

## **Request For Proposals Traffic Signal Maintenance**

Chalfont Borough, Bucks County, Pennsylvania is requesting proposals for Traffic Signal Maintenance. Proposals are to be submitted to: Sandra Zadell, Borough Manager, Chalfont Borough, 40 North Main Street, Chalfont, PA 18914 by 9 AM on Thursday December 6th. The proposal shall include the price for the annual preventive maintenance work and the hourly rates that will be charged for response maintenance. The contract shall be for the remainder of 2018 with three (3) potential one (1) year extensions beginning on January 1, 2019.

### **Locations**

The locations of the signals and traffic control devices covered by this contract are listed in Exhibit A. However, Chalfont Borough may add additional locations during the term of this contract for response maintenance due to new installations.

### **Preventive Maintenance Requirements**

Perform the annual preventive maintenance at the beginning of the contract year. Following the completion of all preventive work for all locations an invoice may be presented to the Borough along with the completed signal checklist for each location, a detailed listing of the results of the inspections and recommended corrective action needed, if any. Payment of the invoice may be expected within thirty (30) days of receipt by the Borough.

The required preventive maintenance shall include the following:

1. Perform the preventive maintenance at each location, as applicable, as is noted on the checklist found in Exhibit B.
2. Complete relamping of signals.
3. Inspect for proper installation.
4. Inspect to ensure the conformance of the installation to the PennDOT permit and condition diagram.
5. Advise the Borough of the results of the inspections and recommend any corrective action needed.
6. Contractor shall have all required ECMS Certifications

### **Response Maintenance Requirements**

Perform response maintenance when requested as follows:

1. Respond in a timely manner (Emergency service within 4 hours.)
2. Perform the work in a safe and accurate manner.
3. Work shall be done on a time and materials basis. Material shall be invoiced at the manufacturer's current retail price. Labor and equipment shall be billed in accordance with a schedule of rates to be submitted with this proposal.

4. Additional lamp replacement that may be required following preventive maintenance relamping shall be done as needed at no additional charge to the Borough subject to the following conditions:
  - a. Contractor will be allowed 3 working days to replace necessary lamps.
  - b. Provided that lamp failure is not the result of vandalism, defective signal equipment or electrical damage.
  - c. Lamps on 3M programmable signals are excluded.
  - d. Single indication lamps (e.g. exclusive left turn signals) are excluded when done on an overtime basis.
5. Following the initial site visit to address a problem, the Borough shall not be charged for any subsequent site visits concerning the same problem, if it was not resolved on the first site visit. However, if it was only possible to make a temporary repair on the initial site visit with additional labor or material required for the permanent repair, those items may be charged to the Borough. If the contractor notifies the Borough that a replacement will be needed to permanently resolve the problem and the Borough fails to authorize the replacement within ten (10) days of the notification from the Contractor being received by the Borough, then all future repair calls for the same problem may be charged to the Borough at the normal billing rates.
6. The following are examples of items that would require an emergency response: knockdown, signal hanging, wires hanging, electrical hazard, conflict, signal on flash, head twisted / conflicting indications, intersection dark, opticom malfunction, stuck and serious timing deficiency.
7. The following would not be considered to require an emergency response:
  - a. bulb out (72 hour response)
  - b. adaptive controls malfunction (48 hour response)
  - c. out of synchronization (24 hour response)
  - d. head twisted / not conflicting indications (24 hour response)

### **Warranties and Guarantees**

Equipment will carry the manufacturer's warranty, if any.

Contractor shall warrant its workmanship for a period of one year.

Loop Detector replacement shall be guaranteed for a period of two years as long as the loop failure is not the result of pavement failure.

**PROPOSAL AND CONTRACT FOR  
TRAFFIC SIGNAL MAINTENANCE**

**CHALFONT BOROUGH  
40 NORTH MAIN STREET  
CHALFONT, PA 18914**

**FROM:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**PARENT COMPANY, IF ANY:** \_\_\_\_\_

**CONTACT PERSON:** \_\_\_\_\_

**CONTACT PERSON PHONE NUMBER:** \_\_\_\_\_

Having reviewed the bid documents which include the following:

- Request for Proposals, Traffic Signal Maintenance
- Exhibit A, Locations of Signals and Traffic Control Devices
- Exhibit B, Annual Preventive Maintenance Checklist

I (we) propose to provide preventive maintenance service for Chalfont Borough's Traffic Signals and Control Devices as is required by the bid documents for the following price:

