

SECTION 01001

SPECIAL PROVISIONS

PART 1 GENERAL

1.1 PURPOSE

- A. The purpose of this contract is to enable the Township to secure contractor services for both regular maintenance and emergency response for the purpose of maintaining and repairing/replacing portions of the traffic signal systems which require attention to protect the health and welfare of the public.

1.2 DURATION

- A. This contract shall remain in effect for a duration of 2-years (730 days) from the Notice to Proceed. Prices provided shall be in effect for the duration of the contract.

1.3 EXPERIENCE

- A. All Contractors must be pre-qualified with PENNDOT in accordance with Section 102.01 of PENNDOT Publication 408 – Specifications, latest edition and the latest supplements thereof to complete traffic signal work (Work Class Code P). The bidder will be required to establish proof of IMSA (International Municipal Signal Association) certification for all employees expected to perform work under this contract.
- B. The Contractor must be established under their current corporate name for a minimum of 10-years.
- C. The contractor must have the capability, including the necessary software, to remotely access the Township's closed loop system via a dial up connection for the purpose of monitoring the system's operation and adjusting various parameters.
- D. The contractor must have a minimum of five (5) years' experience with demand-based control systems such as the Rhythm Adaptive System, or equal, including the ability to diagnose operational issues and repair/replace various components of the system.

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- E. The Contractor shall have PennDOT UCC access, including the ability to periodically review and troubleshoot the Rhythm Adaptive System within the Township.
- F. The Contractor shall have the ability to repair fiber optic communication connections, including backbone fiber, splicing into backbone fiber, and connection to traffic signal controllers including tipping and testing.
- G. Each prospective bidder must demonstrate a minimum of 10-years' experience with work similar to that proposed under this contract.
- H. Each prospective bidder shall be required to submit with their sealed proposal a detailed list of work outlining the projects they have completed within the last five (5) years. This list as a minimum shall include the following:
 - 1. Location of Project.
 - 2. Owner's Name and Address.
 - 3. Total Contract Amount (including change orders).
 - 4. Dates work was performed.
 - 5. Detailed narrative of work performed.
 - 6. Name, address and telephone number of contact person for the awarding agency.
- I. Any proposal not accompanied by the above statement may be deemed non-responsive, and may be rejected by the Owner.
- J. The Owner has the right to reject any bidders who do not demonstrate the minimum qualifications described above.

1.4 MAKEUP OF SYSTEMS

- A. General: Haverford Township is approximately 10-square miles in area with a population of approximately 50,000. The Township has approximately 130-miles of local roads and 33-miles of State Highways. The Township operates and maintains all signals on both state and Township roads. In addition, the Township maintains a number of school flashers, flashing warning devices and intersection flashers. A list of the locations for each is included in Section 265000 .
- B. The system generally includes actuated signalized intersections that utilize Econolite controllers and emergency pre-emption. A number of corridors in the Township include closed loop systems that are interconnected via fiber optic cable. The master controllers communicate through phone drops to the system computer located in the Police Department. The Township's system computer currently utilizes Econolite's Aries software. All traffic signal indicators within the Township are LED.

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- C. The Township has the Rhythm Adaptive System along the Route 3 West Chester Pike corridor from the intersection of Darby Road and West Chester Pike to the Intersection of West Chester Pike and North Lawrence Road. Section 265000 depicts those intersections associated with this system.

1.5 EMERGENCY RESPONSE

- A. Township personnel will make the initial determination of the problem. This information will be conveyed to the contractor during the initial contact. In most cases however, the exact extent of the problem and remedy required cannot be determined until further exploration is completed. The Contractor's responsibility shall be to evaluate the circumstances, determine the following and communicate such to the appropriate Township officials:
 - 1. Cause(s) of the problem
 - 2. Measures necessary to provide temporary restoration of services and an estimated time frame to complete the work.
 - 3. Safety measures and/or temporary traffic control procedures required.
 - 4. All measures necessary to permanently restore operation of the intersection to its original condition along with the time frame to complete the work and a written estimate of the anticipated cost.

1.6 DISPOSAL OF MATERIAL

- A. The Contractor shall remove and dispose of all excavated material in a legal, safe manner in accordance with all Local, State and Federal regulations.

