	7.5	35
0.5	-4	400	300	240	320	80	40	32	140
0.5	30	150	112	90	120	30	15	16	52
0.5	40	50	37	30	40	10	5	4	18
1	-4	120	90	72	96	24	12	9	42
1	30	45	34	27	36	9	4.5	6	16
1	40	25	19	15	20	5	3	2	9

The Design/Build Firm shall be responsible for verifying the vertical clearance to existing overhead signing above the improved roadway. If existing overhead signing will not meet minimum clearance standards, the Design/Build Firm shall be responsible for modifications to provide required clearances.

The Design/Build Firm shall be responsible for installing the thermoplastic pavement markings. The thermoplastic pavement markings shall be installed a minimum of 30 days after the first paint application on the final wearing surface.

O. Lighting Plans:

The Design/Build Firm shall prepare lighting plans in accordance with Department criteria.

The Design/Build Firm shall prepare lighting plans in conformance with the Concept Plans (see section VI – Design and Construction Criteria, A – General). The lighting shall be designed and constructed at the SR 514 (Malabar Road), SR 516 (Palm Bay Road N.E.), US 192, SR 518 (Eau Gallie), and SR 528 (Beach Line) interchanges with I-95.

P. ITS Damage Recovery

Located within this project limits is Florida Department of Transportation District 5's and/or another government agency's or agencies' Intelligent Transportation System here in and after referred to as ITS. The Design/Build Firm shall be responsible for maintaining the ITS system in accordance with the specifications.

The Design/Build Firm shall register with Sunshine One Call for the fiber optic cable within the construction limits. The Design/Build Firm must be registered by the issuance of the NTP and shall remain registered until after final acceptance

In the event that actions of the Design/Build Firm cause the ITS or its components to fail or not operate properly, as determined by the Department, the Design/Build Firm will be charged, as liquidated damages and not as a penalty, the amounts indicated in Table VI.O.1. The Allowable Time in Table VI.O.1 begins with notification of the ITS or component failure by the Engineer. During the Allowable Time, if the Design/Build Firm repairs, corrects, tests and receives approval of the Engineer indicating the system or its components are operating properly then no liquidated damages will be assessed. If the Engineer has not approved the ITS or its components to be operating properly, then Liquidated Damages will be assessed and continue for each Additional Time Period, or portion thereof, as established in Table VI.O.1 until approval is received from the Department. At no time will the liquidated damages exceed \$25,000.00 over a 24-hour period.

In the event that actions of Third Parties cause the ITS or its components to fail or not operate properly, as determined by the Department, the Design/Build Firm will be charged, as liquidated damages and not as a penalty, the amounts indicated in Table VI.O.2. The Allowable Time in Table VI.O.2 begins with notification of the ITS or component failure by the Department. During the Allowable Time, if the Design/Build Firm repairs, corrects, tests and receives approval of the Engineer indicating the system or its components are operating properly then no liquidated damages will be assessed. If the Department has not approved the ITS or its components to be operating properly, then Liquidated Damages will be assessed and continue for each Additional Time Period, or portion thereof, as established in Table VI.O.2 until approval is received from the Department. At no time will the liquidated damages exceed \$25,000.00 over a 24-hour period.

By execution of the Contract Documents, the parties acknowledge and agree that failure to timely repair any failed System and Component will result in damages being suffered by the Department and/or the traveling public which are difficult to ascertain with certainty. Parties further acknowledge and agree that the amount of liquidated damages stated above is a best estimate of the actual damages that would be suffered and is a reasonable amount based on the best available information.

If multiple systems are affected at the same time, the higher liquidated damages will apply and will not end until the system and all components are properly operating. At the discretion of the Department, liquidated damages will not be assessed or time can be extended if the failure to have the System or components of the System operating properly is beyond the Design/Build Firm's control. The Department will have the right to apply as payment on such damages any money, which is due to the Design/Build Firm by the Department. However, lack of manpower or parts will not be considered as items beyond the Design/Build Firm's control.

Intelligent Transportation System and Component Failures:

Cut Fiber - This item entails the cutting of fiber optic cable that brings down the system in whole or any part of the system or its functions that include communication between the Master Hubs. Cut Fiber also includes causing a system to fail over to a redundant path or the removal of a redundant path without written permission from the Department.

Camera System - This is to include the loss of Video or Pan, Tilt or Zoom from a specific camera site. This also includes any change in the height, angle, or location of the support structure of the camera caused by the Design/Build Firm.

Vehicle Detection System - This includes the loss of correct data flow from the field device to the Department's Software system located in the Regional Traffic Management Center (RTMC). This includes data for all lanes of travel. If a temporary detection system is used it shall maintain all standards that the existing system is currently using.

Dynamic Message System (DMS) - This entails the failure or partial failure for a Dynamic Message Sign. This is to include the inability to send or receive data to a DMS or the inability for the Operator at the RTMC to display, blank, change, or verify a message sent to the sign.

Table VI.O.1
 Time and Liquidated Damages

<u>Item</u>	<u>Allowable Time</u>	<u>Liquidated Damages for Allowable Time</u>	<u>Additional Time Period</u>	<u>Liquidated Damages for Additional Time</u>
Cut Fiber	12 hours	\$15,000.00	6 hours	\$5,000
Camera System	12 hours	\$15,000.00	6 hours	\$5,000
Vehicle Detection System	48 hours	\$10,000.00	12 hours	\$3,000
Dynamic Message Sign	12 hours	\$15,000.00	6 hours	\$5,000

Table VI.O.2
 Time and Liquidated Damages

<u>Item</u>	<u>Allowable Time</u>	<u>Liquidated Damages for Allowable Time</u>	<u>Additional Time Period</u>	<u>Liquidated Damages for Additional Time</u>
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Cut Fiber	36 hours	\$15,000.00	6 hours	\$5,000
Camera System	36 hours	\$15,000.00	6 hours	\$5,000
Vehicle Detection System	72 hours	\$10,000.00	12 hours	\$3,000
Dynamic Message Sign	36 hours	\$15,000.00	6 hours	\$5,000

The Design/Build Firm must maintain an inventory of the items listed in Table VI.O.3 until final acceptance. Upon final acceptance, these items will become the property of the Design/Build Firm. The Design/Build Firm must, within 15 calendar days of the Contract Award, visit the site, with the Department, to insure that the items maintained in inventory are compatible with the existing equipment. The Design/Build Firm must order and have these items in inventory within 50 calendar days after the Contract Award. The Design/Build Firm must determine if any of the inventory items have a lead time which will not allow him to have an item in stock within the specified time frame and notify the Engineer in writing within 25 days of the Contract Award. The notification must be accompanied by a letter from the manufacture stating when it will be delivered and why it is not available within the specified time frame. This information will be reviewed by the Engineer and, if approved, the Design/Build Firm will be given additional time to have the item in inventory. This inventory is to be replenished as required to maintain a constant inventory of the required items and if one of the items is used it shall become the property of the State and the Design/Build Firm will immediately obtain another to bring the inventory up to the required amount levels.

Unless otherwise noted, all removed field devices, including but not limited to: cameras, vehicle detection devices, Gig Ethernet Switches, Layer 2 Switches, power supplies, patch panels, cabinets, VSL, media converters, and cooling devices, shall be turned over to Department. Poles, fiber, conduit, pull boxes, special pull boxes, DMS, loops and loop detectors shall be disposed of by the Design/Build Firm unless otherwise noted.

There will be no separate payment for work or materials specified in this sub-article (VI.O). All costs shall be included in the other items of work in the contract.

Submit for review and approval to the Department prior to beginning any maintenance/repair activities, written documentation that all personnel involved in the maintenance/repair of the ITS sub-system have had previous experience in the installation of at least two ITS systems that have been in satisfactory operation for at least one year. The experience shall include cameras, network equipment, Dynamic Message Signs (DMS), Closed Circuit Television (CCTV), Microwave Vehicle Detection Systems (MVDS), Automatic Vehicle Indicators (AVI), License Plate Readers (LPR), and all other system components that comprise the existing and new system being installed on this project.

Table VI.O.3
Inventory Items

Item	Quantity
Wavetnix Smart Sensor	2
CCTV Camera	2
Dell PC 3424 w/ optics	1

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. The data shall be significant to the project and shall be innovative, when appropriate, and practical. Discussions of past performances on other projects shall be minimized except as they relate to the proposed work.

B. Submittal Requirements:

One (1) original and four (4) copies of the Technical Proposal shall be hard copies bound with tabs labeled Section 1 through Section 6 with the information, paper size and page limitation requirements as listed below:

The Technical Proposal must also be submitted in .pdf electronic format. The .pdf format must include bookmarks for the various sections and subsections. Twelve (12) copies of the CD of the Technical Proposal shall be submitted.

Submit one (1) original, four (4) hard copies and 12 CDs of the Technical Proposal to:

Ms. Chela Wood, Professional Services, MS 4-524
Florida Department of Transportation
719 South Woodland Boulevard
DeLand, Florida 32720

1. Section 1: Written Technical Proposal

- Paper size: 8½" x 11", additional larger charts and graphs placed on 11"X17" paper may be provided if folded neatly to 8½" x 11"
- Maximum allowed pages: 20 (excluding graphics and charts)
- Minimum Font Size: 11

The written technical proposal shall be presented in the following order and the minimum information to be included is identified below.

Design Approach

The Design/Build Firm shall present a comprehensive approach to developing the design of the project. Identify design elements that differ significantly from the concept plans. Specific areas to be addressed shall include but not be limited to:

- Roadway Design and approach to minimizing impacts to Utilities
- Drainage Design and approach to the permitting and/or permit modifications

- Structures Design and geotechnical considerations
- Signing & Pavement Marking, Signalization & Lighting Design
- ITS Modifications
- Utilization of existing right-of-way
- Innovative aspects relative to the design of the project

Project Management Plan

The Design/Build Firm shall present a comprehensive approach to managing the design and construction of the project. Specific areas to be addressed shall include but not be limited to:

- **Project Management:** The role of the Design/Build Firm's Project Manager(s) in the design and construction of the project and any specific project management programs shall be described.
- **Staffing Plan:** Provide a staffing plan for the design and construction of the project, addressing all disciplines and specialty areas, sub-consultants, and sub-contractors. Identify key personnel including their relevant experience and responsibilities. Identify personnel responsible for utility coordination detailing their experience on similar projects. The Department must approve any changes to the Project Management Plan and key personnel. Other items to be included in the discussion of the staffing plan are:
 1. Man-loading requirements (both quality and quantity) for all technical services.
 2. Man-loading capabilities of all team firms.
 3. Man-loading availability for the project.

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 this section of the Technical Proposal. If different elements of the work will be done at different locations, those locations shall be listed.

- **Quality Management Plan (QMP):** The highlights of the quality management plan shall be summarized. The minimum information to be included shall be in accordance with Section V.N of this RFP.
- **Coordination Plan:** The Design/Build Firm will also summarize critical elements and strategies to ensure successful coordination with the following:
 - Department management team and Public Information Personnel
 - Other adjacent Department and local projects
 - Contamination Impacts
 - Permitting/Environmental agencies
 - Utility owners
 - Local governments
 - Property & Business Owners
 - General Public

Construction and Maintenance of Traffic Approach

The Design/Build Firm shall present a comprehensive approach for construction of the project. Specific areas to be addressed shall include but not be limited to:

- **Maintenance of Traffic:** This shall include, but not be limited to geometric design for diversions and/or detours, lane widths, shoulder widths, visual obstructions, reductions in speed limits, and minimizing of lane closures.
- **Utility Relocation Approach:** This shall include, but not be limited to, the Design/Build Firm's approach to expedite utility adjustments and relocations that minimize impacts to the traveling public and utility service interruptions.
- **Construction Methods:** This shall include, but not be limited to, the Design/Build Firm's approach to staging of equipment and materials, structures foundation construction, erection and shoring of critical elements, protection of adjacent structures, and efforts to reduce environmental impacts.
- **Protection of Local Business Interests:** This shall include, but not be limited to, Design/Build Firm's plan to minimize impacts to local businesses within construction limits, by maximizing driveway access, prevention of screening the visibility of businesses by equipment and/or materials, minimizing dust, noise, and vibration, utilization of Public Information Coordinators and planned activity notification, and process for managing complaints.
- **Safety:** Include the Design/Build Firm's approach to incorporating safety elements in both the design and construction. This includes such elements as ingress/egress into work zones, rolling road blocks, public safety and worker safety.
- **Innovative aspects relating to the construction of the project.**

Maintenance & Contractor Guaranteed Coverage

The Design/Build Firm shall clearly describe their design and construction strategies to ensure and/or improve the maintainability of the project after completion, including:

- Design and construction methods that minimize periodic and routine maintenance.
- Exceeding minimum material requirements to enhance durability.
- Access to provide adequate inspections and maintenance.

In this section the Design/Build Firm may also present the extent of the Contractor Guaranteed/Value Added coverage above and beyond the minimum time frame and features required by the specifications.

Commitment to Small Business Enterprise

The Design/Build Firm shall identify how they plan to attract, utilize and manage Small Business Enterprise (SBE) firms for this project. As part of the Bid Price Proposal, the Design/Build Firm will indicate the level of Small Business Utilization the Design/Build Firm will commit to during the

execution of the contract. The commitment will be expressed as a percentage (rounded to the nearest tenth) of the Bid Price Proposal. After execution of the contract, the Department will monitor compliance with this commitment. If the Contractor fails to achieve the percentage committed for Small Business Enterprise utilization, the Department will assess the Design/Build Firm monetary penalty equal to the unfulfilled commitment. The Department will have the right to apply as payment for such assessments, any money which is due to the Contractor by the Department.

