SECTION 4

SPECIFICATIONS AND SPECIAL CONDITIONS
FOR
TRAFFIC SIGNAL CONSTRUCTION
EVENT # 5019

4.0 The purpose of these specifications is to describe services that the City of Savannah will need to repair/install traffic control devices for planned minor projects or for emergency repairs in the event of traffic accidents, storms, hurricanes, vandalism, or equipment failures.

To submit pricing electronically for this event, enter pricing for each line item shown under the lines tab on the event summary. To enter pricing manually, complete the attached bid proposal form. Manually submitted bids must be submitted on the bid proposal forms contained in these specifications in order to be considered.

A pre-bid conference has been scheduled to be conducted at the Purchasing Office, third floor, City Hall, 2 E. Bay Street, Savannah, Georgia 31401. This meeting will allow contractors to discuss the specifications and resolve any questions and/or misunderstandings that may arise with City staff. You are invited to attend.

4.1 Scope of Work

4.1.1 The work covered by these specifications consists of furnishing all labor, construction equipment, mobilization, and traffic control necessary for the construction of traffic control devices or the replacement of defective, obsolete, or damaged traffic control devices. This is including, but not limited to, the installation of steel strain poles, mast arm poles/mast arms, span wire, traffic signal head assemblies, control cabinets, vehicle detection loops, interconnect conduit, and signal cable. The unit price description of each work effort will specify whether the work to be performed will be done with material that is supplied by the City or supplied by the contractor. All conduit, loop wire, signal cable, and span wire will be provided by the contractor.

4.1.2 It is the intent of this contract to establish in advance of issuing a purchase order, the contract unit price for all items or work and materials which may be needed for traffic signal construction or related work as required by the Traffic Engineering Director or designee. Such items which will be described in a purchase order and will be used to determine compensation for all work covered by the purchase order.

4.1.3 The quantity of work to be performed will be determined by the Traffic Engineering Director or designee and specified in each purchase order. Incidental or emergency work such as pole replacement, cabinet replacement, or replacement of damaged signal equipment may be required. However, the City does not guarantee a minimum amount of work to be awarded. The quantities of work indicated in this

bid are not considered either a minimum or maximum amount of work to be performed, but do represent the best estimate of the work expected to be awarded and performed during the contract period.

4.1.4 Bids shall include a minimum of three references with contact names of companies for whom the bidder has performed similar services. References shall be submitted on Attachment 1 in order for the bid to be considered further.

4.1.5 All work shall be performed per the latest published editions of the Georgia Department of Transportation (GDOT) Standard Specifications – Construction of Transportation Systems, Section 647 – Traffic Signal Installation.

4.2 Special Conditions

4.2.1 In order to provide emergency service, the bidder must furnish a name and phone number of a contact who can be reached 24 hours daily, seven (7) days a week for order placement.

4.2.2 If supplier is local, supplier must describe its ability to conduct business without disruption in the event of a major storm or natural disaster in this area.

4.2.3 Schedule of Work

The City Traffic Engineering Director or designee will determine the amount of work to be performed under this contract and the priority of each installation. Purchase order(s) will be issued for a specific item or items or work at a site, specifying the estimated quantity of each item of work to be performed and the dates at which the work shall begin and be completed in accordance with the time allocations specified herein. The Traffic Engineering Director or designee reserves the right to change the priority of work or to temporarily suspend work at a site for the purpose of reassigning the contractor to emergency work or work of high priority. Except for emergency work as defined in the contract documents, the contractor shall begin work at the site within ten (10) calendar days after receipt of a purchase order. For vehicle loop installations, a single purchase order covering multiple bad loop lists may be issued. Once work has begun on a site, the contractor shall diligently pursue completion of the work in accordance with the following schedule, or if the work is not listed, the contractor shall work on a continuous basis until the work is finished.