1.7 WORK IN RESIDENTIAL AND BUSINESS AREAS

- A. For maintenance work within residential and business areas the Contractor must ensure that all residents, business owners, patrons, deliveries, etc. are able to conveniently and safely access their property at all times.
- B. The Contractor must also ensure that typical (normal) daily and emergency access is provided for Municipal Trash removal services, public and private school bus services, and all other private Municipal and Emergency services to the project area.

1.8 NUISANCE ORDINANCE

- A. Haverford Township allows work between the hours of 7:00 a.m. and 6:00 p.m., Monday through Friday and 8:00 a.m. to 6:00 p.m. on Saturday. No maintenance work or operation of machinery may be performed before or after these hours or on a Sunday, unless the work is deemed an emergency by the Township.

1.9 PROTECTION OF WORK

- A. The Contractor must properly protect all work within the streets and walks. At a minimum, lighted barricades must be placed at no greater than 5-foot intervals around all disturbed areas, or as directed by the Township.
- B. In addition, adequate temporary walkways must be provided (if necessary) to permit normal pedestrian access. All walkways must be capable of supporting all pedestrian loading without deflection or movement, and must be approved by the Township.

1.10 PUBLIC UTILITIES

- A. The Contractor is required to fully inform himself concerning location of public utilities on, under or over the project which may or may not require removal, resetting, construction or reconstruction and which may interfere with his operations. He shall be assumed to have prepared his bid and entered into contract in full contemplation of the conditions to be encountered and his responsibility in connection therewith. The Contractor shall use special care in execution of the work in order to avoid interference or damage to any operating utilities. When there is any possibility of such interference or damage, the Contractor shall make satisfactory arrangements with responsible officers or owners of the utilities covering the necessary precautions to be used during the performance of the work by the Contractor. Such arrangements shall be made before work is started and shall be subject to the approval of the Engineer, which approval will not be considered as releasing the Contractor from any responsibility for acts of himself or his representatives.
- B. The Contractor shall note that public utilities and services may be in close proximity to the proposed work. The Contractor shall be responsible for both protecting these utilities and coordinating with the Owner of the respective utility should relocations be required. This work shall be included within the Contractors bid prices and should be completed at no additional cost to the Owner.
- C. The Contractor shall be fully aware of the above stipulations and shall take them into consideration when preparing his bid. It shall be assumed he has prepared his bid and entered into contract in full contemplation of these stipulations.

1.11 TRAFFIC CONTROL

- A. The Contractor, unless otherwise directed by the Township, is fully responsible for all traffic control procedures associated with both the routine maintenance work and the emergency services.

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- B. All traffic control must be in accordance with PennDOT regulations, PA Code 67, Chapter 212, Publication 213, “TEMPORARY TRAFFIC CONTROL GUIDELINES”, latest edition.
- C. For emergency response, traffic control must be established immediately in accordance with the above requirements prior to commencement of any repairs.
- D. The cost for all traffic control procedures shall be included in the bid price for the various work items, and will not be measured for payment separately.

1.12 MAINTENANCE OF STREETS AND WALKS

- A. The Contractor shall be required to maintain the existing streets and walks in the vicinity of work being performed as part of this Contract. The streets and walks shall be level and free from any holes, divots, depressions, or other encumbrances that will preclude normal vehicular or pedestrian traffic. All trenches must be temporarily paved each day. Temporary paving shall consist of 2-inches of hot bituminous mix.
- B. Should the contractor fail to maintain the streets and walks in a reasonable manner, or respond to Township requests for maintenance, the Township may retain the services of qualified professionals to remedy the situation to the extent deemed necessary. All monies for such services will then be deducted from payment to the Contractor.

1.13 PENNSYLVANIA ONE-CALL MARKOUTS

- A. The Contractor shall be required to mark-out existing underground Traffic and Pedestrian Signal Infrastructure in accordance with PA ACT 287 of 1984 (PA One Call)” at those intersections and streets where the Township has existing traffic and/or pedestrian signals.
- B. The Contractor shall be solely responsible to obtain all records relating to the as-built location of the underground signal conduit and associated wiring, handholes and all other underground facilities including detection devices associated with the signal. Such records shall be obtained from the Township and/or PennDOT.
- C. The contractor shall employ any and all means to locate the underground facilities including but not limited to: Electromagnetic Cable locator, Ground Penetrating Radar, or other non-destructive technologies.
- D. The contractor shall assume all responsibility for locating the underground infrastructure. Should any of the infrastructure be incorrectly marked, the Contractor shall bear the sole responsibility for repair, replacement and/or

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compensation to the individual/organization who damaged the infrastructure as a result of inaccurate locating in accordance with the most recent version of the Underground Utility Protection Law. PA Act 287 of 1974 as amended by Act 50 of 2017 73P.S. § 176 et. seq.