The Contractor will report, with each invoice, the payments made to SBE firms. Forms for reporting these payments will be provided by the Department after the award of the contract. The forms will require the Contractor to identify each of the SBE firms that are receiving payments that will contribute to the fulfillment of the SBE utilization commitment. For each SBE firm that is identified, the Contractor must provide certification of the firm's SBE status. This certification shall be included with first invoice that identifies payment to each SBE firm. The forms for this certification will be provided by the Department after the award of the contract.

Section 2: Resumes of Key Project Personnel

- Paper Size: 8½" x 11"
- Minimum Font: 11
- Maximum number of resumes to be included: 15
- Each resume is limited to one (1) page per person.
- The minimum information to be included: education, experience directly relevant to this project and personal references.

Section 3: Proposed Schedule

- Paper size: 8½" x 11" or 11" x 17" folded neatly to 8½" x 11"
- Maximum allowed pages: 2
- The minimum information to be included in the summary CPM schedule of anticipated major milestones and their associated phasing as follows:

- Anticipated Notice to Proceed Date
- Design Survey
- Design Reviews by the Department and FHWA
- Design Review / Acceptance Milestones
- Geotechnical Investigation
- Environmental Permit Modification if required
- Construction Mobilization
- Start of Construction
- Utility Adjustments/Relocations
- Clearing and Grubbing
- Embankment/Excavation
- Bridge Design
- Bridge Construction
- Roadway Design
- Roadway Construction (per Phase)
- Additional Construction Milestones as determined by the Design/Build Firm
- Final Completion Date for All Work

Section 4: Design Support Documents

The Design/Build Firm shall provide representative calculations for only those design elements that differ significantly from the concept plans, including but not limited to:

- Drainage Calculations
 - Roadway Geometric Calculations
 - Structural Calculations
-
- Paper size: 8½" x 11"
 - Design Support documents will printed and presented double-sided
 - Maximum allowed pages: No page limit.

Section 5: Preliminary Plans

The Design/Build Firm will provide preliminary plans necessary to convey the intent of the concept and to provide additional detail for those elements that differ significantly from the concept plans.

- Paper size: 11" x 17"
- No page limit

The minimum information to be included in the preliminary plans is as follows:

Roadway

- Project Limits
- Horizontal alignment
- Pier and abutment location
- Major topographic features
- Proposed vertical profile
- Survey controls and bench marks
- Stationing along Vertical and Horizontal alignment
- Connections to existing roadway
- Utilities
- Traffic Control Plans
- Roadway Typical Sections with Pavement Design
- Concept Lighting
- Concept Signing and Pavement Marking
- Guide Signing and ITS

Structures

- General Notes
- Plan and Elevation
- Begin and End Bridge Stations
- Proposed Foundation Types and Location
- Proposed Foundation Testing Requirements
- Span lengths
- Minimum vertical and horizontal clearances
- Location of expansion and fixed bearings
- Basic material properties (concrete strengths, classifications)
- Typical pier(s) and abutment details
- Cross section of proposed superstructure showing type, size and locations of structural elements

Section 6: Specifications

- To be provided on a CD, not on paper.
- Preliminary specifications package – Divisions II and III, Technical Special Provisions, if applicable

C. Evaluation Criteria:

The Technical Review Committee shall evaluate the written Technical Proposal by each Design/Build Firm. The Design/Build Firm should not discuss or reveal elements of the price proposal in the written proposals. A technical score for each firm will be based on the following:

<u>Item</u>	<u>Value</u>
1. Design Approach	20
2. Project Management Plan	25
3. Construction and Maintenance of Traffic Approach	30
4. Maintenance & Contractor Guaranteed Coverage	15
5. Schedule	5
6. Commitment to Small Business Enterprise	5
Maximum Score	100

The following is a description of each of the above referenced items:

1. Design Approach

Credit will be given for a comprehensive approach to the design aspects of the project, including but not limited to roadway, drainage, structures design, signing and pavement marking, signalization and minimizing impacts to utilities.

2. Project Management Plan

Credit will be given for a comprehensive Project Management Plan (PMP) that addresses Project Management approach, staffing plans, Quality Management Plan and coordination. Credit will also be given for incorporation of effective peer reviews.

3. Construction and Maintenance of Traffic Approach

Credit will be given for a comprehensive approach for conducting the construction effort for the project including, but not limited to, Maintenance of Traffic, construction methods, worker and public safety, utility adjustments and relocations.

4. Maintenance & Contractor Guaranteed Coverage

Credit will be given for the extent of the Contractor Guaranteed/Value Added coverage above and beyond the minimum time frame and features required by the specifications. Credit will also be given for:

- Design and construction methods that minimize periodic and routine maintenance
- Exceeding minimum material requirements to enhance durability.
- Access to provide adequate inspections and maintenance

5. Schedule

Credit will be given, **at the time of bid opening**, according to the following table. The number of days shown on the bid proposal form shall be the official proposed contract days.

Days	Points
500 - 473	0
472 - 445	1
444 - 417	2
416 - 389	3
388 - 361	4
360 and below	5

6. Commitment to Small Business Enterprise

Credit will be given, **at the time of bid opening**, according to the following table. This commitment shall be shown on the bid proposal form.

SBE Utilization Commitment (%)	Points Awarded
Up to 1.9%	0
2% - 3.9%	1
4% -5.9%	2
6% - 7.9%	3
8% - 9.9%	4
10% or Greater	5

D. Final Selection Formula:

The Selection Committee shall publicly open the sealed bid proposals and calculate an adjusted score using the following formula:

$$\frac{BPP}{TS} = \text{Adjusted Score}$$

BPP = Bid Price Proposal

TS = Technical Score

The firm selected will be that firm whose adjusted score is lowest.

The Department reserves the right to consider any proposal as non-responsive if any part of the Technical Proposal does not meet established codes and criteria. Also, if Proposed Contract Time is greater than Maximum Allowable Contract Time (MCT) the proposal will be considered non-responsive.

E. Final Selection Process:

After the sealed bids are received, the Department will have a public meeting for the announcement of the Technical Scores and opening of sealed Bid Price Proposals. This meeting will be recorded. At this

meeting, the Department will announce the scores for each member of the Technical Review Committee for each Design/Build Firm in the evaluation criteria items of:

- Design Approach
- Project Management Plan
- Construction Approach
- Maintenance & Contractor Guaranteed Coverage

The sealed Bid Price Proposals will then be opened. The Proposed Contract Time and the Design/Build Firm's Commitment to Small Business Enterprise will be identified, and points awarded based on the Evaluation Criteria in this RFP. Each Design/Build Firm's average Technical Score will then be announced. Following announcement of the technical scores, the bid price proposals will be announced and the adjusted scores calculated.

The Department's Selection Committee will review the evaluation of the Technical Review Committee and the Bid Price Proposal of each Design/Build Firm as to the apparent lowest adjusted score and make a final determination of the lowest adjusted score. The Selection Committee has the right to correct any errors in the evaluation and selection process that may have been made. The Department is not obligated to award the contract and the Selection Committee may decide to reject all proposals. If the Selection Committee decides not to reject all proposals, the contract will be awarded to the Design/Build Firm determined by the Selection Committee to have the lowest adjusted score.

VIII. BID PROPOSAL REQUIREMENTS.

Bid Price Proposals shall be submitted on the Bid Blank form provided and shall include:

- One lump sum price for the Project
- The number of calendar days within which the Design/Build Firm will complete the project
- The Design/Build Firm's commitment to Small Business Enterprise.

The lump sum price shall include all costs for all design, geotechnical surveys, architectural services, engineering services, Design/Build Firms quality plan, construction of that portion 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 Bid Price Proposal shall be hand delivered in a separate sealed package to the following:

Ms. Chela Wood, Professional Services, MS 4-524
Florida Department of Transportation
719 South Woodland Boulevard
DeLand, Florida 32720

The package shall indicate clearly that it is the Bid Price Proposal and shall identify clearly the Design/Build Firm's name, and project description. The Bid Price Proposal shall be secured and unopened until the date specified for opening of Bid Price Proposals.

Task	Submittal Date	Task	Submittal Date
Geotechnical Investigation		Prelim. Typical Section Package	8/24/2001 17:00
Draft Pvmt Surv and Eval Report	9/11/2001 17:00	Demolition Plans	8/27/2001 17:00
FDOT Review	9/25/2001 17:00	90% Plans Submittal	8/31/2001 17:00
Final Pvmt Surv and Eval Report	10/9/2001 17:00	FDOT Review	9/7/2001 17:00
FDOT Review	10/23/2001 17:00	90% Plans Submittal	9/7/2001 17:00
Draft Bridge Foundation Report	10/12/2001 17:00	90% Plans Submittal	9/7/2001 17:00
FDOT Review	10/26/2001 17:00	FDOT Review	9/10/2001 17:00
Final Bridge Foundation Report	11/9/2001 17:00	Draft Pvmt Surv and Eval Report	9/11/2001 17:00
Design		Prelim. Pavement Design Package	9/11/2001 17:00
Roadway		Final Typical Section Package	9/14/2001 17:00
Prelim. Typical Section Package	8/24/2001 17:00	FDOT Review	9/14/2001 17:00
FDOT Review	9/7/2001 17:00	FDOT Review	9/21/2001 17:00
Final Typical Section Package	9/14/2001 17:00	FDOT Review	9/21/2001 17:00
Prelim. Pavement Design Package	9/11/2001 17:00	FDOT Review	9/25/2001 17:00
FDOT Review	9/25/2001 17:00	FDOT Review	9/25/2001 17:00
Final Pavement Design Package	10/2/2001 17:00	Final Pavement Design Package	10/2/2001 17:00
Mill & Resurf. 536 to 535 Plans	10/30/2001 17:00	100% Plans Submittal	10/5/2001 17:00
90% Plans Submittal	9/7/2001 17:00	Final Pvmt Surv and Eval Report	10/9/2001 17:00
FDOT Review	9/21/2001 17:00	Draft Bridge Foundation Report	10/12/2001 17:00
100% Plans Submittal	10/12/2001 17:00	100% Plans Submittal	10/12/2001 17:00
FDOT Review	10/26/2001 17:00	100% Plans Submittal	10/12/2001 17:00
Final S&S	10/30/2001 17:00	90% Plans Submittal	10/12/2001 17:00
Mill & Resurf. 535 to 528 Plans	12/14/2001 17:00	FDOT Review	10/19/2001 17:00
90% Plans Submittal	10/26/2001 17:00	FDOT Review	10/23/2001 17:00
FDOT Review	11/9/2001 17:00	Final S&S	10/23/2001 17:00
100% Plans Submittal	11/23/2001 17:00	FDOT Review	10/26/2001 17:00
FDOT Review	12/7/2001 17:00	FDOT Review	10/26/2001 17:00
Final S&S	12/14/2001 17:00	90% Plans Submittal	10/26/2001 17:00
Lighting Plans		90% Plans Submittal	10/26/2001 17:00
90% Plans Submittal	9/7/2001 17:00	FDOT Review	10/26/2001 17:00
FDOT Review	9/21/2001 17:00	FDOT Review	10/26/2001 17:00
100% Plans Submittal	10/12/2001 17:00	Mill & Resurf. 536 to 535 Plans	10/30/2001 17:00
FDOT Review	10/26/2001 17:00	Final S&S	10/30/2001 17:00
Final S&S	10/30/2001 17:00	Final S&S	10/30/2001 17:00
SMIS Plans		100% Plans Submittal	11/2/2001 17:00
90% Plans Submittal	8/31/2001 17:00	Final Bridge Foundation Report	11/9/2001 17:00
FDOT Review	9/14/2001 17:00	FDOT Review	11/9/2001 17:00
100% Plans Submittal	10/5/2001 17:00	FDOT Review	11/9/2001 17:00
FDOT Review	10/19/2001 17:00	FDOT Review	11/16/2001 17:00
Final S&S	10/23/2001 17:00	90% Plans Submittal	11/16/2001 17:00
Signing and Marking Plans		Substructure Plans	11/20/2001 17:00
90% Plans Submittal	10/26/2001 17:00	Final S&S	11/20/2001 17:00
FDOT Review	11/9/2001 17:00	100% Plans Submittal	11/23/2001 17:00
100% Plans Submittal	11/30/2001 17:00	100% Plans Submittal	11/30/2001 17:00
FDOT Review	12/14/2001 17:00	FDOT Review	11/30/2001 17:00
Final S&S	12/18/2001 17:00	FDOT Review	12/7/2001 17:00
Structures		100% Plans Submittal	12/7/2001 17:00
Demolition Plans	8/27/2001 17:00	Load Rating	12/11/2001 17:00
FDOT Review	9/10/2001 17:00	Mill & Resurf. 535 to 528 Plans	12/14/2001 17:00
Bridge Design	12/25/2001 17:00	Final S&S	12/14/2001 17:00
Substructure Plans	11/20/2001 17:00	FDOT Review	12/14/2001 17:00
90% Plans Submittal	10/12/2001 17:00	Final S&S	12/18/2001 17:00
FDOT Review	10/26/2001 17:00	FDOT Review	12/21/2001 17:00
100% Plans Submittal	11/2/2001 17:00	Bridge Design	12/25/2001 17:00
FDOT Review	11/16/2001 17:00	Superstructure Plans	12/25/2001 17:00
Final S&S	11/20/2001 17:00	Final S&S	12/25/2001 17:00
Superstructure Plans	12/25/2001 17:00	Geotechnical Investigation	
90% Plans Submittal	11/16/2001 17:00	Design	
FDOT Review	11/30/2001 17:00	Roadway	
100% Plans Submittal	12/7/2001 17:00	Lighting Plans	
FDOT Review	12/21/2001 17:00	SMIS Plans	
Final S&S	12/25/2001 17:00	Signing and Marking Plans	
Load Rating		Structures	
	12/11/2001 17:00		



