

CONVENTIONAL CONTRACTING PRACTICES SPECIAL EXPERIMENTAL PROJECT NO. 14 FEDERALLY FUNDED PUSHBUTTON

Introduction

The Florida Department of Transportation (FDOT) submits this plan for review and approval as an alternative contracting methodology under the provisions of Special Experimental Project No. 14 (SEP 14) relating to traffic signal and Intelligent Transportation System (ITS) installation. Historically, the FDOT has used pushbutton contracting with state funds for the purpose of quickly, efficiently, and to cost effectively construct traffic signal and ITS projects. FDOT has been successful in using this methodology on state funded projects for numerous years.

Proposal

FDOT's proposal is to expand the current state funded pushbutton methodology for the use of federal funding while adhering to state and federal requirements. The proposal is to eliminate the individual advertisement period for these small dollar projects, along with the district cost for contract administration and processing of each traffic signal and ITS project as individual contracts. The proposal will quickly, efficiently, and cost effectively construct traffic signal and ITS projects.

The Federal Highway Administration (FHWA) [Every Day Counts](#) website states: "Every Day Counts (EDC) is a state-based model to identify and rapidly deploy proven but underutilized innovations to shorten the project delivery process, enhance roadway safety, reduce congestion and improve environmental sustainability." FDOT is confident that the proposed process will result in quick project delivery, without sacrificing competition, cost, or quality.

- Use a multi-year construction contract, advertised and awarded based on federal regulations, to construct traffic signal and ITS projects. The original contract term will be 1-3 years, with the option to renew the contract for 3 additional 1 year periods.
- The scope of the work for the contract will include traffic signal construction and ITS device installation.
- Contractors will bid on pay items associated with work that may be completed during the contract, each contractor will submit bids for each item. The selected contractor will be based on the lowest responsive, responsible bid.
- When a scope of work for a Work Document is finalized, a detailed estimate will be developed utilizing the unit bid costs submitted by the awarded contractor.

Purpose

This methodology is an innovative process in project delivery. It allows for efficiency in the financial delivery of small dollar projects, flexibility, and expedited implementation of projects compared to the normal design-bid-build contracting method.

Scope

This contracting process will establish a defined scope of work to be completed by the Contractor and also includes establishing unit cost prices for pre-determined work items which may be completed by the Contractor pursuant to the Department's issuance of Work Documents. The original scope of work as defined by the estimated number of units for each pay item is approximate and represents estimated planned work requirements based on historical or specific project needs. The contract would be advertised following FDOT standard process for bidding and would include all Federal contracting language and requirements. This project will be a PoDI (Project of Division Interest (Federal Oversight)) and an individual Stewardship and Oversight Plan will be developed by the FHWA Florida Division Office to determine the oversight activities that will be required for the project.

The bid items would be those historically used to construct traffic signal, ITS, highway lighting and traffic monitoring infrastructure.

The contract will contain pay items associated with work that may be completed during the contract, each contractor will submit bids for each item. The lowest responsive, responsible bidder will be awarded the contract. The contract language will state that quantities are for bidding purposes only and there is no guarantee of work. In addition to Standard Specifications and those Special Provisions specific to federally funded projects, pushbutton Special Provisions will be utilized. Copies of these pushbutton Special Provisions are attached for your consideration as part of this request.

Prior to requesting authorization from FHWA for the initial Work Documents or subsequently issued Work Documents, the NEPA evaluation and planning process steps (funding for projects is shown in the TIP/STIP) must be completed and available for FHWA review. Additionally, the estimated cost for Work Documents, work type and location, must be determined along with a concept of operations and System Engineering Management Plan (SEMP).

The original term to complete all work associated with individual Work Documents will not exceed 180 calendar days. The original amount of individual Work Documents will not exceed \$500,000.00. Issuance of multiple Work Documents of similar scope, to complete the overall scope of a project location in an effort to remain under the \$500,000.00 Work Document limitation, shall not occur. The cumulative total of all Work Documents issued in each state fiscal year of

FDOT's Adopted Work Program shall not exceed \$3 million per Design-Bid-Build Pushbutton contract.

Schedule

Project award will follow all state and federal requirements including advertisement timeframes and award to the lowest responsive bidder. Work Documents will be issued on an as needed basis and will not require re-advertisement, eliminating the need for each Work Document to be advertised for a minimum of 21 days (per 23 CFR 635.112(b)), thereby expediting the implementation of projects compared to the normal design-bid-build contracting method for each individual Work Document.

The Design Project Manager and the Construction Project Manager will coordinate when developing the scope of required Work Documents and the frequency of Work Documents issuance so as to ensure sufficient resources are available to manage the Contract Administration effort associated with the contract.