- E. The Contractor shall take the above into consideration when preparing his bid and it shall be assumed that he has prepared his bid and entered into contract in full contemplation of these stipulations.

1.14 FAILURE TO PERFORM WORK IN ACCORDANCE WITH SPECIFICATIONS

- A. If during the duration of this contract, the contractor fails or refuses to perform work in accordance with the specifications and/or the direction of the Owner or Engineer, the Owner, may at his discretion, order the contractor to correct the deficient work and may hold the dollar value of such deficient work from any monies due or become due to the contractor until the work is corrected to his satisfaction. If such an instance occurs, the Contractor shall have no claim for extra time and/or money as a result of any circumstances related to the deficient work included but not limited to any delays of future work, delivery of materials or interest earned on the monies withheld.
- B. The Contractor shall take the above into consideration when preparing his bid and it shall be assumed that he has prepared his bid and entered into contract in full contemplation of these stipulations.

END OF SECTION

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SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Measurement and payment criteria applicable to the Work performed under a Unit Price payment method and stipulated Lump Sum method.
- B. Defect assessment and non-payment for rejected work.

1.2 AUTHORITY

- A. Measurement methods delineated in the individual specification sections, if any, are intended to complement the criteria of this section.
- B. The Contractor shall take all measurements and compute quantities. The Engineer will verify measurements and quantities.

1.3 UNIT QUANTITIES SPECIFIED

- A. Quantities and measurements indicated in the Form of Bid are for bidding and contract purposes only. Quantities and measurements supplied or placed in the Work and verified by the Engineer shall determine payment.
- B. If the actual Work requires more or fewer quantities than those quantities indicated, provide the required quantities at the unit or lump sum prices contracted.

1.4 MEASUREMENT OF QUANTITIES

- A. Measurement by Number: Will be measured by the actual number of completed items installed.
- B. Measurement by Volume: Measured by cubic dimension using mean length, width and height or thickness.

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- C. Measurement by Area: Measured by square dimension using mean length and width or radius.
- D. Linear Measurement: Measured by linear dimension, at the item centerline or mean chord.
- E. Stipulated Lump Sum or Unit Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as a completed item or unit of the Work.

1.5 PAYMENT

- A. Payment Includes: Full compensation for all required supervision, labor, products, tools, equipment, plant, transportation, services and all incidental work; erection, application or installation of an item of the Work; overhead and profit.
- B. Final payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities accepted by the Engineer multiplied by the unit price for Work which is incorporated in or made necessary by the Work.

1.6 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.

1.7 NON-PAYMENT FOR REJECTED PRODUCTS

- A. Payment will not be made for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products placed beyond the lines and levels of the required Work.
 - 4. Products remaining on hand after completion of the Work.
 - 5. Loading, hauling, and disposing of rejected Products.

PART 2 GENERAL

2.1 GENERAL

- A. Payment for materials furnished and work done under this contract will be made as hereinafter stipulated for the amount of materials furnished and work performed under authorization of Engineers, or their authorized representative, and

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in accordance with their measurements. Contractor shall not be entitled to receive additional compensation for any work or materials except as shall be authorized by written order of the Owner.

- B. The following items, classifying the various kinds of work, refer to respective items bid in the "Form of Bid".

Item T-1: Payment for "Regular Maintenance of Traffic Signals and Flashers for a period of two (2) years" will be made at the lump sum price bid in "Form of Bid". Price bid shall include: communication and coordination with Township personnel; traffic control; inspection, cleaning, oiling and all other manufacturer suggested maintenance work for all components of the system at least twice a year, including, but not limited to: controllers, vehicle detectors, pedestrian push buttons, switches, signal heads and lenses, reflectors, relays, supports, bolts, brackets, modules, contacts, tubes, motors, transistors, diodes, meters, loops, ultrasonic magnetic or pressure detectors, and all other components incidental to the system; preparation of a formal report for each location; coordination with various State and Local agencies; coordination with residents and/or Business owners and all other appurtenant labor, work, transportation, supervision, tools, equipment, materials, and all other items incidental thereto and in accordance with the existing signal permit, manufactures requirements, and all applicable industry standards and codes.