Construction of new traffic signal	30 calendar days per intersection
Reconstruction of existing traffic signal	40 calendar days per intersection
Construction of steel pole foundation	Seven (7) calendar days per intersection
Construction of detector loops	One half (½) calendar day per loop
Installation of cabinet and base	Four (4) calendar days per intersection
Installation of concrete or timber pole	One half (½) calendar days per pole

Installation of span wire and signal cable	Two (2) calendar days per intersection
Installation of signs or signal heads	One (1) calendar day per intersection

If the contractor is unable to complete assigned work in accordance with the contract schedule, the City reserves the right to assign additional work to a secondary contractor. The City may elect to issue a purchase order for work at more than one location or to issue multiple purchase orders with overlapping schedules. The contractor shall be expected to perform work concurrently at no more than three (3) separate locations. If the contractor is unable to complete work at each site with the specified time, due to conditions beyond the control of the contractor, a written revised schedule shall be submitted to the Traffic Engineering Director or designee for approval.

The contractor shall be approved by the Georgia Department of Transportation to perform traffic signal work within GDOT right-of-way.

In the event work at a site is postponed or delayed at the request of the Traffic Engineering Director or designee by issuance of an emergency purchase order, multiple purchase orders, or by verbal agreements; the contractor shall submit a revised schedule.

4.2.5 A purchase order will be issued for each site or project sites or project (which may be multiple sites) and will specify the work to be performed at each site. Each purchase order will be itemized and will indicate the estimated quantity of work to be performed at each site. Construction drawings may accompany the purchase order and will become part of the project documents. The contractor shall review the construction drawings and the purchase order prior to commencing work at a site. The contractor shall verify the estimated quantity of each item and shall notify the Traffic Engineering Director or designee of any apparent discrepancies or errors in the purchase order.

Depending on the nature of the work, construction drawings at some sites may not be provided. In such cases, the Traffic Engineering Director or designee will provide written or oral instructions and will be available at the job site to provide information such as pole, conduit, pull box locations, head alignment, loop locations, or to aid in utility coordination.

4.2.6 It is estimated that fifteen percent (15%) of all work performed under this contract will be emergency work. Emergency work is defined, as work required to provide immediate safety and welfare of the public and will include all work necessary to repair or rebuild a signal installation, or parts of a signal installation, to the degree necessary for proper operation of the traffic signal. Emergency work may be required as a result of traffic accidents, storms, vandalism, or equipment failures. Emergency work is distinguished from regular work by the response time required to begin the work and by the time allotted to complete the work. Emergency work will be authorized by the Traffic Engineering Director or designee and the contractor

may be given written or oral authorization to proceed. In many cases, a purchase order will follow the notice to proceed. Once the contractor has been given authorization to proceed with emergency work, such work shall begin as soon as possible, but must begin within two (2) hours of notice to the vendor by phone call or other such means. The City will not require the emergency response time to be less than two (2) hours. Emergency work is usually due to damaged or down signal poles as a result of a vehicle crash. Typically, the contractor works in coordination with City crews by providing support of a boom truck for pole removal and/or timber pole installation. If the primary contractor cannot provide services in the allocated time, a secondary contractor would be utilized if the City receives enough acceptable bids to award to a primary and secondary contractor. A two (2) hour response is required by either a primary and/or secondary contractor. Work requiring a response time of 24 hours or greater shall not be considered emergency work. Once emergency work begins, the contractor is to diligently pursue completion of the work and shall work beyond regular working hours and on weekends, if necessary, to restore the situation to the satisfaction of the City. Some work efforts, such as site restoration and clean up, may be delayed until the next work day if agreed to by the City.

Compensation for emergency work will be determined by the regular contract unit price multiplied by the Emergency Cost Factor (ECF), a percentage mark-up. The ECF will be established in the bid and will be applied to each item of work, which is completed on any emergency basis.

If a purchase order is issued for emergency work at a site, and the Traffic Engineering Director or designee elects to have additional work done at the site on a non-emergency basis, the ECF multiplier will only be applied to the emergency work. All other work will be paid for at the unit price established in the contract.

4.3 Equipment and Materials

The City will provide traffic signals, controllers and cabinets, pull boxes, and other traffic signal equipment and materials as specified in the purchase order. Items for which the City will provide materials will be described in the bid and purchase order by the word "install" prior to the description of the item. The City may also specify that the contractor furnish and install these items under a different pay item. Items for which the contractor will provide materials will be described in the bid and purchase order by the word "furnish and install" prior to the description of the item. Intersection controllers provided by the contractor under this contract shall be of the make and model specified by the City.