Florida Department of Transportation

CHARLIE CRIST
GOVERNOR

Consultant Project Management
719 S. Woodland Blvd. – MS 542
DeLand, FL 32720-6834

STEPHANIE KOPELOUSOS
SECRETARY

INITIAL PLANS REVIEW (PHASE II)

<i>FPID</i>		<i>Date</i>	
<i>FDOT's Project Name and Limits</i>			
<i>Project Manager</i>		<i>Work Type to be Graded</i>	
<i>Consultant Project Manager Name and Firm</i>			
<i>State Road Number</i>		<i>Common Roadway Name</i>	
<i>From Mile Post:</i>		<i>To Mile Post</i>	<i>Section</i>
<i>County</i>	<i>FDOT Timesheet Job Number</i>		

(Please complete the above fields with your project information)

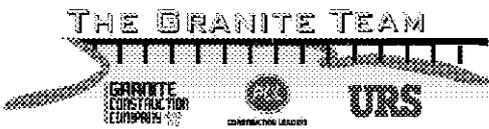
WE ARE FORWARDING TO YOU THE FOLLOWING ITEMS FOR YOUR REVIEW AND COMMENTS:

- | | |
|---|--|
| 1. Roadway Plans / Comment Responses | 7. Geotechnical Report (Roadway & Struct.) |
| 2. Signing & Marking, Signalization, Lighting Plans | 8. Constructability Checklist |
| 3. Structures Plans/Design Calculations | 9. CD Deliverable |
| 4. Computation Book | 10. Drainage Calculations |
| 5. QA Checklist/Plans | 11. Contract Time |
| 6. Design Doc /Tech Specs/Sum Pay Items/CES Printout/LRE/ Engineer's Estimate with Summary Form/Lane Closure Analysis | |

Transmitted herewith are plans for the above project. This submittal has been entered into the Electronic Review Comments system (ERC). Please provide comments using this system only by: If you do not have access to the ERC system or are unfamiliar with it, please contact Aida Echevarria at the district office at 386-943-5144 or via email at aida.echevarria@dot.state.fl.us. If you have any other questions, please contact the Project Manager at:

MS/Dept: Items Sent –

	<u>INITIAL</u>
544 - Checking RICHARD BELL	1, 2, 3, 5, 6, 8
544 – Estimates YOUNG PIERRE	1, 2, 3, 6, 8
544 – TCP Review JIM HARKRIDER	1, 2, 3, 5, 6
544 – Specs ED KESTORY	1, 2, 3, 6, 8
544 – Drainage FERRELL HICKSON	1, 10
562 – Traffic Operations (TP&S) SUSANNE HERTZ (Plans to Jim Stroz)	1, 2, 3
562 – Traffic Operations (Safety, Bike/Ped, Rail) SUSANNE HERTZ (Plans to Christopher Cairns)	1, 2, 3
562 – Traffic Operations (ITS) SUSANNE HERTZ (Plans to Mike Smith)	1, 2, 3
562 – Traffic Operations (Studies/Access Management SUSANNE HERTZ (Plans to Mike Sanders)	2
501 – Environmental STEPHEN TONJES	1, 3
506 – D.O. Construction (Constructability) ALIDA SCHMITT	1, 2, 3, 8
506 – D.O. Construction (Scheduling) ABEL SIERRA	N/A
546 – Utilities STACI NESTER	1, 2, 3
519 – Geotechnical RAFAEL RODRIGUEZ	1, 2, 3, 7
542 – Project Manager	1, 2, 3, 6, 8
542 – Project Management Files REBECCA COLON-FRANZ	1, 2, 3
510 – Maintenance MIKE WRIGHT	1, 2
544 – Permits HANNAH HERNANDEZ	1, 3
538 – Structures Maintenance CHARLES WOOD	1, 2, 3
530 OOU – Planning, MPO Liaison Supervisor EVE FINLEY	1, 2, 3
545 – Structures NEIL KENIS	1, 3, 7
549 – Legal, Public Record Set N/A	1, 2, 3
LCO (Local Construction Office)	1, 2, 3, 6, 8
LMU (Local Maintenance Unit)	1, 2
FHWA – full oversight only	1, 2, 3, 6
Local Municipality/As Noted:	1, 2, 3
Public Transportation	1, 2, 3



Invoice
I-4 (SR400) St. Johns River Bridge Replacement and Six Laning
Financial Project ID: 242702-1-52-01
Contract Number E5F02

Period 08/20/04 to 09/20/04
Contract Day 1322
Invoice No.: 42

Original Contract Amount: \$ 101,930,000.00
Extra Work: \$ 9,305,371.89
Present Contract Amount: \$ 111,235,371.89

Percent Complete	96.70%	Original Contract Time	1090
Percent Time	99.10%	Added Time	<u>244</u>
		Present Contract Time	1334

Total Completed to Date: \$ 107,569,285.42
Previous Payment: \$ 106,612,231.90
Current Payment Due: \$ **957,053.52**

Remit To: Granite Construction Company
Cindy Walker
PO Box 290757
Tampa, FL 33687

I HEREBY CERTIFY THAT I HAVE EXAMINED THIS ESTIMATE AND
THAT IT IS TRUE AND CORRECT ACCORDING TO MY BEST
KNOWLEDGE AND BELIEF

Signed: _____

Granite / PCL A Joint Venture
Devon Johnson



Invoice
 I-4 (SR400) St. Johns River Bridge Replacement and Six Laning
 Financial Project ID: 242702-1-52-01
 Contract Number E5F02

Period Ending 9/20/2004
 Contract Day 1322
 Invoice No.: 42

Original Contract Amount \$ 101,930,000.00
 Extra Work \$ 9,305,371.89
 Present Contract Amount \$ 111,235,371.89

Percent Complete 96.70%
 Percent Time 99.10%

Original Contract Time 1090
 Added Time 244
 Present Contract Time 1334

Item	Amount	Previous		This Estimate		Total To date	
		% Complete	Amount	% Complete	Amount	% Complete	Amount
Services							
1 Engineering Services Total	\$ 9,000,000	95.37%	\$ 8,583,000.00	0.00%	\$ -	95.37%	\$ 8,583,000.00
1-1 River Bridge Superstructure P1R	\$ 300,000	100.00%	\$ 300,000.00	0.00%	\$ -	100.00%	\$ 300,000.00
1-2 River Bridge Superstructure P2R	\$ 200,000	100.00%	\$ 200,000.00	0.00%	\$ -	100.00%	\$ 200,000.00
1-3 Sign Structures MG	\$ 100,000	100.00%	\$ 100,000.00	0.00%	\$ -	100.00%	\$ 100,000.00
1-4 MSE Walls Orange WO	\$ 100,000	100.00%	\$ 100,000.00	0.00%	\$ -	100.00%	\$ 100,000.00
1-5 River Bridge Substructure B1R	\$ 350,000	100.00%	\$ 350,000.00	0.00%	\$ -	100.00%	\$ 350,000.00
1-6 River Bridge Substructure B2R	\$ 250,000	100.00%	\$ 250,000.00	0.00%	\$ -	100.00%	\$ 250,000.00
1-7 Orange Substructure BO	\$ 150,000	100.00%	\$ 150,000.00	0.00%	\$ -	100.00%	\$ 150,000.00
1-8 Padgett Substructure BP	\$ 70,000	100.00%	\$ 70,000.00	0.00%	\$ -	100.00%	\$ 70,000.00
1-9 DeBary Substructure BD	\$ 80,000	100.00%	\$ 80,000.00	0.00%	\$ -	100.00%	\$ 80,000.00
1-10 Enterprise Substructure BE	\$ 60,000	100.00%	\$ 60,000.00	0.00%	\$ -	100.00%	\$ 60,000.00
1-11 Orange Superstructure PO	\$ 240,000	100.00%	\$ 240,000.00	0.00%	\$ -	100.00%	\$ 240,000.00
1-12 Padgett Superstructure PP	\$ 100,000	100.00%	\$ 100,000.00	0.00%	\$ -	100.00%	\$ 100,000.00
1-13 DeBary Superstructure PD	\$ 100,000	100.00%	\$ 100,000.00	0.00%	\$ -	100.00%	\$ 100,000.00
1-14 Enterprise Superstructure PE	\$ 120,000	100.00%	\$ 120,000.00	0.00%	\$ -	100.00%	\$ 120,000.00
1-15 MSE Walls Ramp B WB	\$ 30,000	100.00%	\$ 30,000.00	0.00%	\$ -	100.00%	\$ 30,000.00
1-16 MSE Walls 17/92 WS	\$ 50,000	100.00%	\$ 50,000.00	0.00%	\$ -	100.00%	\$ 50,000.00
1-17 MSE Walls Midden WM	\$ 120,000	100.00%	\$ 120,000.00	0.00%	\$ -	100.00%	\$ 120,000.00
1-18 MSE Walls Enterprise WN	\$ 100,000	100.00%	\$ 100,000.00	0.00%	\$ -	100.00%	\$ 100,000.00
1-19 Typical Sections RS	\$ 146,196	100.00%	\$ 146,196.00	0.00%	\$ -	100.00%	\$ 146,196.00
1-20 Geometrics RWG	\$ 116,957	100.00%	\$ 116,957.00	0.00%	\$ -	100.00%	\$ 116,957.00
1-21 Roadway Plans RWP	\$ 467,826	100.00%	\$ 467,826.00	0.00%	\$ -	100.00%	\$ 467,826.00
1-22 Cross Sections RWS	\$ 511,685	100.00%	\$ 511,685.00	0.00%	\$ -	100.00%	\$ 511,685.00
1-23 Drainage Analysis RWD	\$ 146,196	100.00%	\$ 146,196.00	0.00%	\$ -	100.00%	\$ 146,196.00
1-24 Drainage Plans RWG	\$ 511,685	100.00%	\$ 511,685.00	0.00%	\$ -	100.00%	\$ 511,685.00
1-25 MOT Plans RWM	\$ 511,685	100.00%	\$ 511,685.00	0.00%	\$ -	100.00%	\$ 511,685.00
1-26 Surcharge Area Plans RWU	\$ 175,435	100.00%	\$ 175,435.00	0.00%	\$ -	100.00%	\$ 175,435.00
1-27 Geometrics REG	\$ 102,335	100.00%	\$ 102,335.00	0.00%	\$ -	100.00%	\$ 102,335.00
1-28 Roadway Plans REP	\$ 300,000	100.00%	\$ 300,000.00	0.00%	\$ -	100.00%	\$ 300,000.00
1-29 Cross Sections RES	\$ 300,000	100.00%	\$ 300,000.00	0.00%	\$ -	100.00%	\$ 300,000.00
1-30 Drainage Analysis RED	\$ 50,000	100.00%	\$ 50,000.00	0.00%	\$ -	100.00%	\$ 50,000.00
1-31 Drainage Plans REG	\$ 300,000	100.00%	\$ 300,000.00	0.00%	\$ -	100.00%	\$ 300,000.00
1-32 MOT Plans REM	\$ 200,000	100.00%	\$ 200,000.00	0.00%	\$ -	100.00%	\$ 200,000.00
1-33 Erosion Control Plans EC	\$ 150,000	100.00%	\$ 150,000.00	0.00%	\$ -	100.00%	\$ 150,000.00
1-34 Demolition Control Plans DEC	\$ 20,000	100.00%	\$ 20,000.00	0.00%	\$ -	100.00%	\$ 20,000.00
1-35 Signing Plans SG	\$ 100,000	100.00%	\$ 100,000.00	0.00%	\$ -	100.00%	\$ 100,000.00
1-36 Striping Plans ST	\$ 100,000	100.00%	\$ 100,000.00	0.00%	\$ -	100.00%	\$ 100,000.00
1-37 Signalization at Enterprise SN	\$ 20,000	100.00%	\$ 20,000.00	0.00%	\$ -	100.00%	\$ 20,000.00
1-38 River Bridge Electrical EB	\$ 60,000	100.00%	\$ 60,000.00	0.00%	\$ -	100.00%	\$ 60,000.00
1-39 Sign Electrical Design EP	\$ 150,000	100.00%	\$ 150,000.00	0.00%	\$ -	100.00%	\$ 150,000.00
1-40 Preliminary ITS Electrical EI	\$ 120,000	100.00%	\$ 120,000.00	0.00%	\$ -	100.00%	\$ 120,000.00
1-41 Cable Alignment ITA	\$ 190,000	100.00%	\$ 190,000.00	0.00%	\$ -	100.00%	\$ 190,000.00
1-42 Preliminary System ITP	\$ 200,000	100.00%	\$ 200,000.00	0.00%	\$ -	100.00%	\$ 200,000.00
1-43 Equipment Cut Sheets ITE	\$ 150,000	100.00%	\$ 150,000.00	0.00%	\$ -	100.00%	\$ 150,000.00
1-44 Final System ITF	\$ 300,000	100.00%	\$ 300,000.00	0.00%	\$ -	100.00%	\$ 300,000.00



Invoice
 I-4 (SR400) St. Johns River Bridge Replacement and Six Laning
 Financial Project ID: 242702-1-52-01
 Contract Number E5F02