Item T-2: Payment for "Mark Out of Existing Underground Traffic Signal Infrastructure in accordance with PA ACT 287 of 1984 (PA One Call)" will be made at the price per each bid in "Form of Bid". This item is intended for each visit authorized by the Township for any of the locations indicated in Section 265000 and shall include a minimum of two (2) hours per visit. The Unit Price bid shall include: coordination with Township personnel regarding obtaining and reviewing of the PA One Call Request submitted to the Township; review of the existing signal permit plan; travel time to and from the specific location within the Township; marking of all underground infrastructure associated with the existing traffic signal including but not limited to: underground conduit, traffic loops; electrical feeds; control wiring; splice boxes and all other infrastructure located within the right-of-way of the specific location; furnishing of written documentation of the mark out to the Township which indicates the location, date and time the mark out was completed; and all appurtenant labor, work, supervision, tools, equipment, materials, and all other items incidental thereto, and in accordance with the existing signal permit, and all applicable industry standards and codes.

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Items T-3 through T-8: Payment for “Emergency Services-Labor” will be made at the indicated hourly rates for the appropriate labor designation in "Form of Bid". The hourly rates shall include: coordination with Township personnel and all other authorities having jurisdiction; establishment of all traffic control procedures including but not limited to signage, arrow boards, barricades, flashers, flagmen, and all other labor necessary to control traffic during both working and non-working hours in accordance with PennDOT Publication 213 “Temporary Traffic Control Guidelines” (latest edition); furnishing of the appropriate labor necessary to respond to and correct the situation including, labor, transportation, fuel, travel, supervision, accessories, overhead & profit, and all items incidental to the work being performed. The hourly rates items shall be calculated from the time the call is placed by the Township official until the time all work has been fully completed and the contractor leaves the site. Travel time back to the contractor’s place of business is not included. Should additional labor be determined to be necessary after the initial arrival on-site, the contractor will be compensated at the appropriate hourly rate for the additional labor from the time that person leaves for the job until the time all work has been fully completed including all appurtenant labor, work, supervision, tools, equipment, material and all other items incidental thereto, and in accordance with the existing signal permit, manufactures requirements, and all applicable industry standards and codes

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Items T-9 through T-15: Payment for “Emergency Services-Equipment” will be made at the indicated hourly rate for the appropriate equipment designation in "Form of Bid". The hourly rates shall include: coordination with Township personnel and all other authorities having jurisdiction; furnishing all traffic control items including but not limited to signage, arrow boards, barricades, flashers, and all other equipment and materials necessary to control traffic during both working and non-working hours in accordance with PennDOT Publication 213 “Temporary Traffic Control Guidelines” (latest edition); furnishing of the appropriate piece(s) of equipment necessary to assist with the correction of the situation including, transportation, fuel, travel, supervision, accessories, overhead, profit, and all items incidental to the particular piece of equipment and the work being performed. The hourly rates items shall be calculated from the time the call is placed by the Township official until the time all work has been fully completed. Travel time back to the contractor’s place of business is not included nor is any time associated with moving the equipment at a later date. Should additional equipment be determined to be necessary after the initial arrival on-site, the contractor will be compensated at the appropriate hourly rate from the time they leave the site until the time they return to the job site with the equipment including all appurtenant labor, work, supervision, tools, equipment, material and all other items incidental thereto, and in accordance with the existing signal permit, manufactures requirements, and all applicable industry standards and codes.