The original contract term for Design-Bid-Build Pushbutton Contract shall not exceed 3 years; contract may include 3 renewable options which shall not exceed 1 year each. Contract renewals shall be reviewed and approved by the Chief Engineer, prior to issuance.

At the time of initial authorization there must be at least three (3) project specific task assignments with a scope and estimated cost. The estimated cost, work type and location of Work covered by each Work Document must be determined prior to issuance of the Work Document.

Specific Project Information

Below is a list of the first (3) project specific task assignments.

1. Interconnect on Wilson Blvd (SR 208): Intelligent Transportation System (ITS) Project on Wilson Blvd from me-295 to Blanding Blvd (SR 21) in Duval County, Florida.
 - a. Project will consist of the purchase and installation of Fiber Optic Cable with associated infrastructure including Ethernet switches, patch panels, jumper cables, conduit, pull boxes and mounting hardware.
2. Interconnect on SR 13: Intelligent Transportation System (ITS) Project on SR 13 from Race Track Rd in St. Johns County to Julington Creek Rd in Duval County, Florida.
 - a. Project will provide communication connectivity between St. Johns County System and the City of Jacksonville system. Project consists of the purchase and installation of Fiber Optic Cable with associated infrastructure including Ethernet

switches, patch panels, jumper cables, conduit, pull boxes and mounting hardware.

3. Interconnect on Blanding Boulevard (SR 21): Intelligent Transportation System (ITS) Project on SR 21 from Collins Road to Park Street in Duval County, Florida.
 - a. Project will consist of the purchase and installation of Wireless Access Points with associated infrastructure including Ethernet switches, jumper cables, conduit, pull boxes and mounting hardware.

Each individual Work Document will include work type, location, and estimate. Individual Work Documents will not exceed \$500,000.00, and will be part of the System Engineering Management Plan (SEMP).

Current Method

Individual work documents would be advertised as a standalone project and awarded to the lowest responsive bidder following all state and federal requirements.

Deviation

The proposed process follows FHWA regulations as contained in 23 CFR 635.112, 635.113, and 635.114; with the exception of the below:

Allow issuance of multiple work documents of similar scope during the specified contract period. The proposed process would eliminate the cost and time associated with advertisement and contract award of each individual Work Document.

Measures

Time Savings

The performance of this modified procurement method will be measured by documented time savings from design completion until the start of construction. The time savings of individual project advertisement, along with the quick implementation of these safety enhancement features will determine the effectiveness of this innovative process.

Cost Savings

The cost savings introduced by using the ITS Push Button contract will be driven by smaller sized projects that will allow for greater competition among firms seeking to “fill in the gaps” between larger sized projects or firms trying to enter the District Two market. Most firms

maintain a surplus of materials that sit idly in a warehouse (at a cost) that can now be utilized for these sized projects. We expect a cost savings of 10% when a comparison is made between a traditional and push button contract. Likewise, by using the North Florida Transportation Planning Organization System Manager consultant for design of these projects we can address the laborious work needed by these firms while handling the technical aspects like configuration, integration and testing with local forces. This approach reduces the price mark-ups of up to 20% that were traditionally incorporated by contractors due to the risks associated with technology based projects. A traditional approach of Design-Bid-Build contracts not only adds time to a project but also incremental increases due to risk that can be avoided through use of this push button contract. Economies of scale and efficiency on use of personnel can also be captured by the winning contractor, thereby allowing for additional cost savings through use of this contract method.

Our team will compare the cost savings captured via use of the Push Button versus the traditional method. We will compare costs for Design, time and deployment between both. We will also compare post deployment costs whereby we can compare the maintenance efforts for local agencies between contract approaches.

Cost Saving Measures are:

Cost of Design, cost of deployment, cost of maintenance and cost savings based on time saved.

Quality of Work Delivered – The expectation is that the quality of work will be significantly increased through use of the push button contract. As mentioned previously, the goal is to reduce the risk placed on a contractor while allowing the local agency greater involvement in the technical aspects like configuration, integration and testing. The Department will measure the amount of time and money spent by local maintenance forces on post deployment efforts when compared to traditional deployments. Historically, local agencies spend more time and effort than desired on a traditional based contract, so the hope is to show that less time spent by them post deployment on these push button contracts will display a better quality of work.

Labor costs, equipment costs, mean-time between failures, material costs.

Reporting

Measures identified will be monitored and reported for total contract duration. The Transportation System Management and Operations Program Manager will provide annual reports to the FHWA Florida Division within three months after completion of every year of the contract. These reports will include a cost savings report, quality of work delivery report, and a reaction and response report. The reaction and response report will document comments

received by Construction Industry and will include any impacts identified during project delivery.