4.3.1 All traffic signal hardware provided shall be compatible with existing City of Savannah equipment and shall be certified by GDOT for use on their roadways.

4.3.2 All materials and equipment furnished for installation under this contract shall be new and unused, unless otherwise specified. The contractor shall furnish and install or install all manufactured items, materials, and equipment in strict accordance with the manufacturer's recommended specifications except that the specifications herein, where more stringent, shall be complied with.

4.3.3 Equipment and materials supplied by the City will normally be stored at the City's Traffic Engineering warehouse located at 1100 W. Gwinnett Street or Traffic Engineering's pole yard located on the 1000 block of Louisville Road. The contractor shall provide for transportation of equipment and materials to each job site from the City's Traffic Engineering warehouse or other designated storage area within the limits of the City of Savannah. In addition, cranes, forklifts, or other special equipment necessary for loading and transporting materials and equipment shall be supplied by the contractor.

4.3.4 Upon receipt of a purchase order, the contractor shall promptly contact the Traffic Engineering Director or designee to arrange for picking up City furnished materials. In most cases, the exact quantity of materials will be issued. However, in the event material overruns occur, the contractor shall be responsible for the safekeeping and the return of unused materials. The Traffic Engineering Director or designee will verify quantities upon completion of the project and will check final quantities with the materials issued.

4.4 Construction

The contractor shall provide all labor, traffic control, construction equipment, form work, temporary braces, and any other items, machinery, or equipment necessary to perform the required work. In addition, the contractor shall provide all fill materials, gravel, cement, wire, cable, loop sealant, PVC conduit, sealant, and any miscellaneous items such as wire connectors, fasteners, nuts, bolts, washers, etc., which are not supplied by the City as a part of, or included in the materials for, any items specified in the purchase order. The cost of all such materials, supplies, or miscellaneous items that are supplied by the contractor shall be included in the contract unit price for the applicable bid item.

4.4.1 All poles, conduits, span wire, signal common, and service common shall be bonded with a No. 6 AWG bare copper wire, or equal, to form a continuous system and effectively grounded to three-quarters inch by ten feet (¾" x 10') ground rods with exothermic welds.

4.4.2 Poles shall be set with a sufficient amount of rake so that they are plumb with the signal load or slightly raked away from the signal load. Strain poles should have a slight backward rake, one to two inches (1"-2"), and timber poles shall utilize down guys to maintain appropriate signal height clearance during construction. The contractor shall rake the poles to the satisfaction of the Traffic Engineering Director or designee. Rake is hereby defined as the inclination to the vertical measured at the top of the structure in the opposite direction of the strain axis.

4.4.3 The locations of all poles, vehicle loops detectors, pull boxes, and cabinet base shown on the plans are diagrammatic only. The specific locations of such devices shall be decided by the Traffic Engineering Director or designee and shall be staked out as directed.

4.4.4 The contractor shall locate underground utilities in the vicinity of new traffic signal poles before installation. Minor shifts, up to a maximum of five feet (5') in location of new signal poles, at the discretion of the engineer, are acceptable to avoid underground utilities. Minimum clearances from edge of the pavement shall be maintained. Final pole location must be approved by the Traffic Engineering Director or designee prior to installation.

4.4.5 The work specified in this section will consist of providing all parts, equipment, and labor for construction of strain pole/mast arm pole bases. The size of the base will be specified in the purchase order.

4.4.6 The contractor shall replace in like kind, quantity, and size, at no separate expense to the City of Savannah or Traffic Engineering Department, any barrier wall, fence, ditch paving, curbing, sidewalk, pavement, wheelchair ramp, driveway, gutter, slope pavement, sign, guardrail, landscaping (in accordance with Georgia specifications Section 702), grassing (in accordance with Georgia specifications Section 700), utility service line, sprinkler system, storm drain pipe, and any masonry wall that are removed, damaged, or destroyed due to the signal, conduit, or strain pole installation.