END OF SECTION

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SECTION 265000

TRAFFIC SIGNAL MAINTENANCE AND EMERGENCY WORK

1.1 GENERAL CONDITIONS & QUALIFICATIONS OF CONTRACTORS

- A. All Contractors must be pre-qualified with PENNDOT in accordance with Section 102.01 of PENNDOT Publication 408 – Specifications, latest edition (and the latest supplements thereof) to complete traffic signal work (Work Class Code P). The bidder shall provide proof of IMSA (International Municipal Signal Association) certification for all employees expected to perform work under this contract. This requirement also applies to all subcontractors used.
- B. The Contractor shall provide proof of the following International Municipal Signal Association (IMSA) certifications for all employees expected to perform work under this contract:
 - 1. Associate Traffic Signal Technician Level I
 - 2. Traffic Signal Technician Level II
- C. The contractor must have a minimum of ten (10) years' experience with demand-based control systems such as the Rhythm Adaptive System, or equal, including the ability to diagnose operational issues and repair/replace various components of the system.
- D. The Contractor shall have PennDOT UCC access, including the ability to periodically review and troubleshoot the Rhythm Adaptive System within the Township.
- E. The Contractor shall have the ability to repair fiber optic communication connections, including backbone fiber, splicing into backbone fiber, and connection to traffic signal controllers including tipping and testing.
- F. The Contractor shall certify they have available all necessary equipment for use under this Contract. This must include, but shall not be limited to:
 - 1. A well-equipped service center located within a 25-mile radius of Haverford Township. This location must stock replacement parts for most traffic controlling and detection equipment.
 - 2. In addition, the Contractor must maintain a sufficient inventory of cabinets, poles, pole sections, pedestals, hardware, signal heads, signs, controllers, detectors and IMSA (International Municipal Signal Association) approved

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signal cables and wire and that all equipment which will be used must be approved by the Pennsylvania Department of Transportation.

3. Maintain spare detection of all types used within the Township, including adaptive system(s), and ability to replace and program faulty detection within 24 hours.
 4. Lift truck with bucket, capable of access to all overhead equipment.
 5. Air Compressor.
 6. All necessary miscellaneous hand tools and power tools (such as drills, power wrenches, test meters, road cutting saws, etc.) for proper job performance.
 7. All miscellaneous materials (such as nuts, bolts, wire, oil, lubrication, etc.) for proper job performance.
 8. All necessary traffic control equipment (signs, cones, flashers, arrow boards, flagmen, etc.) to maintain safe traffic movement within the work area in accordance with PennDOT Publication 213, Temporary Traffic Control Guidelines.
- G. Contractor shall furnish all materials, implements, machinery, equipment, tools, supplies, transportation, labor and supervision required to maintain and provide emergency service for the traffic signals, School Flashers and other flashers as indicated below at each location in accordance with the Pennsylvania Department of Transportation approved Signal Permit, and as additionally specified herein. It shall be the responsibility of the Contractor to proceed with the work in the manner and within such limitations as may be prescribed by the Township. The locations are as follows:
- H. Where work outside the scope of this contract is required, the Contractor shall provide a detailed list, including quantity and unit price of all material costs for review and approval by the Township before proceeding with any of the work.
- I. All parts and materials used shall be in accordance with the Pennsylvania Department of Transportation (PennDOT) Publication 408 Specifications latest edition and the latest supplements thereof and NEMA Standards TS 1-1989. All parts and materials shall be supplied by PennDOT approved manufacturers.
- J. Construction methods shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD) and all applicable sections of the latest editions of the following PennDOT Publications:

Publication 72M – Roadway Construction Standards
Publication 111 – Traffic Control Pavement Markings & Signing Standards – TC8600 & 8700
Publication 148 – Traffic Standards – Signals TC-8800 Series
Publication 149 – Traffic Signal Design Handbook
Publication 191 – Traffic Signal Maintenance Manual
Publication 212 – Official Traffic Control Guidelines