<u>Items</u>	<u># of Items</u>	<u>Unit Price</u>	<u>Total Price</u>
1. Traffic Signals	7	\$_____	\$_____
2. Flash Warning Devices	3	\$_____	\$_____
<b>Total of Both Items</b>			<b>\$_____</b>

In addition I (we) propose to provide response maintenance according to the attached listing of unit prices. (Please attach a separate sheet listing the hourly rates and overtime rates that you propose to charge for various levels of service, such as signal technicians, signal mechanics, equipment operators, foremen and electrical engineers. Also, list your hourly equipment rates. Types of equipment that may be required are service vehicles, bucket trucks, cranes, auger trucks, dump trucks, backhoes, compressors, earth trenchers and wheel trenchers.) Regular

hourly rates should apply for work that occurs on Monday through Friday between 8:00 AM and 4:00 PM. Overtime rates would apply for other periods. (If your normal regular and overtime periods differ from those we have listed, identify your schedule.) Also, identify what rates would be included in a typical hourly service call such as, signal technician and a service technician (or whatever combination you normally utilize). Identify your minimum service charges.

**Bidder:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**By (signature):** \_\_\_\_\_ **(seal)**  
**Title:**

**Witness or Attested By (signature):** \_\_\_\_\_ **(seal)**  
**Title:**

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**In the event that this proposal is accepted, the following will be executed by Chalfont Borough.**

**Accepted on:** \_\_\_\_\_

**By:** \_\_\_\_\_ **Attest:** \_\_\_\_\_

**Exhibit A**  
**Locations of Signals and Traffic Control Devices**

**Signals**

- 1.Oak Avenue and Butler Avenue (Route 202)
- 2.Limekiln Pike (Route 152) and Butler Avenue (Route 202)
- 3.North Main Street (Route 152) and Butler Avenue (Route 202)
- 4.Bristol Road and Butler Avenue (Route 202)
- 5.Sunset Avenue and North Main Street (Route 152)
- 6.Park Avenue and North Main Street (Route 152)
- 7.Lindenfield Parkway and North Main Street (Route 152)

**Flash Warning Devices**

1. Swartley-Winkleman Field across from 500 North Main Street (2)
2. Red Light Warning Signal for Oak and Butler Signal

**Exhibit B**  
**Annual Preventive Maintenance Checklist**

Location: \_\_\_\_\_

Type of Device: \_\_\_\_\_

**MECHANICAL**

**Cabinet**

- \_\_\_ Oil hinges and lock
- \_\_\_ Replace filter
- \_\_\_ Check weatherproof seal (gasket)
- \_\_\_ Check anchor bolts
- \_\_\_ Check for gas, water accumulation, duct sealant
- \_\_\_ Check ground rod clamp
- \_\_\_ Wiring schematics and report available and signed
- \_\_\_ Check operation of fan and heater
- \_\_\_ Check circuit breaker
- \_\_\_ Check ground fault receptacle
- \_\_\_ Measure voltage at service inputs in cabinet
- \_\_\_ Check and record current being drawn

**Mast Arms and Poles**

- \_\_\_ Inspect for rust and spot paint as required
- \_\_\_ Inspect the joints for rust and cracks at (1) arm/upright location and (2) base plate
- \_\_\_ Inspect anchor bolts for rust and tightness
- \_\_\_ Inspect horizontal and vertical angle of the arm

**Push Buttons**

- \_\_\_ Check push button on each end of actuated crosswalks and visually verify pedestrian operation; verify timing
- \_\_\_ Check push button lamp (if existing) for operation
- \_\_\_ Check push button signs and clean if necessary
- \_\_\_ Check push button sign alignment

**Signal Heads**

- \_\_\_ Clean lenses, signs and reflectors
- \_\_\_ Replace lamps
- \_\_\_ Check alignment
- \_\_\_ Check for wear on span wire and signal wire; check mechanical hardware (clevis pin, clamps)
- \_\_\_ Check for cracks or rust in the hardware
- \_\_\_ Check mast arms; free-swinging signals
- \_\_\_ Check clevis and the chain
- \_\_\_ Check bent hoods, wing nuts, hinges
- \_\_\_ Replace substandard parts
- \_\_\_ Replace defective lenses and reflectors
- \_\_\_ Check locking ring (surface); install proper locking devices as required
- \_\_\_ Check condition of back plates (if used)
- \_\_\_ Perform nighttime check for visibility