Period Ending 9/20/2004
 Contract Day 1322
 Invoice No.: 42

Original Contract Amount	\$ 101,930,000.00	Percent Complete	96.70%	Original Contract Time	1090
Extra Work	\$ 9,305,371.89	Percent Time	99.10%	Added Time	244
Present Contract Amount	\$ 111,235,371.89			Present Contract Time	1334

Item	Amount	Previous		This Estimate		Total To date		
		% Complete	Amount	% Complete	Amount	% Complete	Amount	
1-45	SJRWMD Permit Application PA	\$ 120,000	100.00%	\$ 120,000.00	0.00%	\$ -	100.00%	\$ 120,000.00
1-46	USACOE Permit Modification PC	\$ 80,000	100.00%	\$ 80,000.00	0.00%	\$ -	100.00%	\$ 80,000.00
1-47	USCG Bridge Permit PU	\$ 30,000	100.00%	\$ 30,000.00	0.00%	\$ -	100.00%	\$ 30,000.00
1-48	As Built submittals	\$ 130,000	10.00%	\$ 13,000.00	0.00%	\$ -	10.00%	\$ 13,000.00
1-49	River Bridge Production Piles	\$ 300,000	100.00%	\$ 300,000.00	0.00%	\$ -	100.00%	\$ 300,000.00
1-50	Land Bridge Production Piles	\$ 100,000	100.00%	\$ 100,000.00	0.00%	\$ -	100.00%	\$ 100,000.00
1-51	Enterprise Rd. Ph. 2 Prod. Piles	\$ 20,000	100.00%	\$ 20,000.00	0.00%	\$ -	100.00%	\$ 20,000.00
1-52	Roadway Warranty	\$ 200,000	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -
1-53	River Bridge Warranty	\$ 100,000	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -
2	Geotechnical Services	\$ 3,000,000	100.00%	\$ 3,000,000.00	0.00%	\$ -	100.00%	\$ 3,000,000.00
2-1	Geotechnical Enterprise GN	\$ 100,000	100.00%	\$ 100,000.00	0.00%	\$ -	100.00%	\$ 100,000.00
2-2	Geotechnical West End Roadway GW	\$ 550,000	100.00%	\$ 550,000.00	0.00%	\$ -	100.00%	\$ 550,000.00
2-3	Geotechnical East End Roadway GE	\$ 420,000	100.00%	\$ 420,000.00	0.00%	\$ -	100.00%	\$ 420,000.00
2-4	Geotechnical Misc Structures GM	\$ 250,000	100.00%	\$ 250,000.00	0.00%	\$ -	100.00%	\$ 250,000.00
2-5	Foundations River F1R	\$ 400,000	100.00%	\$ 400,000.00	0.00%	\$ -	100.00%	\$ 400,000.00
2-6	Foundations River F2R	\$ 200,000	100.00%	\$ 200,000.00	0.00%	\$ -	100.00%	\$ 200,000.00
2-7	Foundations Orange FO	\$ 350,000	100.00%	\$ 350,000.00	0.00%	\$ -	100.00%	\$ 350,000.00
2-8	Foundations Padgett FP	\$ 110,000	100.00%	\$ 110,000.00	0.00%	\$ -	100.00%	\$ 110,000.00
2-9	Foundations DeBary FD	\$ 150,000	100.00%	\$ 150,000.00	0.00%	\$ -	100.00%	\$ 150,000.00
2-10	Foundations Enterprise FN	\$ 125,000	100.00%	\$ 125,000.00	0.00%	\$ -	100.00%	\$ 125,000.00
2-11	River Bridge Design Test Piles	\$ 45,000	100.00%	\$ 45,000.00	0.00%	\$ -	100.00%	\$ 45,000.00
2-12	River Bridge Indicator Piles	\$ 200,000	100.00%	\$ 200,000.00	0.00%	\$ -	100.00%	\$ 200,000.00
2-13	Land Test Piles	\$ 100,000	100.00%	\$ 100,000.00	0.00%	\$ -	100.00%	\$ 100,000.00
3	Survey Services	\$ 400,000	90.00%	\$ 400,000.00	0.00%	\$ -	100.00%	\$ 400,000.00
3-1	Design Survey	\$ 400,000	100.00%	\$ 400,000.00	0.00%	\$ -	100.00%	\$ 400,000.00
4	Landscape Design Services	\$ 50,000	100.00%	\$ 50,000.00	0.00%	\$ -	100.00%	\$ 50,000.00
4-1	Landscape Design LS	\$ 40,000	100.00%	\$ 40,000.00	0.00%	\$ -	100.00%	\$ 40,000.00
4-2	Irrigation Design LR	\$ 10,000	100.00%	\$ 10,000.00	0.00%	\$ -	100.00%	\$ 10,000.00
4	Bridge Construction							
	Orange Blvd. / CSX Railroad Bridge							
5	Construction Mobilization Orange BI	\$ 4,000,000	100.00%	\$ 4,000,000.00	0.00%	\$ -	100.00%	\$ 4,000,000.00
5-1	FPL Relocation Orange - Design	\$ 10,000	100.00%	\$ 10,000.00	0.00%	\$ -	100.00%	\$ 10,000.00
5-2	FPL Relocation Orange - Complete	\$ 90,000	100.00%	\$ 90,000.00	0.00%	\$ -	100.00%	\$ 90,000.00
5-3	Waterline Relocation OB - Design	\$ 5,000	100.00%	\$ 5,000.00	0.00%	\$ -	100.00%	\$ 5,000.00
5-4	Waterline Relocation OB - Complete	\$ 50,000	100.00%	\$ 50,000.00	0.00%	\$ -	100.00%	\$ 50,000.00
5-5	Miscellaneous Relocation Orange	\$ 150,000	100.00%	\$ 150,000.00	0.00%	\$ -	100.00%	\$ 150,000.00
5-6	Orange Blvd Bridge Mobilization	\$ 3,303,943	100.00%	\$ 3,303,943.00	0.00%	\$ -	100.00%	\$ 3,303,943.00
5-7	Furnish Perf. & Pay. Bonds + JV Insur.	\$ 191,057	100.00%	\$ 191,057.00	0.00%	\$ -	100.00%	\$ 191,057.00
5-8	Set-Up Office Compound	\$ 200,000	100.00%	\$ 200,000.00	0.00%	\$ -	100.00%	\$ 200,000.00
6	Foundation Orange Blvd	\$ 2,000,000	100.00%	\$ 2,000,000.00	0.00%	\$ -	100.00%	\$ 2,000,000.00
6-1	OB - Foundation Construction	\$ 2,000,000	100.00%	\$ 2,000,000.00	0.00%	\$ -	100.00%	\$ 2,000,000.00
7	Substructure Orange Blvd	\$ 600,000	100.00%	\$ 600,000.00	0.00%	\$ -	100.00%	\$ 600,000.00
7-1	OB - Substructure Construction	\$ 600,000	100.00%	\$ 600,000.00	0.00%	\$ -	100.00%	\$ 600,000.00
8	Removal of Old Bridges Orange Blvd	\$ 200,000	100.00%	\$ 200,000.00	0.00%	\$ -	100.00%	\$ 200,000.00
8-1	OB - Removal of Existing Bridge	\$ 200,000	100.00%	\$ 200,000.00	0.00%	\$ -	100.00%	\$ 200,000.00
9	Super Structure Orange Blvd	\$ 1,500,000	100.00%	\$ 1,499,979.36	0.00%	\$ -	100.00%	\$ 1,499,979.36



Invoice
 I-4 (SR400) St. Johns River Bridge Replacement and Six Laning
 Financial Project ID: 242702-1-52-01
 Contract Number E5F02

Period Ending 9/20/2004
 Contract Day 1322
 Invoice No.: 42

Original Contract Amount	\$ 101,930,000.00	Percent Complete	96.70%	Original Contract Time	1090
Extra Work	\$ 9,305,371.89	Percent Time	99.10%	Added Time	244
Present Contract Amount	\$ 111,235,371.89			Present Contract Time	1334

	Item	Amount	Previous		This Estimate		Total To date	
			% Complete	Amount	% Complete	Amount	% Complete	Amount
9-1	OB - Furnish Structural Steel	\$ 1,000,000	100.00%	\$ 999,979.36	0.00%	\$ -	100.00%	\$ 999,979.36
9-2	OB - Superstructure Construction	\$ 500,000	100.00%	\$ 500,000.00	0.00%	\$ -	100.00%	\$ 500,000.00
10	Retaining Walls Orange Blvd	\$ 700,000	99.75%	\$ 698,250.00	0.00%	\$ -	99.75%	\$ 698,250.00
10-1	Orange Blvd Retaining Wall Const	\$ 700,000	99.75%	\$ 698,250.00	0.00%	\$ -	99.75%	\$ 698,250.00
	US 17-92 / St. Johns River Bridge							
11	Construction Mobilization River Bridge	\$ 3,200,000	100.00%	\$ 3,200,000.00	0.00%	\$ -	100.00%	\$ 3,200,000.00
11-1	AT&T Relocation US 17/92 - Design	\$ 20,000	100.00%	\$ 20,000.00	0.00%	\$ -	100.00%	\$ 20,000.00
11-2	AT&T Relocation US 17/92 - Complete	\$ 180,000	100.00%	\$ 180,000.00	0.00%	\$ -	100.00%	\$ 180,000.00
11-3	Miscellaneous Relocation US 17/92	\$ 50,000	100.00%	\$ 50,000.00	0.00%	\$ -	100.00%	\$ 50,000.00
11-4	River Bridge Mobilization	\$ 2,021,643	100.00%	\$ 2,021,643.00	0.00%	\$ -	100.00%	\$ 2,021,643.00
11-5	Preliminary Test Piles	\$ 400,000	100.00%	\$ 400,000.00	0.00%	\$ -	100.00%	\$ 400,000.00
11-6	Access Trestles	\$ 400,000	100.00%	\$ 400,000.00	0.00%	\$ -	100.00%	\$ 400,000.00
11-7	PCL Perf. & Payment Bond	\$ 128,357	100.00%	\$ 128,357.00	0.00%	\$ -	100.00%	\$ 128,357.00
12	Foundation River Bridge	\$ 10,000,000	100.00%	\$ 10,000,000.00	0.00%	\$ -	100.00%	\$ 10,000,000.00
12-1	Foundation Construction	\$ 10,000,000	100.00%	\$ 10,000,000.00	0.00%	\$ -	100.00%	\$ 10,000,000.00
13	Substructure River Bridge	\$ 10,000,000	100.00%	\$ 10,000,000.00	0.00%	\$ -	100.00%	\$ 10,000,000.00
13-1	Substructure Construction	\$ 10,000,000	100.00%	\$ 10,000,000.00	0.00%	\$ -	100.00%	\$ 10,000,000.00
14	Fender System River Bridge	\$ 800,000	100.00%	\$ 800,000.00	0.00%	\$ -	100.00%	\$ 800,000.00
14-1	Fender System	\$ 800,000	100.00%	\$ 800,000.00	0.00%	\$ -	100.00%	\$ 800,000.00
15	Removal of Old Bridges River Bridge	\$ 2,000,000	100.00%	\$ 1,999,900.00	0.00%	\$ -	100.00%	\$ 1,999,900.00
15-1	Removal of Existing Bridge	\$ 2,000,000	100.00%	\$ 1,999,900.00	0.00%	\$ -	100.00%	\$ 1,999,900.00
16	Super Structure River Bridge	\$ 10,400,000	100.00%	\$ 10,400,000.00	0.00%	\$ -	100.00%	\$ 10,400,000.00
16-1	Furnish Prestress Beams	\$ 4,750,000	100.00%	\$ 4,750,000.00	0.00%	\$ -	100.00%	\$ 4,750,000.00
16-2	Superstructure Construction	\$ 5,400,000	100.00%	\$ 5,400,000.00	0.00%	\$ -	100.00%	\$ 5,400,000.00
16-3	Traffic Barrier	\$ 250,000	100.00%	\$ 250,000.00	0.00%	\$ -	100.00%	\$ 250,000.00
17	Retaining Wall Const River Bridge	\$ 1,200,000	98.60%	\$ 1,183,200.00	0.50%	\$ 6,000.00	99.10%	\$ 1,189,200.00
17-1	US 17-92 Retaining Wall Const	\$ 1,200,000	98.60%	\$ 1,183,200.00	0.50%	\$ 6,000.00	99.10%	\$ 1,189,200.00
	Padgett Creek Bridge							
18	Padgett Creek Bridge Mobilization	\$ 40,000	100.00%	\$ 40,000.00	0.00%	\$ -	100.00%	\$ 40,000.00
18-1	Padgett Creek Bridge Mobilization	\$ 40,000	100.00%	\$ 40,000.00	0.00%	\$ -	100.00%	\$ 40,000.00
19	PC - Foundation Construction	\$ 200,000	100.00%	\$ 200,000.00	0.00%	\$ -	100.00%	\$ 200,000.00
19-1	PC - Foundation Construction	\$ 200,000	100.00%	\$ 200,000.00	0.00%	\$ -	100.00%	\$ 200,000.00
20	PC - Substructure Construction	\$ 100,000	100.00%	\$ 100,000.00	0.00%	\$ -	100.00%	\$ 100,000.00
20-1	PC - Substructure Construction	\$ 100,000	100.00%	\$ 100,000.00	0.00%	\$ -	100.00%	\$ 100,000.00
21	PC - Superstructure Construction	\$ 200,000	100.00%	\$ 200,000.00	0.00%	\$ -	100.00%	\$ 200,000.00
21-1	PC - Superstructure Construction	\$ 200,000	100.00%	\$ 200,000.00	0.00%	\$ -	100.00%	\$ 200,000.00
22	Padgett Creek Retaining Wall Const	\$ 5,000	100.00%	\$ 5,000.00	0.00%	\$ -	100.00%	\$ 5,000.00
22-1	Padgett Creek Retaining Wall Const	\$ 5,000	100.00%	\$ 5,000.00	0.00%	\$ -	100.00%	\$ 5,000.00
	Dirksen/DeBary Bridge							
23	Dirksen/DeBary Bridge Mobilization	\$ 80,000	100.00%	\$ 80,000.00	0.00%	\$ -	100.00%	\$ 80,000.00
23-1	Dirksen/DeBary Bridge Mobilization	\$ 80,000	100.00%	\$ 80,000.00	0.00%	\$ -	100.00%	\$ 80,000.00
24	DD - Foundation Construction	\$ 200,000	100.00%	\$ 200,000.00	0.00%	\$ -	100.00%	\$ 200,000.00
24-1	DD - Foundation Construction	\$ 200,000	100.00%	\$ 200,000.00	0.00%	\$ -	100.00%	\$ 200,000.00
25	DD - Substructure Construction	\$ 300,000	100.00%	\$ 300,000.00	0.00%	\$ -	100.00%	\$ 300,000.00
25-1	DD - Substructure Construction	\$ 300,000	100.00%	\$ 300,000.00	0.00%	\$ -	100.00%	\$ 300,000.00
26	DD - Superstructure Construction	\$ 400,000	100.00%	\$ 400,000.00	0.00%	\$ -	100.00%	\$ 400,000.00