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1.2 TRAFFIC SIGNALS

1. West Chester Pike & Darby Road¹
2. West Chester Pike & Kohl's Driveway¹
3. West Chester Pike & Gilmore Road¹
4. West Chester Pike & Steel Road¹
5. West Chester Pike & Naylors Run Drive¹
6. West Chester Pike & Country Club Lane¹
7. West Chester Pike & Manoa Road¹
8. West Chester Pike & Eagle Road¹
9. West Chester Pike & Glendale Road¹
10. West Chester Pike & Glen Gary Drive¹
11. West Chester Pike & Old West Chester Pike
12. West Chester Pike & North Lawrence Road¹
13. Darby Road & College Avenue
14. Darby Road & Ardmore Road
15. Darby Road & Eagle Road
16. East Darby Road & Eagle Road
17. Darby Road & Bellemead Avenue
18. Darby Road & Benedict Avenue
19. Darby Road & Mill Road
20. Darby Road & Brookline Boulevard
21. Darby Road & Manoa Road
22. Darby Road & Llandillo Road
23. Eagle Road & Steel Road/Drexel Avenue
24. Eagle Road & Manoa Road
25. Eagle Road & Lincoln Road/Shopping Center
26. Eagle Road & Lawrence Road
27. Eagle Road & St. Denis Lane
28. Eagle Road & West Hillcrest Avenue
29. Haverford Road & Buck Lane
30. Haverford Road & College Avenue
31. Haverford Road & Ardmore Avenue
32. Haverford Road & Hathaway Lane/Loraine Street
33. Haverford Road & Eagle Road
34. Haverford Road & Karakung Road
35. Ardmore Avenue & Manoa Road
36. Earlington Road & Manoa Road
37. Earlington Road & Brookline Boulevard
38. Earlington Road & Mill Road
39. Lancaster Avenue & Old Lancaster Road

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40. Lancaster Avenue & Penn Avenue
41. Township Line & Lynn Boulevard
42. Township Line & Earlington Road
43. Township Line & Juniper Road
44. Township Line & Park Road/Brighton
45. Township Line & West Chester Pike¹
46. Township Line & Darby Road/Lansdowne Avenue¹
47. Darby Road & Marple Road
48. Darby Road & Williams Road

NOTES:

¹. Indicates Adaptive Control System currently in use.

1.3 SCHOOL FLASHERS

<u>SCHOOL</u>	<u>LOCATION</u>
Coopertown	Front of 817 Coopertown Rd #1
Coopertown	Front of 913 Coopertown Rd #2
Friends	Corner of Buck Lane & Panmure Rd #3
Friends	Buck Lane near School #4
Chestnutwold	Loraine Ave WB #5
Chestnutwold	Loraine Ave #6
St. Denis	Corner of East Eagle & Poplar Rd #7
St. Denis	Eagle Rd across from St. Denis School #8
Oakmont	East Eagle Rd near Hollis Rd #9
Oakmont	East Eagle Rd by Wawa #10
Oakmont	Hathaway Lane WB #11
Middle School	Front of 1810 Darby Rd #12
Middle School	Darby Rd at Golf Road #13
Sr High	Front of 133 Mill Rd #14
Sr High	Mill Rd near Hampton Rd #15
Annunciation	Front of 424 Brookline Blvd #16
Annunciation	Front of 341 Brookline Blvd #17
Chatham Park	Corner Allston Rd and Glen Arbor Rd #18
Chatham Park	Front of 407 Twin Oaks Dr #19
Sacred Heart	Near corner of Sycamore & Manoa on Manoa Rd #20
Sacred Heart	Near corner of West Chester Pike & Manoa on Manoa Rd #21
Sacred Heart	West Chester Pike by Llanerch Country Club #22
Sacred Heart	West Chester Pike and Shelbourne Rd #23
Manoa	Front of 110 Manoa Rd #24
Manoa	Manor Rd near Stanley Ave on Manoa Rd #25
Lynnewood	Across from 1501 Lawrence Rd #26
Lynnewood	Across from 1300 Lawrence Rd #27
Blessed John Neuman	Radnor Rd #28
Blessed John Neuman	Radnor Rd #29

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1.4 FLASHING WARNING DEVICES

Ellis Road (2)	Karakung Drive (2)
Glendale Road (2)	Manoa Road (2)
Haverford Road (2)	Hathaway Lane (1)
Darby Road & Fairfield Ave (1)	

1.5 INTERSECTION FLASHERS

Manoa & Allston (4-way)
Marple Road & Darby Creek Road (3-way)

1.6 SCOPE OF WORK – NORMAL/PREVENTIVE MAINTENANCE

A. NORMAL/PREVENTIVE MAINTENANCE shall include assessing the overall operation of the signal/system and ensuring each installation's conformance to the most recent approved PennDOT permit on at least a semi-annual basis. Upon award of contract, Contractor will submit to Haverford Township an intended maintenance schedule for the above locations.