4.4.7 All signal equipment and signal pole removals shall include the return and unloading of equipment in Traffic Engineering's warehouse, Traffic Engineering's pole yard, or other designated storage area within the limits of the City of Savannah. The exception will be damaged or broken timber poles which shall be the responsibility of the contractor to dispose of.

4.4.8 The contractor and subcontractors shall comply with all federal, state and local laws, codes and ordinances applicable to the work. The contractor shall obtain all permits required in connection with the execution of the work as required, including a City right-of-way permit.

4.4.9 All construction will be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD)-latest revisions, the signal drawings, National Electrical Cod, and GDOT specifications.

4.5 Public Safety and Convenience

All work done under this contract shall be done in compliance with the MUTCD. Each operation shall be considered a work zone area and shall be treated in accordance with the MUTCD.

4.5.1 Contractor shall provide barricades, fences, lights, etc., for protection of property and the public as required by the MUTCD. The contractor will be held liable for all damage to property and/or persons.

4.5.2 Flow of traffic shall not be interrupted completely without the approval of the Traffic Engineering Director or designee. Restriction and minor diversion will be

kept to a minimum. No work will be permitted in the traffic lanes during peak hours, 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM, Monday through Friday, unless approved in advance by the Traffic Engineering Director or designee.

4.5.3 Appropriate personal protective equipment shall be worn by all contract personnel when on the job-site.

4.6 Project Inspection

The City Traffic Engineer will provide a project engineer. All contacts with the City shall be through the project engineer, including correspondence, purchase orders, payment, coordination, and inspection. The project engineer will be responsible for inspection and acceptance of all work performed as a part of this contract. For final project inspection, the contractor shall notify the project engineer only after the project is complete and ready for inspection. The project engineer has the right to suspend the final inspection if numerous discrepancies are encountered, until such time that the contractor can recheck its work and assure that it is ready for a final inspection. Additionally, the contractor shall notify the project engineer at least 24 hours in advance of installing ground rods, underground conduit, setting poles, cutting loops, or sealing signal head assemblies so that these operations may be observed if he so desires. The project engineer will be responsible for issuing purchase orders, verification of completed work, approval of change orders, and will assist the contractor in utility coordination and resolution of utility conflicts. The project engineer may postpone work at a site, redirect the priorities previously established for the contractor, or assign additional work or items associated with emergency work, as directed by the Traffic Engineer Director or designee.

4.7 Work by Others

The contractor shall cooperate and coordinate his work with City personnel which may be performing additional work at the site, related to the contractors work. The City reserves the rights to have City personnel perform any work at a site or to perform specific items or work in conjunction with contractor's work. In the event additional work at a site is being performed by the City Traffic Engineering personnel, coordination may be accomplished through the City construction foreman at the approval of the project engineer. However, only the project engineer will be authorized to modify the quantities and scope of work to be performed by the contractor.

4.8 Payment

Upon completion and acceptance of all work at a site, the contractor shall submit one invoice for each purchase order issued. Payment of each item shall be determined by the contract unit price submitted in the bid. Unless approved in advance, partial payments will not be made. Invoices which contain final quantities and/or payment amounts greater than specified in the purchase order will not be processed unless the Traffic Engineer is notified in advance and the appropriate change order or supplemental purchase order is issued.

Original invoices should be mailed to: Accounts Payable
City of Savannah

P.O. Box 1027
Savannah, GA 31402

Duplicate invoices should be mailed to: City of Savannah
Traffic Engineering
P.O. Box 1027
Savannah, GA 31402

4.8.1 Basis of Award

This contract will be awarded to the vendor that offers the lowest net price to the City, and who meets or exceed all specifications herein. The City reserves the right to split the award if deemed to be in its best interest. The City also reserves the right to appoint a primary, secondary and tertiary vendor if deemed advantageous. The secondary and tertiary vendors will be utilized when the primary vendor cannot provide the good/services in the allocated time.

4.8.2 This is an annual contract and prices are to be held firm for a period of one (1) year (12 months). This contract may be extended for two (2) additional one (1) year periods at the same terms and conditions upon mutual agreement of the contracting parties.

4.9 Minority/Woman Business Enterprise Goals: The City of Savannah has not established a M/WBE goal for the project.