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26-1	DD – Superstructure Construction	\$ 400,000	100.00%	\$ 400,000.00	0.00%	\$ -	100.00%	\$ 400,000.00
27	Dirksen Rd. Retaining Wall Const	\$ 10,000	100.00%	\$ 10,000.00	0.00%	\$ -	100.00%	\$ 10,000.00
27-1	Dirksen Rd. Retaining Wall Const	\$ 10,000	100.00%	\$ 10,000.00	0.00%	\$ -	100.00%	\$ 10,000.00
	Enterprise Road Bridge							
28	Enterprise Road Bridge Mobilization	\$ 150,000	100.00%	\$ 150,000.00	0.00%	\$ -	100.00%	\$ 150,000.00
28-1	Enterprise Road Bridge Mobilization	\$ 150,000	100.00%	\$ 150,000.00	0.00%	\$ -	100.00%	\$ 150,000.00
29	ER – Foundation Construction	\$ 400,000	100.00%	\$ 400,000.00	0.00%	\$ -	100.00%	\$ 400,000.00
29-1	ER – Foundation Construction Ph1	\$ 250,000	100.00%	\$ 250,000.00	0.00%	\$ -	100.00%	\$ 250,000.00
29-2	ER – Foundation Construction Ph2	\$ 150,000	100.00%	\$ 150,000.00	0.00%	\$ -	100.00%	\$ 150,000.00
30	ER – Substructure Construction	\$ 300,000	99.86%	\$ 299,568.00	0.00%	\$ -	99.86%	\$ 299,568.00
30-1	ER – Substructure Construction Ph1	\$ 180,000	100.00%	\$ 180,000.00	0.00%	\$ -	100.00%	\$ 180,000.00
30-2	ER – Substructure Construction Ph2	\$ 120,000	99.64%	\$ 119,568.00	0.00%	\$ -	99.64%	\$ 119,568.00
31	ER – Superstructure Construction	\$ 800,000	86.88%	\$ 695,000.00	0.00%	\$ -	86.88%	\$ 695,000.00
31-1	ER – Superstructure Construction Ph1	\$ 500,000	100.00%	\$ 500,000.00	0.00%	\$ -	100.00%	\$ 500,000.00
31-2	ER – Superstructure Construction Ph2	\$ 300,000	65.00%	\$ 195,000.00	0.00%	\$ -	65.00%	\$ 195,000.00
32	Enterprise Rd Retaining Wall Const	\$ 350,000	99.00%	\$ 346,500.00	0.00%	\$ -	99.00%	\$ 346,500.00
32-1	Enterprise Rd Retaining Wall Const	\$ 350,000	99.00%	\$ 346,500.00	0.00%	\$ -	99.00%	\$ 346,500.00
33	ER – Removal Existing Bridge	\$ 150,000	100.00%	\$ 150,000.00	0.00%	\$ -	100.00%	\$ 150,000.00
33-1	ER – Removal Existing Bridge	\$ 150,000	100.00%	\$ 150,000.00	0.00%	\$ -	100.00%	\$ 150,000.00
	III. Roadway Construction							
34	Roadway Mobilization	\$ 2,500,000	100.00%	\$ 2,500,000.00	0.00%	\$ -	100.00%	\$ 2,500,000.00
34-1	FPL Relocation US 17/92 - Design	\$ 55,000	100.00%	\$ 55,000.00	0.00%	\$ -	100.00%	\$ 55,000.00
34-2	FPL Relocation US 17/92 - Complete	\$ 450,000	100.00%	\$ 450,000.00	0.00%	\$ -	100.00%	\$ 450,000.00
34-3	Miscellaneous Relocation US 17/92	\$ 150,000	100.00%	\$ 150,000.00	0.00%	\$ -	100.00%	\$ 150,000.00
34-4	Miscellaneous Relocation Orange	\$ 100,000	100.00%	\$ 100,000.00	0.00%	\$ -	100.00%	\$ 100,000.00
34-5	Roadway Mobilization	\$ 1,745,000	100.00%	\$ 1,745,000.00	0.00%	\$ -	100.00%	\$ 1,745,000.00
35	Embankment / Excavation	\$ 6,000,000	99.97%	\$ 5,998,000.00	0.00%	\$ -	99.97%	\$ 5,998,000.00
35-1	Phase 1 Roadway Construction	\$ 1,000,000	100.00%	\$ 1,000,000.00	0.00%	\$ -	100.00%	\$ 1,000,000.00
35-2	Phase 2 Roadway Construction	\$ 500,000	100.00%	\$ 500,000.00	0.00%	\$ -	100.00%	\$ 500,000.00
35-3	Phase 2A Roadway Construction	\$ 100,000	100.00%	\$ 100,000.00	0.00%	\$ -	100.00%	\$ 100,000.00
35-4	Phase 3 Roadway Construction	\$ 200,000	100.00%	\$ 200,000.00	0.00%	\$ -	100.00%	\$ 200,000.00
35-5	Phase 3A Roadway Construction	\$ 100,000	100.00%	\$ 100,000.00	0.00%	\$ -	100.00%	\$ 100,000.00
35-6	Enterprise Rd. Roadway Constr.	\$ 100,000	98.00%	\$ 98,000.00	0.00%	\$ -	98.00%	\$ 98,000.00
35-7	Clear & Grub West	\$ 500,000	100.00%	\$ 500,000.00	0.00%	\$ -	100.00%	\$ 500,000.00
35-8	Clear & Grub East	\$ 250,000	100.00%	\$ 250,000.00	0.00%	\$ -	100.00%	\$ 250,000.00
35-9	Clear & Grub Enterprise	\$ 50,000	100.00%	\$ 50,000.00	0.00%	\$ -	100.00%	\$ 50,000.00
35-10	Surcharge	\$ 3,200,000	100.00%	\$ 3,200,000.00	0.00%	\$ -	100.00%	\$ 3,200,000.00
36	Drainage	\$ 5,295,000	99.52%	\$ 5,269,800.00	0.00%	\$ -	99.52%	\$ 5,269,800.00
36-1	Drainage Work I-4	\$ 5,100,000	99.85%	\$ 5,092,350.00	0.00%	\$ -	99.85%	\$ 5,092,350.00
36-2	Drainage Enterprise Rd.	\$ 195,000	91.00%	\$ 177,450.00	0.00%	\$ -	91.00%	\$ 177,450.00
37	Traffic Control (MOT)	\$ 4,000,000	99.90%	\$ 3,996,000.00	0.00%	\$ -	99.90%	\$ 3,996,000.00
37-1	MOT Phase 1 West	\$ 1,000,000	100.00%	\$ 1,000,000.00	0.00%	\$ -	100.00%	\$ 1,000,000.00
37-2	MOT Phase 1 East	\$ 1,200,000	100.00%	\$ 1,200,000.00	0.00%	\$ -	100.00%	\$ 1,200,000.00
37-3	MOT Phase 2 West	\$ 750,000	100.00%	\$ 750,000.00	0.00%	\$ -	100.00%	\$ 750,000.00
37-4	MOT Phase 2 East	\$ 500,000	100.00%	\$ 500,000.00	0.00%	\$ -	100.00%	\$ 500,000.00
37-5	MOT Phase 2A	\$ 50,000	100.00%	\$ 50,000.00	0.00%	\$ -	100.00%	\$ 50,000.00



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37-6	MOT Phase 3 West	\$ 200,000	100.00%	\$ 200,000.00	0.00%	\$ -	100.00%	\$ 200,000.00
37-7	MOT Phase 3 East	\$ 150,000	100.00%	\$ 150,000.00	0.00%	\$ -	100.00%	\$ 150,000.00
37-8	MOT Phase 3A	\$ 50,000	100.00%	\$ 50,000.00	0.00%	\$ -	100.00%	\$ 50,000.00
37-9	MOT Phase 4	\$ 100,000	96.00%	\$ 96,000.00	0.00%	\$ -	96.00%	\$ 96,000.00
38	Erosion Control	\$ 400,000	98.50%	\$ 394,000.00	0.50%	\$ 2,000.00	99.00%	\$ 396,000.00
38-1	Erosion Control	\$ 400,000	98.50%	\$ 394,000.00	0.50%	\$ 2,000.00	99.00%	\$ 396,000.00
39	Pavement Structure	\$ 8,600,000	95.57%	\$ 8,219,000.00	0.00%	\$ -	95.57%	\$ 8,219,000.00
39-1	Phase 1 Pavement Construction	\$ 3,300,000	100.00%	\$ 3,300,000.00	0.00%	\$ -	100.00%	\$ 3,300,000.00
39-2	Phase 2 Pavement Construction	\$ 2,300,000	98.00%	\$ 2,254,000.00	0.00%	\$ -	98.00%	\$ 2,254,000.00
39-3	Phase 2A Pavement Construction	\$ 400,000	99.00%	\$ 396,000.00	0.00%	\$ -	99.00%	\$ 396,000.00
39-4	Phase 3 Pavement Construction	\$ 1,100,000	99.00%	\$ 1,089,000.00	0.00%	\$ -	99.00%	\$ 1,089,000.00
39-5	Phase 3A Pavement Construction	\$ 300,000	100.00%	\$ 300,000.00	0.00%	\$ -	100.00%	\$ 300,000.00
39-6	Enterprise Rd. Pavement Constr.	\$ 200,000	75.00%	\$ 150,000.00	0.00%	\$ -	75.00%	\$ 150,000.00
39-7	Phase 4 Pavement Construction	\$ 1,000,000	73.00%	\$ 730,000.00	0.00%	\$ -	73.00%	\$ 730,000.00
40	Curbs, Barrier Wall & Guardrail	\$ 1,200,000	98.44%	\$ 1,181,250.00	0.00%	\$ -	98.44%	\$ 1,181,250.00
40-1	Concrete Construction	\$ 750,000	99.00%	\$ 742,500.00	0.00%	\$ -	99.00%	\$ 742,500.00
40-2	Guardrail & Fencing	\$ 450,000	97.50%	\$ 438,750.00	0.00%	\$ -	97.50%	\$ 438,750.00
41	Signalization	\$ 600,000	80.50%	\$ 483,000.00	0.50%	\$ 3,000.00	81.00%	\$ 486,000.00
41-1	Signalization	\$ 100,000	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -
41-2	River Bridge Lighting	\$ 200,000	99.00%	\$ 198,000.00	0.00%	\$ -	99.00%	\$ 198,000.00
41-3	Roadway Electrical	\$ 300,000	95.00%	\$ 285,000.00	1.00%	\$ 3,000.00	96.00%	\$ 288,000.00
42	Signing and Pavement Marking	\$ 1,400,000	41.50%	\$ 581,000.00	13.50%	\$ 189,000.00	55.00%	\$ 770,000.00
42-1	Signs	\$ 1,050,000	41.00%	\$ 430,500.00	18.00%	\$ 189,000.00	59.00%	\$ 619,500.00
42-2	Pavement Marking	\$ 350,000	43.00%	\$ 150,500.00	0.00%	\$ -	43.00%	\$ 150,500.00
43	Grassing	\$ 400,000	84.00%	\$ 336,000.00	3.00%	\$ 12,000.00	87.00%	\$ 348,000.00
43-1	Grassing	\$ 400,000	84.00%	\$ 336,000.00	3.00%	\$ 12,000.00	87.00%	\$ 348,000.00
44	Landscaping	\$ 1,000,000	20.00%	\$ 200,000.00	12.00%	\$ 120,000.00	32.00%	\$ 320,000.00
44-1	Landscaping	\$ 1,000,000	20.00%	\$ 200,000.00	12.00%	\$ 120,000.00	32.00%	\$ 320,000.00
45	Service Patrol	\$ 600,000	97.00%	\$ 582,000.00	1.00%	\$ 6,000.00	98.00%	\$ 588,000.00
45-1	Service Patrol	\$ 600,000	97.00%	\$ 582,000.00	1.00%	\$ 6,000.00	98.00%	\$ 588,000.00
IV	ITS							
46	ITS	\$ 7,200,000	83.98%	\$ 6,046,500.00	7.22%	\$ 520,000.00	91.20%	\$ 6,566,500.00
46-1	Furnish F/O Cable	\$ 2,000,000	98.00%	\$ 1,960,000.00	0.00%	\$ -	98.00%	\$ 1,960,000.00
46-2	Install F/O Cable For Project	\$ 900,000	98.00%	\$ 882,000.00	0.00%	\$ -	98.00%	\$ 882,000.00
46-3	Install F/O Cable To DeLand	\$ 400,000	100.00%	\$ 400,000.00	0.00%	\$ -	100.00%	\$ 400,000.00
46-4	Cameras	\$ 900,000	93.30%	\$ 839,700.00	0.00%	\$ -	93.30%	\$ 839,700.00
46-5	Preliminary Vehicle Detection	\$ 500,000	100.00%	\$ 500,000.00	0.00%	\$ -	100.00%	\$ 500,000.00
46-6	Final Vehicle Detection	\$ 400,000	84.00%	\$ 336,000.00	0.00%	\$ -	84.00%	\$ 336,000.00
46-7	Temporary VMS	\$ 200,000	100.00%	\$ 200,000.00	0.00%	\$ -	100.00%	\$ 200,000.00
46-8	Furnish DMS	\$ 1,200,000	55.40%	\$ 664,800.00	33.00%	\$ 396,000.00	88.40%	\$ 1,060,800.00
46-9	Permanent DMS	\$ 400,000	48.00%	\$ 192,000.00	28.00%	\$ 112,000.00	76.00%	\$ 304,000.00
46-10	Integrate ITS	\$ 100,000	72.00%	\$ 72,000.00	12.00%	\$ 12,000.00	84.00%	\$ 84,000.00
46-11	ITS Warranty	\$ 200,000	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -
V	Extra Work							
SA-1	Change From 48 to 72 Strand F/O Cable	\$ 286,832	100.00%	\$ 286,832.00	0.00%	\$ -	100.00%	\$ 286,832.00
SA-2	Column Rustication	\$ 333,028	100.00%	\$ 333,027.78	0.00%	\$ -	100.00%	\$ 333,027.78



