

CHATHAM COUNTY PURCHASING DEPARTMENT

ADDENDUM NO. 1 TO 11-5-2-4

FOR: KING GEORGE BLVD. @ GROVE POINT ROAD SIGNALIZATION

PLEASE SEE THE FOLLOWING FOR ADDITIONS, CLARIFICATIONS AND/OR CHANGES:

SEE ATTACHED SHEET (1) FOR RESPONSES TO QUESTIONS RECEIVED.

SEE ATTACHED SHEETS (3) : GDOT *SECTION 687 TRAFFIC SIGNAL TIMING* SPECIAL PROVISIONS.

**NOTE: All questions submitted December 20 thru 22 shall be submitted to Robin Maurer
email: rlmaurer@chathamcounty.org Fax: 912-790-1627.**

THE BID OPENING REMAINS: 2PM, DECEMBER 29, 2010

THE BIDDER IS RESPONSIBLE FOR MAKING THE NECESSARY CHANGES AND MUST ACKNOWLEDGE RECEIPT OF ADDENDUM.

12-17-10
DATE



ROBERT E. MARSHALL
SENIOR PROCUREMENT SPECIALIST
CHATHAM COUNTY

King George Blvd. @ Grove Point Road Signalization

Bid No. 11-5-2-4

Questions Received:

1. What are the requirements for the 2 inch rigid conduit?

1A. The conduit must meet the requirements of Specification Section 923.2.01 for rigid steel or rigid aluminum conduit.

2. Who will set the signal timing? Will there be a pay item for the signal timing?

2A. The contractor will be responsible for the signal timing. See Special Provision 687 as attached. There will not be a separate pay item for this work. The cost for this work shall be included in the lump sum bid price for 647-1000 Traffic Signal Installation-1. The submittal schedule for the timing will be as stated in Special Provision 687, and will not be required within 60 days of Notice to Proceed. Traffic count data will be provided by the County.

3. Will Contractor supplied message boards be required for advanced warning of the signal activation?

3A. Yes, two message boards will be required for about 5 days prior to and 7 days after signal activation. The cost for the use of the message boards should be included in the lump sum traffic control bid price.

**Georgia Department of
Transportation**

State of Georgia

Special Provision

Section-687 Traffic Signal Timing

Add the following:

687.1 General Description

This work consists of developing and implementing, by a prequalified Contractor, a traffic signal operating plan designed to provide a safe and efficient operation of the Intersection of King George Boulevard and Grove Point Road. This work includes system timing plan development, implementation and adjustment.

687.1.01 Definitions

Use the following definitions for purposes of this project:

- A prequalified Contractor is defined as one who is qualified to perform work in Area Class Codes 3.06 and 3.09 in the Department's Consultant Prequalification regulations.
- A signal timing plan is defined as a unique combination of cycle length, splits and offsets for all intersections within a system or control section.
- A control section is defined as any portion of a traffic control system, which can be controlled by a single set of timing parameters and in which all intersections change timing patterns at the same time.
- Engineer is defined as the District Traffic Engineer for the District in which the intersections are located.
- Approved or approval is defined as written approval by the District Traffic Engineer or his designated representative.

687.1.02 Related References

A. Standard Specifications

Section 108 - Prosecution and Progress

Section 647 - Traffic Signal Installation

687.1.03 Submittals

Make the following eight (8) submittals to the Engineer for review and approval in the sequence and order listed. Each submittal must be approved before conducting any associated work. The preliminary timing plan shall be submitted a minimum of 30 calendar days prior to the proposed signal activation date.

1. Methodology Report
2. Preliminary timing plans
3. Final Timing Plans Report

Submit all traffic signal timing data to the Engineer in a form utilizing the manufacturer's software. Assure that all work submitted is neat and legible.

687.2 Materials

687.2.01 Software

The Department will not provide resources to fulfill any Contractor obligations under this Special Provision. The Department will not furnish any software or equipment for the development and implementation of timing plans. Obtain all necessary licensed software, equipment and materials to support this work effort. All software used for this project must be registered to

Section 687 – Traffic Signal Timing

the Contractor and must be 100 percent compatible with the software utilized by the Department. Supply proof of registration.

687.3 Construction Requirements

687.3.01 Field Review

Visit the intersection during the morning, afternoon and evening peak traffic periods in order to make qualitative assessments of intersection operation. Make note of queue length, delays, conflicts or any other operational characteristics that should be considered in evaluating and developing coordinated traffic signal timing plans. Make note of the surrounding land use and traffic generators to gain insight on the daily traffic patterns of motorists in the area.

Upon completion of the field observations, contact the Engineer to determine if any special local conditions exist that could affect the timing plan development process.

687.3.02 Methodology Report

Develop a traffic signal Methodology Report containing the following data:

1. Methodology for calculating pedestrian and vehicular clearance intervals
2. Signal analysis software to be used
3. Software registration numbers
4. Time Schedule for the signal timing development and implementation

Submit two (2) copies of the Methodology Report to the Engineer for review and approval. Obtain written approval of the Methodology Report prior to the development of initial system timing plans. Define in the Methodology Report the intended methodology for developing system timing as well as the goals for operating the system.