**Span Wire and Poles**

- \_\_\_ Refer to applicable pole section
- \_\_\_ Check span wire
- \_\_\_ Check clamps, hardware
- \_\_\_ Check guy wire and the anchor

**Detector Sensors**

- \_\_\_ Make a visual inspection of the roadway along the saw cut for exposed wires, cracks, potholes, cameras, etc.
- \_\_\_ Check alignment for sonic, magnetic and radar-type detectors

## UNDERGROUND

### Junction boxes and hand holes

- \_\_\_ Check the integrity of the splices
- \_\_\_ Check ground rod and clamp connection, check bonding of conduits
- \_\_\_ Check the insulation
- \_\_\_ Check for abnormal amount of water
- \_\_\_ Check lid for abnormal condition and fit

## ELECTRICAL

- \_\_\_ Check radio interference filter and lightning arrestor

## ELECTROMECHANICAL CONTROL EQUIPMENT

### Dial Assembly

- \_\_\_ Check for wear on key follower
- \_\_\_ Check for burned or pitted contacts and service contacts per manufacturer's maintenance recommendations
- \_\_\_ Check for key positions
- \_\_\_ Check for cycle gear size and mesh
- \_\_\_ Check dial motor operation
- \_\_\_ Check all dials according to the manufacturer's recommendations
- \_\_\_ If controller is part of a system, test offset
- \_\_\_ Check duration of the advance pulse

### Relays

- \_\_\_ Check for burned and pitted contacts and service contacts per manufacturer's maintenance recommendations
- \_\_\_ Check for tight and secure fit into the sockets
- \_\_\_ If latch type relays, check for latch operation as per manufacturer's specification

### Switches

- \_\_\_ Verify operation of each switch position

### Cam Assembly

- \_\_\_ Check for end play
- \_\_\_ Clean and lubricate as required by manufacturer
- \_\_\_ Visually inspect for abnormal wear or cracks
- \_\_\_ Visually inspect contacts for pitting/discoloration and service contacts per manufacturer's maintenance recommendations
- \_\_\_ Check spring tension on contacts
- \_\_\_ Check for any loose wiring contacts
- \_\_\_ Check for operation of advancing mechanism to conform with manufacturer's requirement
- \_\_\_ Check security and tightness of connections
- \_\_\_ Visually inspect wires for wear, rubbing, deterioration of insulation

### Flashers

- \_\_\_ Check flash rate
- \_\_\_ Check operation
- \_\_\_ Service contacts per manufacturer's recommendations
- \_\_\_ Check for tight and secure fit into sockets

## ELECTROMECHANICAL CONTROL EQUIPMENT (Continued)

### Terminal Connections

- \_\_\_ Check visually for signs of corrosion or any abnormal condition
- \_\_\_ Tighten all terminal connections

### SOLID STATE, ANALOG AND MICROPROCESSOR-BASED CONTROL EQUIPMENT

- \_\_\_ Check time settings against master time sheet
- \_\_\_ Check indicator lamps on modules; replace if required
- \_\_\_ Check for extension by detector actuation
- \_\_\_ Check tightness and security of modules to frame
- \_\_\_ Check tightness and security of connector
- \_\_\_ Wipe dust off controller, detectors, and auxiliary equipment

### Conflict Monitor

- \_\_\_ Jump two conflicting green phases; if conflict monitor responds, check for implementation of stop timing if auxiliary logic package exists in controller, check conflict monitor for 24vdc drop
- \_\_\_ Check for activation of flash

### Detector Amplifiers

- \_\_\_ Check for detection of vehicles within design zone
- \_\_\_ Perform any necessary tuning
- \_\_\_ Check tightness and security of connections

### Load Switches

- \_\_\_ Check tightness and security of load switch packs to chassis

### Auxiliary Logic

- \_\_\_ Ensure that points of connection are making good contact
- \_\_\_ If electromechanical device, check for any wear; if contacts are used, clean as required per manufacturer's recommendations

## INTERCONNECTED EQUIPMENT

- \_\_\_ Check for controller operation in mode selected by the supervisory master
- \_\_\_ Disconnect from the master supervisory system and check for "free" or backup operation
- \_\_\_ Check operation of any special equipment per manufacturer's recommendations

## GENERAL

- \_\_\_ Record changes in timing, wiring or any function
- \_\_\_ Verify that all required signage and road way markings are in place