1. The Contractor will provide materials and labor on a semi-annual basis for the normal/preventive maintenance of all controllers, vehicle detectors, pedestrian buttons, all internal cabinet items including switches, signal load modules or relays, etc., installation supports, signal heads and lenses, reflectors, intersection signing, lamps, brackets, cables, etc. for all signals and flashers at the above locations according to PennDOT Publication 191, Traffic Signal Maintenance Manual, latest edition.
2. "Normal/Preventive Maintenance" shall not include damage caused by vandalism, fire, traffic accidents, short circuits in existing conduits, or short circuits in overhead wires or cables, lightning or other acts of God, or damage directly or indirectly caused by someone other than the Contractor.
3. The Contractor shall thoroughly clean all lenses and reflectors at least once a year.
4. The Contractor shall inspect each loop, ultrasonic magnetic or pressure detector twice each year and will maintain the detectors in proper working order. This shall include replacing or repairing defective parts such as relays, transistors, diodes, tubes, lamps, meters, etc.
5. The Contractor shall warrant all surface pressure detectors they install.
6. The Contractor shall check timings at each solid-state controller once a year and maintain the controller in proper working order. Field test the NEMA conflict monitor once a year using a solid-state tester.
7. The Contractor shall verify communication between master and local signal controllers for interconnected signal systems, and check communication between master controllers and the Township's system computer at least twice a year.

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8. The Contractor shall check all pedestrian signals/controls associated with the above traffic signals and installed independently throughout the Township at least two (2) times a year. The first inspection shall be completed between March 15th and April 30th. The second inspection shall be completed between August 1st and September 15th. The work shall include verifying integrity and operation of all components including but not limited to; supports, pedestrian poles, push buttons, pedestrian signal heads and signage associated with the crossing. During this check, all pedestrian timings shall be verified to be in compliance with the approved signal permit. Any components found to be defective shall be immediately reported to the Township.
9. Adjust all controller clocks two (2) times a year to account for the time change associated with daylight savings time. This adjustment shall be completed no more than 24-hours after the time change occurs.
10. The Contractor shall replace the air filter in each controller cabinet at least once a year.

1.7 CONDITIONS OF WORK – NORMAL/PREVENTIVE MAINTENANCE

- A. The following conditions must be followed by the Contractor as part of Services supplied under this agreement:
 1. Provide at least 72-hours advance notice of normal maintenance service to the Township for each of the locations previously listed.
 2. Provide a formal written report of maintenance performed and written recommendations as a result of equipment inspections and testing to Haverford Township for each location no later than fourteen (14) working days after the inspection is completed.
 3. The report shall indicate the condition of all equipment and list that equipment which is not functioning correctly, damaged, a safety concern, or is in imminent danger of failure. The report shall also detail any repairs, adjustments, or any other maintenance performed.
 4. Reports for all signal maintenance must be submitted to the Township prior to final payment under this contract.
 5. Should it be determined, during the routine inspection, that any portion of the system requires immediate repair or replacement, the contractor shall immediately notify the primary contact at the Township and discuss the issues. The Township will then determine if the work is required immediately and issue verbal approval. The contractor shall also, within 24-hours of verbal notification, provide a written outline to the Township describing the problem(s), the work to be

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performed, replacement parts required, and an estimate of the cost and time (including procurement of parts) required to complete the work.

6. Upon completion of the work, the contractor shall revise the above document to reflect the actual work completed and forward all documentation including a detailed bill (in triplicate) to the primary Township contact.

1.8 SCOPE OF WORK - EMERGENCY SERVICE

A. Emergency Service, under this agreement, shall be defined as:

1. The repair, replacement and/or modification of traffic signal equipment at any of the indicated locations necessary to restore traffic control through a sequential, steady-burn or flashing traffic signal operation within the time limits specified after notification by the authorized Haverford Township contact (or designee thereof) of an emergency. This service shall be performed by the Contractor on an "as-needed" basis.
2. In no case is emergency service to proceed without the express authorization of the primary Township contact or a designee thereof. A signed Traffic Signal Authorization Form (see Exhibit D) is required as proof of the Townships Authorization for emergency work. Should a Township representative not be available upon arrival on site, it is the responsibility of the contractor to have the form signed the next business day.