Submit for approval a time schedule for completing the tasks covered under this Special Provision.

Define all software programs proposed to be used for timing plan development and database preparation. Do not use the Department resources to fulfill any of the Contractor's obligations under this Special Provision.

Use a Department approved computer signal timing analysis program to develop the signal timing plans. All software programs must be 100 percent compatible with the programs that the Department is currently using. Program version numbers may be different as long as the data can be saved into the version utilized by the Department. Obtain approval from the Department of all computer programs to be used for this project. Provide the Department with program registration numbers.

687.3.03 Data Collection

The traffic study including the traffic counts will be made available to the contractor by the County.

687.3.08 Initial Timing Plan Development

After receiving written approval of the Methodology Report from the Engineer, develop initial system timing plans based on the Methodology Report. Include in each timing plan controller, master (if present) and system settings necessary to allow coordinated operation of the Intersections.

687.3.08.01 Timing Plan Development Requirements

Submit a report consisting of the recommended time-of-day, day-of-week time periods for each plan and the proposed signal timing plans and databases for each plan to the Engineer for review and approval.

Develop and submit for approval by the Engineer procedures and a schedule for implementing and fine-tuning the timing.

Submit the signal timing development computer program input and output files for the proposed signal timing plans. Explain in the initial timing plan report the analysis and conclusions regarding the development of the signal timing plans.

687.3.09 Timing Plan Implementation

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Upon receipt of written approval of the Initial Timing Plan Report by the Engineer, implement the new signal timing. Notify the Engineer five (5) working days in advance of the implementation of the system timing plan. Do not schedule implementation on peak traffic days or peak travel times without prior approval from the Engineer.

Enter only approved data into the equipment at each location. Enter the new timing data at each controller, through the master or from the workstation. If entering the timing data from the workstation, have a person experienced with controller operation on-site in the field during the implementation process. Obtain approval of the method of data entry from the Engineer prior to the entry of any data. Develop and implement all settings required for the system database.

687.3.10 Fine-Tuning

Review the timing plans and adjust this data as required by actual field conditions or as directed by the Engineer. Conduct this evaluation in three (3) stages:

1. Conduct an initial field verification within twenty-four (24) hours of operating plan implementation. Review the operation of the equipment in the field to verify that the correct cycle lengths, splits and offsets are being implemented by the system and that no major operating problems occur.
2. In the second stage, include a detailed on-street review of the operation of all timing plans. This review will determine where adjustments are required subject to excessive queues or vehicle delays. Upon determining these locations, make the necessary adjustments.
3. The third stage of the fine-tuning consists of an on-street review of the timing plans by the Contractor, the Department and the Local Agency, if applicable. Request in writing to proceed with this stage and submit documentation of the activities in completing stages one and two before beginning the third stage. It is not the intent of stage three for the Department and the Local Agency to accomplish stages one and two for the Contractor. Stage three is reserved for the Department and Local Agency to review and approve, reject or request changes to the final timings as installed by the Contractor. As directed by the Department, the third stage could involve rejection of the timing plans, at which point the Contractor must repeat stages one and two and then request a follow-up stage three review with the Department. As directed by the Department, the third stage could also require the Contractor to re-run the timing plan development program at lower or higher restricted ranges or at specific cycle lengths (as needed to achieve the desired progression and minimize delay). If so directed, implement the necessary adjustments and repeat the detailed on-street review. Notify the Department at least five working days in advance of all on-street reviews. The Department reserves the right to require that adjustments be made due to conditions observed in the field.

Make any adjustments to the timings requested by the Department until the Final Timing Plan Report is submitted for review. Anticipate implementing all plans into the system and fine tuning all plans during the time-of-day/day-of-week, (and season of year, if applicable) that the plans are scheduled to be in effect. Shall present to the Department for approval any contract scheduling conflicts that may interfere with the proper scheduling of the timing plan implementation along with proposed resolutions.

Complete the fine tuning prior to the beginning of the operational test period as specified in Section 647.3.06.C of the Traffic Signal Installation Supplemental Specification.

687.3.12 Final Timing Plans

After all necessary adjustments are made to the timing and operating data and system graphics, furnish two (2) signed copies in a notebook of the final local timing plans to the District Traffic Engineer. Provide hard copies of the local and timing on the signal system software manufacturer's forms. Use the back-up routine provided in the Department's signal system software to make a back-up of the system database. Supply this back-up to the Engineer on a 3.5" diskette or a CD-ROM.

687.4 Measurement

Work performed under this specification will not be measured separately for payment.

687.5 Payment

Work performed under this specification will be paid for as part of the Lump Sum price bid under item 647-1000 Traffic Signal Installation 1 and will include all materials, labor, tools, equipment, supplies, and incidentals to complete this work.