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SA-3 Elder Ditch Drainage	\$ 306,880	100.00%	\$ 306,880.00	0.00%	\$ -	100.00%	\$ 306,880.00
SA-4 Construct Ramp D-1	\$ 4,555,000	89.76%	\$ 4,088,529.00	1.66%	\$ 75,800.00	91.42%	\$ 4,164,329.00
SA-4-1 Engineering Services	\$ 450,000	100.00%	\$ 450,000.00	0.00%	\$ -	100.00%	\$ 450,000.00
SA-4-2 Geotechnical Services	\$ 80,000	100.00%	\$ 80,000.00	0.00%	\$ -	100.00%	\$ 80,000.00
SA-4-3 Survey Services	\$ 7,000	100.00%	\$ 7,000.00	0.00%	\$ -	100.00%	\$ 7,000.00
SA-4-4 Foundation Construction	\$ 290,000	100.00%	\$ 290,000.00	0.00%	\$ -	100.00%	\$ 290,000.00
SA-4-5 Substructure Construction	\$ 110,000	99.00%	\$ 108,900.00	1.00%	\$ 1,100.00	100.00%	\$ 110,000.00
SA-4-6 Superstructure Construction	\$ 770,000	97.17%	\$ 748,209.00	1.00%	\$ 7,700.00	98.17%	\$ 755,909.00
SA-4-7 Retaining Wall Const	\$ 760,000	98.30%	\$ 747,080.00	0.50%	\$ 3,800.00	98.80%	\$ 750,880.00
SA-4-8 Construction Mobilization	\$ 220,000	100.00%	\$ 220,000.00	0.00%	\$ -	100.00%	\$ 220,000.00
SA-4-9 Embankment / Excavation	\$ 1,175,000	99.00%	\$ 1,163,250.00	0.00%	\$ -	99.00%	\$ 1,163,250.00
SA-4-10 Drainage	\$ 109,000	99.00%	\$ 107,910.00	0.00%	\$ -	99.00%	\$ 107,910.00
SA-4-11 Traffic Control (MOT)	\$ 40,000	98.00%	\$ 39,200.00	0.00%	\$ -	98.00%	\$ 39,200.00
SA-4-12 Erosion Control	\$ 12,000	97.00%	\$ 11,640.00	0.00%	\$ -	97.00%	\$ 11,640.00
SA-4-13 Pavement Structure	\$ 200,000	28.00%	\$ 56,000.00	28.00%	\$ 56,000.00	56.00%	\$ 112,000.00
SA-4-14 Curbs, Barrier Wall & Guardrail	\$ 138,000	43.00%	\$ 59,340.00	0.00%	\$ -	43.00%	\$ 59,340.00
SA-4-15 Signalization	\$ 100,000	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -
SA-4-16 Signing & Pavement Marking	\$ 22,000	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -
SA-4-17 Grassing	\$ 12,000	0.00%	\$ -	10.00%	\$ 1,200.00	10.00%	\$ 1,200.00
SA-4-18 Landscaping	\$ 60,000	0.00%	\$ -	10.00%	\$ 6,000.00	10.00%	\$ 6,000.00
SA-5 Construct Decorative Soundwall	\$ 2,948,000	99.04%	\$ 2,919,552.00	0.00%	\$ -	99.04%	\$ 2,919,552.00
SA-5-1 Engineering Services	\$ 83,987	100.00%	\$ 83,987.00	0.00%	\$ -	100.00%	\$ 83,987.00
SA-5-2 Clear & Construct Access	\$ 100,400	100.00%	\$ 100,400.00	0.00%	\$ -	100.00%	\$ 100,400.00
SA-5-3 Foundations	\$ 569,337	100.00%	\$ 569,337.00	0.00%	\$ -	100.00%	\$ 569,337.00
SA-5-4 Set Post & Panels	\$ 2,052,036	100.00%	\$ 2,052,036.00	0.00%	\$ -	100.00%	\$ 2,052,036.00
SA-5-5 Paint & AntiGraffiti	\$ 142,240	80.00%	\$ 113,792.00	0.00%	\$ -	80.00%	\$ 113,792.00
SA-6 Sinkhole Repair	\$ 180,325	100.00%	\$ 180,325.00	0.00%	\$ -	100.00%	\$ 180,325.00
SA-6-1 Mobilization for Sinkhole Repair	\$ 10,000	100.00%	\$ 10,000.00	0.00%	\$ -	100.00%	\$ 10,000.00
SA-6-2 Grouting Mix A	\$ 138,000	100.00%	\$ 138,000.00	0.00%	\$ -	100.00%	\$ 138,000.00
SA-6-3 Casing Pipe For Grouting	\$ 24,225	100.00%	\$ 24,225.00	0.00%	\$ -	100.00%	\$ 24,225.00
SA-6-4 Grouting Mix B	\$ 8,100	100.00%	\$ 8,100.00	0.00%	\$ -	100.00%	\$ 8,100.00
SA-7 Anti Graffiti & 2 Color Scheme	\$ 77,437	100.00%	\$ 77,437.31	0.00%	\$ -	100.00%	\$ 77,437.31
SA-8 Fiber Optic Cable Relocation	\$ 44,929	100.00%	\$ 44,929.08	0.00%	\$ -	100.00%	\$ 44,929.08
SA-9 Sinkhole Repair & Adj to SA#6 & SA#7	\$ 141,657	75.81%	\$ 112,791.32	0.00%	\$ -	79.62%	\$ 112,791.32
SA-9-1 Sinkhole Grouting Sta. 198+00	\$ 119,328	75.81%	\$ 90,462.18	0.00%	\$ -	75.81%	\$ 90,462.18
SA-9-2 Repair Depression EB I-4 Sta. 2967+00	\$ 5,820	100.00%	\$ 5,820.00	0.00%	\$ -	100.00%	\$ 5,820.00
SA-9-3 Adjustment To SA #7	\$ 25,719	100.00%	\$ 25,718.90	0.00%	\$ -	100.00%	\$ 25,718.90
SA-9-4 Adjustment To SA #6	\$ (9,210)	100.00%	\$ (9,209.76)	0.00%	\$ -	100.00%	\$ (9,209.76)
SA-11 Construct Ramp D-1 Turn Lane	\$ 203,345	100.00%	\$ 16,040.00	11.44%	\$ 23,254	63.15%	\$ 128,418.32
SA-11-1 Mobilization	\$ 8,600	100.00%	\$ 8,600.00	0.00%	\$ -	100.00%	\$ 8,600.00
SA-11-2 M.O.T.	\$ 7,500	50.00%	\$ 3,750.00	25.00%	\$ 1,875.00	75.00%	\$ 5,625.00
SA-11-3 Erosion Control	\$ 1,200	50.00%	\$ 600.00	25.00%	\$ 300.00	75.00%	\$ 900.00
SA-11-4 Excavation	\$ 6,180	50.00%	\$ 3,090.00	25.00%	\$ 1,545.00	75.00%	\$ 4,635.00
SA-11-5 Stabilization Type B	\$ 5,556	80.00%	\$ 4,444.80	12.00%	\$ 666.72	92.00%	\$ 5,111.52
SA-11-6 Base Group 9	\$ 13,890	80.00%	\$ 11,112.00	12.00%	\$ 1,666.80	92.00%	\$ 12,778.80



The Design-Build Team

I-4 (SR 400) Interim Auxiliary Lanes From SR 423 (John Young Parkway) To SR 414 (Maitland Boulevard)
I-4 Milling and Resurfacing From SR 423 (Lee Road) to SR 434 (Sanlando Springs Road)
FDOT Financial Project Number 242499-1-52-01, FDOT Contract Number E5F21
Federal Project Number FL 430001
Hubbard Construction Company Job Number 10298

PROGRESS PAYMENT INVOICE SUMMARY

Invoice Number 21
Invoice Period 16-Apr-03 Thru 15-May-03

CONTRACT REVENUE SUMMARY

Original Contract Amount \$ 51,100,000.00
Total Supplemental Agreement 232,539.18
Current Contract Amount \$ 51,332,539.18

CONTRACT PAYMENT SUMMARY

Previous Estimate \$ 37,738,844.13 73.52%
Current Estimate 2,180,776.20 04.25%
Total To Date \$ 39,919,620.33 77.77%
Retainage -
Total Amount Due \$ 39,919,620.33
Less Previous Payments (37,738,844.13)
Current Payment Due \$ 2,180,776.20

CONTRACT TIME SUMMARY

Contract Start Date 4-Sep-01
Original Duration 825 Days
Weather Days Added 40 Days
Supplemental Agreement Days - Days
Current Duration 865 Days
Suspension Days - Days
Contract End Date 16-Jan-04
Days Used To Date 619
Percent Complete 71.56%

I HEREBY CERTIFY THAT I HAVE EXAMINED THIS ESTIMATE AND THAT IT IS TRUE AND CORRECT ACCORDING TO MY BEST KNOWLEDGE AND BELIEF

Signed: Hubbard Construction Company, Inc.
Robert Brown - Construction Manager

Remit To: Hubbard Construction Company
Attn: Emie Wolf
PO Box 547217
Orlando, FL 32854-7217

I-4 (SR 400) Interim Auxiliary Lanes From SR 423 (John Young Parkway) To SR 414 (Mailand Boulevard)
 Financial Project Number 242499-1-52-01
 PROGRESS PAYMENT INVOICE DETAIL

Federal Project Numbers FL 430001, 0042193
 Hubbard Construction Company Job Number 10298
 Invoice Number 21
 Invoice Period 16-Apr-03 Thru 15-May-03