1.9 CONDITIONS OF WORK - EMERGENCY SERVICE

- A. The Contractor must be available for Emergency Service on a 24-hour a day, 365 days a year basis, and will endeavor to provide immediate response and service to Haverford Township when called. The Contractor must employ a competent representative and/or answering service for after hours and weekend emergency service to insure proper response. Answering machines are not acceptable.
- B. The Contractor shall respond to emergency calls placed by the primary contact of the Township and/or its designee only. Response by the Contractor to emergency calls placed by other than the above will not be considered for payment by Haverford Township.
- C. The Contractor shall respond to an emergency call and have service personnel arrive on site within 90-minutes of contact from the Township. In the case of a failed intersection, the response time shall be no more than 60-minutes. **If the Contractors' response time exceeds these limits by more than 2 hours, the Township has the option to use another Contractor to repair the failed intersection.** The on-call Contractor shall have no claim for payment associated with labor or equipment that arrives after notification of another contractor.

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- D. The Contractor shall have a failed intersection fully operational as soon as possible but in no case later than sixteen (16) hours from the time of the report, even if a traffic accident has occurred damaging poles and/or equipment. The only exception will be where conditions exist which are beyond the control of the Contractor and the Township concurs with such conditions.
- E. The Contractor must provide for adequate and safe traffic control at an emergency location before terminating service. Where deemed necessary by the Township, the Contractor shall provide a temporary controller to provide adequate and safe signal operation. If the Contractor cannot restore adequate and safe signal operation due to electrical system failure, extensive signal equipment damage, etc., it is the Contractor's responsibility to immediately contact the Township. It shall then be the Township's responsibility to have temporary "STOP" controls placed at the emergency location, or to direct the Contractor to do so in accordance with instructions from the Township.
- F. No later than fourteen (14) days after restoration of normal service, the Contractor shall prepare a written report containing a description of the problem and/or damage at the emergency location. The report shall include services rendered by the Contractor to restore normal traffic control, and recommendations for additional repair and/or replacement of equipment. The recommendations shall include cost and time estimates for such work.
- G. The Township will review the above report and determine if and when the work is to be completed. The Contractor will be notified if equipment is to be repaired and/or replaced as specified above.
- H. The Township has the option to seek proposals from other Contractor's to complete all or portions of the repair and/or replacements to damaged equipment at the intersection.

1.10 MATERIALS

- A. All materials required for normal maintenance and emergency repairs will be paid at the Contractor's cost plus a mark-up not-to-exceed 10-percent for overhead and profit. An itemized bill summarizing the quantity and cost of each component must be submitted to the Township for review and approval.

1.11 ADDITIONAL WORK

- B. Additional work may be authorized by the Township as a result of deficiencies discovered during normal maintenance, further work required after emergency services, or as a result of issues discovered by Township personnel.
- C. All additional work shall be in accordance with the unit prices provided. All unit prices for this work shall include labor, overhead, profit and all items incidental to the work.

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- D. Work outside the scope of any services shall be in accordance with the General Conditions, paragraph 16, "Changes in Work".
- E. Additional work will be formally requested by the Township. Upon such requests, the Contractor shall visit the location to ascertain the scope of the work. A formal written estimate shall than be provided to the Township detailing the scope of work to be performed, an estimate of the quantity of equipment and material to be installed and/or replaced; the unit cost associated with each item, and a total cost for the entire project. The estimate should also indicate the time frame for completion of the work (including all material deliveries), a description of any additional services that may be needed with an estimated cost, and whether new or used items are quoted to be installed.
- F. The Township upon review of the estimate will determine whether or not to proceed with all or portions of the work. The contractor will be notified within twenty-one (21) days of the receipt of the estimate.
- G. Upon completion of all work, the Contractor shall revise the estimate to reflect actual quantities and work completed. The bill shall also indicate whether a new or used item was installed and the manufacturer, model and serial number for all equipment.
- H. Payment will not be made for the above work until a final accurate bill is received and all documentation is received.

1.12 CONTRACT TERMS & BASIS OF PAYMENT

- A. This contract is effective for a period of two (2) years from the date of the Notice to Proceed and will cover all locations as specified for the respective lump sum price. The Contractor will invoice Haverford Township on a monthly basis for 1/24th of the aforementioned contract amount, in addition to any emergency service charges incurred during the invoice period.
- B. After the contract dates, this agreement will become self-renewing on a 30-day basis until canceled by either party by giving 30-days written notice to the other thus guaranteeing continued service.

END OF SECTION

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