The Transportation System Management and Operations Program Manager will provide the FHWA Florida Division a final evaluation report within three months of the completion of the contract.

APPENDIX

**AWARD AND EXECUTION OF CONTRACT.
(REV 4-28-16)**

ARTICLE 3-1 is expanded by the following:

The quantities shown on the Bid Price Proposal are approximate and only represent estimated planned requirements based on historical or specific project needs. The Department does not guarantee any maximum or minimum quantity, any range of quantities, or the exact quantities shown for each bid item. The Department's estimated quantities and the Contractor's bid price will be used to calculate a total bid amount. This total bid amount will then be used to determine the low bidder; however, actual payment under the awarded contract will be based on actual quantities completed.

SUBARTICLE 3-2.2 is deleted.

SUBARTICLE 3-5.1 is expanded by the following:

If this Contract is for an improvement, demolition, or removal Contract of \$25,000 or less, the security may be a cashier's check, certified check or bank or postal money order. The Department will deposit and hold the security, paying no interest throughout the life of the Contract. The security will not be returned until written notice of final acceptance is issued by the Department.

CONTROL OF THE WORK.

(REV 4-1-15)

ARTICLE 5-1 is expanded by the following:

5-1.7 Work Documents/Liquidated Damages: For this Contract in which specific sites are not identified at the time of letting, the Engineer will issue a Work Document. Work Documents will identify the location, description, amount of work to be accomplished, and the number of calendar days to complete the work. Notify the Engineer prior to beginning work defined by each individual Work Document.

The initial Work Document may be issued with the Notice to Proceed. The Contractor will be allowed 14 calendar days from receipt of the initial Work Document to respond and begin work. The 14 calendar days begin on the date the document is received in person, by fax or by certified mail. The Contractor will be expected to respond and begin work within five working days of receipt of any subsequent Work Document. If a start date later than 5 working days is identified in a Work Document, the Contractor will be expected to begin work by the start date identified in the Work Document.

Charging of Contract time will begin on the actual day that work begins at the site, but no later than:

1. the 14th calendar day from receipt of the initial Work Document; or
2. the 5th working day from receipt of any subsequent Work Document; or
3. the "start date " identified in a Work Document (as described above)

that is applicable to the specific Work Document issued.

If the Contractor does not begin work by the end of the day provided by the Work Document, or if the assignment of work on the Work Document is not complete within the number of calendar days specified on the Work Document, then the Department may assess the Contractor, not as a penalty but as liquidated damages, a per day assessment of 1% of the total Work Document amount or the amount shown in Subarticle 8-10.2 (Amount of Liquidated Damages), whichever is less.

The Engineer will issue Work Documents for locations that represent a minimum of one day's work. All work locations will be described with sufficient particularity that will allow the Contractor to proceed immediately to the location with minimum delay. The Department will make every reasonable effort to plan work locations and develop work documents in systematic and concentrated regions so as to minimize the Contractor's travel requirements. A Pre-Work Conference may be scheduled prior to the commencement of work in accordance with the Work Document.

Upon completion of the assigned work of the Work Document, notify the Engineer. Certify that the work quantities and quality were accomplished in accordance with these specifications by signing and returning the Work Document to the Department. All work completed will be reviewed to verify quantity and quality prior to approval of the Work Document.

Should inclement weather limit or stop the work, notify the Engineer of such limitation or work stoppage.

Schedule work in a manner that prevents delays, stoppages and rework.

PROSECUTION AND PROGRESS.

(REV 4-2-07)

SECTION 8 is expanded by the following:

8-13 Contract Renewal.

This Contract does have a renewable option. The Contract may be renewed for a period that may not exceed 3 years or the term of the original Contract, whichever period is longer. The renewal will be subject to the same bid prices, associated quantities and other terms and conditions set forth in the original Contract and supplemental agreement(s) determined by the Engineer to continue into the renewal period. Renewals will be made at the sole discretion and option of the Department and must be agreed to in writing, by both parties. Renewal is contingent upon the availability of funds and the satisfactory performance of the Contractor, as determined by the Department.

MAINTENANCE OF TRAFFIC.

(REV 5-13-10)

SUBARTICLE 102-13.1 is expanded by the following:

102-13.1.1 When No Separate Item is Included in the Proposal: When the proposal does not include a separate item for Maintenance of Traffic, all work and incidental costs specified as being covered under this Section will be included for payment under the several scheduled items of the overall Contract, and no separate payment will be made therefore.