Pay Item No.	Bid item Description	Unit	Unit Price	Previous Estimate		This Estimate		Total To Date	
				Quantity	Amount	Quantity	Amount	Quantity	Amount
SERVICES									
I-01	Engineering Services	LS	\$ 6,000,000.00	0.940	\$ 5,674,950.00	0.006	\$ 37,050.00	0.946	\$ 5,712,000.00
I-01.01	Roadway Design, Section 1 (JYP - SR408)	LS	540,000.00	1.000	540,000.00	-	-	1.000	540,000.00
I-01.02	Roadway Design, Section 2 (SR408 - Par Ave)	LS	390,000.00	1.000	390,000.00	-	-	1.000	390,000.00
I-01.03	Roadway Design, Section 3 (Par Ave - Lee Road)	LS	390,000.00	1.000	390,000.00	-	-	1.000	390,000.00
I-01.04	Drainage Design, Section 1 (JYP - SR408)	LS	145,000.00	1.000	145,000.00	-	-	1.000	145,000.00
I-01.05	Drainage Design, Section 2 (SR408 - Par Ave)	LS	132,000.00	1.000	132,000.00	-	-	1.000	132,000.00
I-01.06	Drainage Design, Section 3 (Par Ave - Lee Road)	LS	126,000.00	1.000	126,000.00	-	-	1.000	126,000.00
I-01.07	Traffic Control Plans, Section 1 (JYP - SR408)	LS	155,000.00	1.000	155,000.00	-	-	1.000	155,000.00
I-01.08	Traffic Control Plans, Section 2 (SR408 - Par Ave)	LS	126,000.00	1.000	126,000.00	-	-	1.000	126,000.00
I-01.09	Traffic Control Plans, Section 3 (Par Ave - Lee Road)	LS	126,000.00	1.000	126,000.00	-	-	1.000	126,000.00
I-01.10	Environmental / Permits, Section 1 (JYP - SR408)	LS	20,000.00	1.000	20,000.00	-	-	1.000	20,000.00
I-01.11	Environmental / Permits, Section 2 (SR408 - Par Ave)	LS	15,000.00	1.000	15,000.00	-	-	1.000	15,000.00
I-01.12	Environmental / Permits, Section 3 (Par Ave - Lee Road)	LS	10,000.00	1.000	10,000.00	-	-	1.000	10,000.00
I-01.13	Structures Design, Section 1 (JYP - SR408)	LS	820,000.00	1.000	820,000.00	-	-	1.000	820,000.00
I-01.14	Structures Design, Section 2 (SR408 - Par Ave)	LS	410,000.00	1.000	410,000.00	-	-	1.000	410,000.00
I-01.15	Structures Design, Section 3 (Par Ave - Lee Road)	LS	570,000.00	0.975	555,750.00	0.025	14,250.00	1.000	570,000.00
I-01.16	Lighting Design, Section 1 (JYP - SR408)	LS	125,000.00	1.000	125,000.00	-	-	1.000	125,000.00
I-01.17	Lighting Design, Section 2 (SR408 - Par Ave)	LS	110,000.00	1.000	110,000.00	-	-	1.000	110,000.00
I-01.18	Lighting Design, Section 3 (Par Ave - Lee Road)	LS	120,000.00	1.000	120,000.00	-	-	1.000	120,000.00
I-01.19	ITS System Design, Section 1 (JYP - SR408)	LS	400,000.00	1.000	400,000.00	-	-	1.000	400,000.00
I-01.20	ITS System Design, Section 2 (SR408 - Par Ave)	LS	375,000.00	1.000	375,000.00	-	-	1.000	375,000.00
I-01.21	ITS System Design, Section 3 (Par Ave - Lee Road)	LS	375,000.00	1.000	375,000.00	-	-	1.000	375,000.00
I-01.22	Utility Coordination	LS	160,000.00	0.970	155,200.00	0.030	4,800.00	1.000	160,000.00
I-01.23	Post-Design Services	LS	360,000.00	0.150	54,000.00	0.050	18,000.00	0.200	72,000.00
I-02	Geotechnical Services	LS	1,000,000.00	1.000	1,000,000.00	-	-	1.000	1,000,000.00
I-02.01	Geotechnical Services, Section 1 (JYP - SR408)(Rdwy)	LS	200,000.00	1.000	200,000.00	-	-	1.000	200,000.00
I-02.02	Geotechnical Services, Section 2 (SR408 - Par Ave)(Rdwy)	LS	125,000.00	1.000	125,000.00	-	-	1.000	125,000.00
I-02.03	Geotechnical Services, Section 3 (Par Ave - Lee Road)(Rdwy)	LS	150,000.00	1.000	150,000.00	-	-	1.000	150,000.00
I-02.04	Geotechnical Services, Section 1 (JYP - SR408)(Bridges)	LS	250,000.00	1.000	250,000.00	-	-	1.000	250,000.00
I-02.05	Geotechnical Services, Section 2 (SR408 - Par Ave)(Bridges)	LS	125,000.00	1.000	125,000.00	-	-	1.000	125,000.00
I-02.06	Geotechnical Services, Section 3 (Par Ave - Lee Road)(Bridges)	LS	150,000.00	1.000	150,000.00	-	-	1.000	150,000.00
I-03	Survey Services	LS	1,000,000.00	1.000	1,000,000.00	-	-	1.000	1,000,000.00
I-03.01	Survey Services, Section 1 (JYP - SR408)	LS	400,000.00	1.000	400,000.00	-	-	1.000	400,000.00
I-03.02	Survey Services, Section 2 (SR408 - Par Ave)	LS	300,000.00	1.000	300,000.00	-	-	1.000	300,000.00
I-03.03	Survey Services, Section 3 (Par Ave - Lee Road)	LS	300,000.00	1.000	300,000.00	-	-	1.000	300,000.00
BRIDGE CONSTRUCTION / WIDENING									
II-04	Mobilization	LS	3,000,000.00	0.946	2,837,500.00	0.021	62,500.00	0.967	2,900,000.00
II-04.01	Mobilization, Section 1 (JYP - SR408)	LS	2,000,000.00	1.000	2,000,000.00	-	-	1.000	2,000,000.00
II-04.02	Mobilization, Section 2 (SR408 - Par Ave)	LS	750,000.00	1.000	750,000.00	-	-	1.000	750,000.00
II-04.03	Mobilization, Section 3 (Par Ave - Lee Road)	LS	250,000.00	0.350	87,500.00	0.250	62,500.00	0.600	150,000.00
II-05	Foundation	LS	2,500,000.00	0.754	1,885,000.00	0.061	153,000.00	0.815	\$ 2,038,000.00
II-05.01	Foundation, (Rio Grande)	LS	150,000.00	1.000	150,000.00	-	-	1.000	150,000.00
II-05.02	Foundation, (OBT)	LS	225,000.00	1.000	225,000.00	-	-	1.000	225,000.00
II-05.03	Foundation, (Westmoreland)	LS	200,000.00	1.000	200,000.00	-	-	1.000	200,000.00
II-05.04	Foundation, (Michigan)	LS	225,000.00	1.000	225,000.00	-	-	1.000	225,000.00
II-05.05	Foundation, (Kaley)	LS	175,000.00	1.000	175,000.00	-	-	1.000	175,000.00
II-05.06	Foundation, (Gore)	LS	210,000.00	1.000	210,000.00	-	-	1.000	210,000.00
II-05.07	Foundation, (Division)	LS	250,000.00	1.000	250,000.00	-	-	1.000	250,000.00
II-05.08	Foundation, (South Street)	LS	175,000.00	1.000	175,000.00	-	-	1.000	175,000.00
II-05.09	Foundation, (Par)	LS	150,000.00	0.950	142,500.00	0.050	7,500.00	1.000	150,000.00

I-4 (SR 400) Interim Auxiliary Lanes From SR 423 (John Young Parkway) To SR 414 (Mailand Boulevard)
 Financial Project Number 242499-1-52-01
 PROGRESS PAYMENT INVOICE DETAIL

Federal Project Numbers FL 430001, 0042193
 Hubbard Construction Company Job Number 10298
 Invoice Number 21
 Invoice Period 16-Apr-03 Thru 15-May-03

Pay Item No.	Bid item Description	Unit	Unit Price	Previous Estimate		This Estimate		Total To Date	
				Quantity	Amount	Quantity	Amount	Quantity	Amount
II-05.10	Foundation, (Formosa)	LS	265,000.00	0.500	132,500.00	0.500	132,500.00	1.000	265,000.00
II-05.11	Foundation, (Fairbanks)	LS	200,000.00	-	-	0.065	13,000.00	0.065	13,000.00
II-05.12	Foundation, (Wymore)	LS	275,000.00	-	-	-	-	-	-
II-06	Substructure	LS	2,000,000.00	0.668	1,336,400.00	0.045	90,400.00	0.713	\$ 1,426,800.00
II-06.01	Substructure, (Rio Grande)	LS	120,000.00	1.000	120,000.00	-	-	1.000	120,000.00
II-06.02	Substructure, (OBT)	LS	180,000.00	1.000	180,000.00	-	-	1.000	180,000.00
II-06.03	Substructure, (Westmoreland)	LS	160,000.00	1.000	160,000.00	-	-	1.000	160,000.00
II-06.04	Substructure, (Michigan)	LS	180,000.00	1.000	180,000.00	-	-	1.000	180,000.00
II-06.05	Substructure, (Kaley)	LS	140,000.00	1.000	140,000.00	-	-	1.000	140,000.00
II-06.06	Substructure, (Gore)	LS	168,000.00	1.000	168,000.00	-	-	1.000	168,000.00
II-06.07	Substructure, (Division)	LS	200,000.00	1.000	200,000.00	-	-	1.000	200,000.00
II-06.08	Substructure, (South Street)	LS	140,000.00	1.000	140,000.00	-	-	1.000	140,000.00
II-06.09	Substructure, (Par)	LS	120,000.00	0.050	6,000.00	0.400	48,000.00	0.450	54,000.00
II-06.10	Substructure, (Formosa)	LS	212,000.00	0.200	42,400.00	0.200	42,400.00	0.400	84,800.00
II-06.11	Substructure, (Fairbanks)	LS	160,000.00	-	-	-	-	-	-
II-06.12	Substructure, (Wymore)	LS	220,000.00	-	-	-	-	-	-
II-07	Superstructure	LS	2,000,000.00	0.608	1,216,200.00	-	-	0.608	\$ 1,216,200.00
II-07.01	Superstructure, (Rio Grande)	LS	120,000.00	1.000	120,000.00	-	-	1.000	120,000.00
II-07.02	Superstructure, (OBT)	LS	180,000.00	1.000	180,000.00	-	-	1.000	180,000.00
II-07.03	Superstructure, (Westmoreland)	LS	160,000.00	1.000	160,000.00	-	-	1.000	160,000.00
II-07.04	Superstructure, (Michigan)	LS	180,000.00	1.000	180,000.00	-	-	1.000	180,000.00
II-07.05	Superstructure, (Kaley)	LS	140,000.00	1.000	140,000.00	-	-	1.000	140,000.00
II-07.06	Superstructure, (Gore)	LS	168,000.00	0.900	151,200.00	-	-	0.900	151,200.00
II-07.07	Superstructure, (Division)	LS	200,000.00	0.900	180,000.00	-	-	0.900	180,000.00
II-07.08	Superstructure, (South Street)	LS	140,000.00	0.750	105,000.00	-	-	0.750	105,000.00
II-07.09	Superstructure, (Par)	LS	120,000.00	-	-	-	-	-	-
II-07.10	Superstructure, (Formosa)	LS	212,000.00	-	-	-	-	-	-
II-07.11	Superstructure, (Fairbanks)	LS	160,000.00	-	-	-	-	-	-
II-07.12	Superstructure, (Wymore)	LS	220,000.00	-	-	-	-	-	-
II-08	Retaining Walls	LS	1,000,000.00	0.480	480,000.00	-	-	0.480	\$ 480,000.00
III ROADWAY CONSTRUCTION / WIDENING									
III-09	Mobilization	LS	3,000,000.00	0.967	2,900,000.00	0.013	37,500.00	0.979	2,937,500.00
III-09.01	Mobilization, Section 1 (JYP - SR408)	LS	2,000,000.00	1.000	2,000,000.00	-	-	1.000	2,000,000.00
III-09.02	Mobilization, Section 2 (SR408 - Par Ave)	LS	750,000.00	1.000	750,000.00	-	-	1.000	750,000.00
III-09.03	Mobilization, Section 3 (Par Ave - Lee Road)	LS	250,000.00	0.600	150,000.00	0.150	37,500.00	0.750	187,500.00
III-10	Embankment / Excavation	LS	3,000,000.00	0.650	1,950,000.00	0.067	200,000.00	0.717	2,150,000.00
III-10.01	Embankment / Excavation, Section 1 (JYP - SR408)	LS	1,000,000.00	1.000	1,000,000.00	-	-	1.000	1,000,000.00
III-10.02	Embankment / Excavation, Section 2 (SR408 - Par Ave)	LS	1,250,000.00	0.700	875,000.00	0.100	125,000.00	0.800	1,000,000.00
III-10.03	Embankment / Excavation, Section 3 (Par Ave - Lee Road)	LS	750,000.00	0.100	75,000.00	0.100	75,000.00	0.200	150,000.00
III-11	Drainage	LS	3,000,000.00	0.628	1,885,000.00	0.042	125,000.00	0.670	2,010,000.00
III-11.01	Drainage, Section 1 (JYP - SR408)	LS	1,250,000.00	1.000	1,250,000.00	-	-	1.000	1,250,000.00
III-11.02	Drainage, Section 2 (SR408 - Par Ave)	LS	1,000,000.00	0.635	635,000.00	0.050	50,000.00	0.685	685,000.00
III-11.03	Drainage, Section 3 (Par Ave - Lee Road)	LS	750,000.00	-	-	0.100	75,000.00	0.100	75,000.00
III-12	Traffic Control	LS	1,000,000.00	0.532	532,000.00	0.007	7,000.00	0.539	539,000.00
III-12.01	Traffic Control, Section 1 (JYP - SR408)	LS	500,000.00	1.000	500,000.00	-	-	1.000	500,000.00
III-12.02	Traffic Control, Section 2 (SR408 - Par Ave)	LS	300,000.00	0.100	30,000.00	0.010	3,000.00	0.110	33,000.00
III-12.03	Traffic Control, Section 3 (Par Ave - Lee Road)	LS	200,000.00	0.010	2,000.00	0.020	4,000.00	0.030	6,000.00
III-13	Erosion Control	LS	300,000.00	0.517	155,000.00	0.067	20,000.00	0.583	175,000.00
III-13.01	Erosion Control, Section 1 (JYP - SR408)	LS	100,000.00	1.000	100,000.00	-	-	1.000	100,000.00
III-13.02	Erosion Control, Section 2 (SR408 - Par Ave)	LS	125,000.00	0.320	40,000.00	0.100	12,500.00	0.420	52,500.00
III-13.03	Erosion Control, Section 3 (Par Ave - Lee Road)	LS	75,000.00	0.200	15,000.00	0.100	7,500.00	0.300	22,500.00
III-14	Pavement Structure	LS	5,000,000.00	0.545	2,725,000.00	0.150	750,000.00	0.695	3,475,000.00
III-14.01	Pavement Structure, Section 1 (JYP - SR408)	LS	1,500,000.00	1.000	1,500,000.00	-	-	1.000	1,500,000.00
III-14.02	Pavement Structure, Section 2 (SR408 - Par Ave)	LS	2,500,000.00	0.490	1,225,000.00	0.260	650,000.00	0.750	1,875,000.00
III-14.03	Pavement Structure, Section 3 (Par Ave - Lee Road)	LS	1,000,000.00	-	-	0.100	100,000.00	0.100	100,000.00
III-15	Barrier Wall, Guardrail, Etc.	LS	1,000,000.00	0.590	590,000.00	0.050	50,000.00	0.640	640,000.00
III-15.01	Barrier Wall, Guardrail, Etc., Section 1 (JYP - SR408)	LS	500,000.00	1.000	500,000.00	-	-	1.000	500,000.00

I-4 (SR 400) Interim Auxiliary Lanes From SR 423 (John Young Parkway) To SR 414 (Mailand Boulevard)
 Financial Project Number 242499-1-52-01
 PROGRESS PAYMENT INVOICE DETAIL

Federal Project Numbers FL 430001, 0042193
 Hubbard Construction Company Job Number 10298
 Invoice Number 21

Invoice Period 16-Apr-03 Thru 15-May-03

Pay Item No.	Bid item Description	Unit	Unit Price	Previous Estimate		This Estimate		Total To Date	
				Quantity	Amount	Quantity	Amount	Quantity	Amount
III-15.02	Barrier Wall, Guardrail, Etc., Section 2 (SR408 - Par Ave)	LS	300,000.00	0.300	90,000.00	0.100	30,000.00	0.400	120,000.00
III-15.03	Barrier Wall, Guardrail, Etc., Section 3 (Par Ave - Lee Road)	LS	200,000.00	-	-	0.100	20,000.00	0.100	20,000.00
III-16	Signing	LS	1,276,000.00	0.407	519,562.94	0.006	7,911.20	0.413	527,474.14
III-16.01	Signing, Section 1 (JYP - SR408)	LS	484,880.00	1.000	484,880.00	-	-	1.000	484,880.00
III-16.02	Signing, Section 2 (SR408 - Par Ave)	LS	395,560.00	0.045	17,776.59	0.020	7,911.20	0.065	25,687.79
III-16.03	Signing, Section 3 (Par Ave - Lee Road)	LS	395,560.00	0.043	16,906.36	-	-	0.043	16,906.36
III-17	Highway Lighting	LS	4,118,000.00	0.589	2,423,513.01	0.047	191,487.00	0.635	2,615,000.01
III-17.01	Lighting, Section 1 (JYP - SR408)	LS	1,441,300.00	1.000	1,441,300.00	-	-	1.000	1,441,300.00
III-17.02	Lighting, Section 2 (SR408 - Par Ave)	LS	1,276,580.00	0.640	817,138.86	0.150	191,487.00	0.790	1,008,625.86
III-17.03	Lighting, Section 3 (Par Ave - Lee Road)	LS	1,400,120.00	0.118	165,074.15	-	-	0.118	165,074.15
III-18	Pavement Markings	LS	406,000.00	0.342	138,852.00	0.038	15,428.00	0.380	154,280.00
III-18.01	Pavement Markings, Section 1 (JYP - SR408)	LS	154,280.00	0.900	138,852.00	0.100	15,428.00	1.000	154,280.00
III-18.02	Pavement Markings, Section 2 (SR408 - Par Ave)	LS	125,860.00	-	-	-	-	-	-
III-18.03	Pavement Markings, Section 3 (Par Ave - Lee Road)	LS	125,860.00	-	-	-	-	-	-
III-19	Grass / Landscape Replacement	LS	200,000.00	0.300	60,000.00	0.040	8,000.00	0.340	68,000.00
III-19.01	Grass / Landscape Replacement, Section 1 (JYP - SR408)	LS	60,000.00	1.000	60,000.00	-	-	1.000	60,000.00
III-19.02	Grass / Landscape Replacement, Section 2 (SR408 - Par Ave)	LS	80,000.00	-	-	0.100	8,000.00	0.100	8,000.00
III-19.03	Grass / Landscape Replacement, Section 3 (Par Ave - Lee Road)	LS	60,000.00	-	-	-	-	-	-
IV ITS									
IV-18	SMIS	LS	5,000,000.00	0.760	3,798,330.00	0.048	238,000.00	0.807	4,036,330.00
IV-18.01	SMIS, Section 1 (JYP - SR408)	LS	1,700,000.00	1.000	1,700,000.00	-	-	1.000	1,700,000.00
IV-18.02	SMIS, Section 2 (SR408 - Par Ave)	LS	2,000,000.00	0.860	1,719,800.00	0.015	30,000.00	0.875	1,749,800.00
IV-18.03	SMIS, Section 3 (Par Ave - Lee Road)	LS	1,300,000.00	0.291	378,530.00	0.160	208,000.00	0.451	586,530.00
V BRIDGE REPAIR / REHABILITATION									
V-19	Repair / Rehabilitation	LS	300,000.00	1.000	300,000.00	-	-	1.000	300,000.00
V-19.01	Repair / Rehabilitation, Section 1 (JYP - SR408)	LS	200,000.00	1.000	200,000.00	-	-	1.000	200,000.00
V-19.02	Repair / Rehabilitation, Section 2 (SR408 - Par Ave)	LS	-	-	-	-	-	-	-
V-19.03	Repair / Rehabilitation, Section 3 (Par Ave - Lee Road)	LS	100,000.00	1.000	100,000.00	-	-	1.000	100,000.00
VI MILLING AND RESURFACING									
VI-20	Milling and Resurfacing	LS	5,000,000.00	0.825	4,123,750.00	0.038	187,500.00	0.862	4,311,250.00
VI-20.01	Milling and Resurfacing, Section 1 (JYP - SR408)	LS	3,750,000.00	1.000	3,748,750.00	-	-	1.000	3,748,750.00
VI-20.02	Milling and Resurfacing, Section 2 (SR408 - Par Ave)	LS	750,000.00	0.500	375,000.00	0.250	187,500.00	0.750	562,500.00
VI-20.03	Milling and Resurfacing, Section 3 (Par Ave - Lee Road)	LS	500,000.00	-	-	-	-	-	-
VII SUPPLEMENTAL AGREEMENTS									
VI-21	SUPPLEMENTAL AGREEMENTS	LS	232,539.18	0.893	207,786.18	-	-	0.893	207,786.18
VI-21.01	Church Street Slab Repair/PaveTrac	LS	70,135.50	1.000	70,135.50	-	-	1.000	70,135.50
	PaveTrac	LS	25,131.40	1.000	25,131.40	-	-	1.000	25,131.40
VI-21.03	Guardrail Repairs	LS	8,731.25	1.000	8,731.25	-	-	1.000	8,731.25
	Deletion of ITS System Components	LS	(5,160.00)	1.000	(5,160.00)	-	-	1.000	(5,160.00)
VI-21.04	Contingency	LS	40,000.00	0.381	15,247.00	-	-	0.381	15,247.00
VI-21.05	Light Pole Repairs	LS	5,561.64	1.000	5,561.64	-	-	1.000	5,561.64
	Joint Replacements at Kaley Bridge	LS	80,657.00	1.000	80,657.00	-	-	1.000	80,657.00
	Deck Repairs at OBT Bridge	LS	7,482.39	1.000	7,482.39	-	-	1.000	7,482.39
		S	51,332,539.18	S	37,738,844.13	S	2,180,776.20	S	39,919,620.33

Design-Build Crossword

Referenced Documents

(Found on the State Construction Website under Alternative Contracts, Design Build)

Design-Build Guidelines (DBG)

Boilerplate - Request for Proposal (RFP)

2007 Standard Specifications for Road and Bridge Construction (Spec)

FDOT Procedure No. 625-020-010

DOWN

1	In addition to the submittal of the regular documents, the following items shall be added to the list of submittals: 1. As-built (record) drawings 2. Design plans and calculations 3. Geotechnical reports 4. Load _____ of as-built structure(s).	DBG 15
2	Design-Build Firm Responsibility for Accuracy and Coordination of Shop Drawings: Coordinate, _____, and control all submittals, with a regard for the required priority, including those of the various subcontractors, suppliers, and engineers, to provide for an orderly and balanced distribution of the work.	DBG 13.4.2.6.1
3	Design-Build projects allow the contractor to participate in the design in an effort to reduce costs and _____ construction.	FDOT Proc No. 625-020-010
4	Design-Build Firm Responsibility for Accuracy and Coordination of Shop Drawings: Indicate on the shop drawings all deviations from the Contract drawings and itemize all deviations in the letter of _____. Likewise, whenever a submittal does not deviate from the Contract plans, clearly state so in the transmittal letter.	DBG 13.4.2.6.1
5	The Department's PM will be responsible for coordinating the procurement of Design-Build services as well as overseeing the engineering/inspection/construction of the project. A team approach, with a PM from Production and a PM from Operations (Construction), is a viable solution to fulfilling the responsibilities associated with this role. One of these roles is _____ and _____ periodic progress payments.	DBG 13
6	No _____ shall be submitted prior to Department approval of the schedule of values.	RFP p. 24 of 52
7	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 Supplement Specifications from the Specifications _____ in effect at the time the Bid Price Proposals were due in the District Office.	RFP p. 41 of 52
8	Shop drawings are not required for prequalified items. For non-prequalified items, determine the submittal path to be followed based upon the identity of the Engineer of Record as shown adjacent to the title block on the structural plan sheets, and on the key sheets of roadway plans, signing, and pavement marking plans, and/or lighting plans. At the preconstruction conference, the Department will notify the Design-Build Firm of any changes to the standard submittal process. The Department's red ink review stamp will signify an officially reviewed shop drawing and will state either "_____ for Construction" or "_____ for Construction as Noted". <i>(Missing word is the same word in each location, use only once in puzzle)</i>	DBG 13.4.2.5.1

ACROSS

1	Special Review by the Engineer of Record of Shop Drawings for Construction Affecting Public Safety For Construction Affecting Public Safety, the Engineer of Record, will make an independent design review of all relevant shop drawings and similar documents. Do not proceed with construction of the permanent works until receiving the Engineer of Record's approval. Send a copy of the approval letter to the _____ _____. The review of these shop drawings is for overall structural adequacy of the item to support the imposed loads.	DBG 13.4.2.6.3
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Design-Build Crossword

Referenced Documents

(Found on the State Construction Website under Alternative Contracts, Design Build)

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DOWN

9	Monthly Estimates: The Design-Build Firm will develop a list of general pay items based on a _____ loaded CPM schedule. The pay items will be per each such as columns for a bridge and; therefore, the monthly payment due the Design-Build Firm will be based on the number of columns completed of the total planned. If the total column item is \$100,000.00 and 5 out of 10 columns were completed in one month, then the Design-Build Firm is due \$50,000.00 for that month.	DBG 13.3.1
10	_____ days are granted in the same manner per the specifications in a Design-Build Project as in a typical Construction Project.	Spec 8-7.3.2
11	The monthly payments shall be approximate only and shall be subject to reduction for overpayments or _____ for underpayments on preceding payments to the Design-Build Firm and to correction in the subsequent estimates and the final estimate and payment.	DBG 15

ACROSS

12	The Job Guide Schedule (JGS) shall be kept up-to-date, and provided by the Design-Build Firm on a _____ basis to the District Materials Engineer and District Construction Engineer.	DBG 14.1(L)
13	The _____ contract day of a Design Build Project is the Notice to Proceed Date. Design starts immediately after the Notice to Proceed Date.	DBG 13.4.2.6.3
14	Daily Report of Construction (DRC): Design-Build projects will require the standard DRC form to be filled out every day for every construction operation underway. Particular attention should be paid to recording what _____ is completed for use in preparing the monthly estimate.	DBG 13.4.1
15	Environmental permit agencies ____ _____ allow Design-Build Firms to perform permit testing such as turbidity, the CEI will be expected to perform these tests and these should be covered by the scope.	DBG 13.2.2
16	Prepare and submit to the Engineer a Job Guide Schedule (JGS) using the Laboratory Information Management System (LIMS), 21 calendar days prior to commencement of _____. Update the Job Guide Schedule and submit it to the Engineer prior to each monthly progress estimate.	RFP p. 23 of 52
17	Final signed and sealed plans will be delivered to the Department’s Project Manager a minimum of _____ working days prior to construction of that component. The Department’s Project Manager will send a copy of a final signed and sealed plans to the appropriate office for review and stamping “Released for Construction”. Only stamped signed and sealed plans 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.	RFP p 20 of 52
18	During the Design Phase, _____ are granted in the same manner as during the construction phase.	Spec 8-7.3.2
19	Invoicing will be based on the completion or _____ of completion of major, well-defined tasks as defined in the schedule of values.	RFP p. 24 of 52
20	Before construction activities can begin, the Design/Build Firm shall prepare and submit a signed and sealed Construction Specifications Package for the project. The Design/Build Firm must account for a _____ calendar day (excluding Holidays as defined in section 1-3 of the Specifications) review time in its schedule.	RFP p. 41 of 52
21	For the purpose of the shop drawing review process as set forth in this article, the term “_____” will apply to the initiator or producer of shop drawings regardless of whether or not that party is normally the Engineer of Record or the _____ and the term “Engineer of Record” will apply to the shop drawing checker and certifier regardless of whether or not that party is normally the Engineer of Record or the _____. <i>(Missing words are the same word in each area of this paragraph, use only once in puzzle)</i>	DBG 13.4.2.1
22	Approach and Understanding of the Project: The Design/Build Firm shall present a comprehensive _____ 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.	RFP p. 49 of 52