RESOLUTION

2018-08

BE IT RESOLVED, by authority of the Board of Commissioners
(Name of governing body)

of the Township of Hopewell, Beaver County, and it
(Name of MUNICIPALITY)

is hereby resolved by authority of the same, that the Manager/Engineer
(designate official title)

of said MUNICIPALITY is authorized and directed to submit the attached Application for Traffic Signal Approval to the Pennsylvania Department of Transportation and to sign this Application on behalf of the MUNICIPALITY.

ATTEST:

Township of Hopewell
(Name of MUNICIPALITY)

Marie S. Hartman
Marie S. Hartman, P.E., Engineer/Manager
(Signature and designation of official title)

By: Richard Bufalini
Richard Bufalini, President
(Signature and designation of official title)

I, Marie S. Hartman, P.E., Hopewell Township Engineer/Manager
(Name) (Official Title)

of the Board of Commissioners of the Township of Hopewell, do hereby certify that the foregoing
(Name of governing body and MUNICIPALITY)

is a true and correct copy of the Resolution adopted at a regular meeting of the

Township of Hopewell, held the 25 day of June, 20 18.
(Name of governing body)

DATE: June 25, 2018

Marie S. Hartman, P.E.
(Signature and designation of official title)
Engineer/Manager

TE-160 (6-12)

Application for Traffic Signal Approval

Please Type or Print all information in Blue or Black Ink

pennsylvania DEPARTMENT OF TRANSPORTATION

DEPARTMENT USE ONLY

County : Beaver

Engineering District : 11

Department Tracking # :

Initial Submission Date :

A - Applicant's (Municipal) Contact Information

Municipal Contact's Name : ~~John Norman Kraus Jr.~~ Marie S. Hartman, P.E. **Title :** Manager/ENGINEER

Municipal Name : Hopewell Township

Municipal Address : 1700 Clark Boulevard, Aliquippa, PA 15001

Municipal Phone Number : (724) 378-1460 x 108 **Alternative Phone Number :** 724-747-9231

E-mail Address : ~~manager@hopewelltwp.com~~ engineer@hopewelltwp.com

Municipal Hours of Operation : 8:30 AM - 4:30 PM M-F

B - Application Description

Location (*intersection*) : S.R. 0151 (Gringo-Clinton Road and Laurel Road), S.R. 3007 (Brodhead Road), and S.R. 3038 (Heights Rd)

Traffic Control Device is : ☐ **NEW** Traffic Signal ☒ **EXISTING** Traffic Signal **(*Permit Number*) :** 2-028-06

Type of Device (*select one*) ☒ Traffic Control Signal (*MUTCD Section 4D, 4E, 4G*) ☐ Flashing Beacon (*MUTCD Section 4L*) ☐ School Warning System (*MUTCD Section 7B*)

☐ Other :

Is Traffic Signal part of a system? : ☐ YES ☒ NO **System Number (*if applicable*) :**

If YES, provide locations of all signalized intersections in system.

Explain the proposed improvements :

New signal heads, push buttons, controller, radar detectors, and pavement markings

Associated with Highway Occupancy Permit (HOP)?: ☐ YES ☒ NO **If YES, HOP Application # :**

C - Maintenance and Operation Information

Maintenance and Operations are typically performed by? :

☐ Municipal Personnel ☒ Municipal Contractor ☐ Municipal Personnel & Contractor

☐ Other :

Maintenance and Operations Contact Name : DAVE CLARK **Company/Organization :** TRAFIC EQUIPMENT AND SUPPLY

Cell Phone # : 412-848-2338 **Alternative Phone # :** 412-882-2012 **E-mail :**

D - Attachments Listing

☒ Municipal Resolution (*required*)	☐ Location Map	☐ Traffic Volumes / Pedestrian Volumes
☐ Letter of Financial Commitment	☐ Photographs	☐ Turn Lane Analysis
☐ Traffic Signal Permit	☐ Straight Line Diagram	☐ Turn Restriction Studies
☐ Warrant Analysis	☐ Capacity Analysis	☐ Other :
☐ Crash Analysis	☐ Traffic Impact Study (TIS)	
☐ Traffic Signal Study	☐ Condition Diagram	

Application for Traffic Signal Approval

Please Type or Print all information in Blue or Black Ink

pennsylvania
DEPARTMENT OF TRANSPORTATION

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E - Applicant (Municipal) Certification

The applicant desires to own, operate, and maintain the traffic control device in the location indicated above; and the Vehicle Code requires the approval of the Department of Transportation ("Department") before any traffic signals may be legally erected or modified. A signed Application for Traffic Signal Approval (TE-160) must be submitted in conformance with the instructions provided by the Department, and a Traffic Signal Permit must be issued, before any work can begin.

If the Department approves a traffic signal after a traffic engineering study and engineering judgment indicates the need, the traffic signal shall be installed, owned, operated, and maintained within the parameters indicated in the Vehicle Code and the Department's regulations relating to traffic signs, signals, and markings. The Department may direct appropriate alterations to the design or operation (including, but not limited to, hours of operation) of the traffic signal, or require removal of the traffic signal, if traffic conditions or other considerations necessitate alteration or removal.

All items associated with the traffic control device (geometric features, signs, signals, pavement markings, pedestrian accommodations, and other traffic control device associated items) are the applicant's responsibility. The Traffic Signal Permit will then document all of the items associated with operation of each traffic control device. The applicant, at its sole expense, shall provide the necessary inspection, maintenance, and operation activities in conformance with the Department's Publication 191 or as otherwise agreed to by the Department. The applicant shall perform the preventative and responsive maintenance requirements and recordkeeping in accordance with the exhibits specified below. If the applicant fails to provide the required inspection, maintenance, or operation services within thirty (30) days of receipt of written notice from the Department, the Department shall have the right to perform the required inspection, maintenance, or operation services in the applicant's stead and the applicant shall reimburse the Department for all costs incurred. Federal- and/or state-aid participation may be withheld on all future projects if the applicant fails to demonstrate to the Department the ability to provide all required maintenance and operation services. The applicant certifies that it has funds available and committed for the operation and maintenance of the traffic control device and that it will make available sufficient funds for all required future inspection, maintenance, and operation activities.

The applicant shall indemnify, save harmless and, defend (if requested) the Commonwealth of Pennsylvania, its agents, representatives, and employees from and against any damages recoverable under the Sovereign Immunity Act, 42 Pa. C.S. §§ 8521-8528, up to the limitations on damages under said law, arising out of any personal injury or damage to property which is finally determined by a court to be caused by or result from acts or omissions of the applicant and for which a court has held applicant, its officials, or employees to be liable. This provision shall not be construed to limit the applicant in asserting any rights or defenses. Additionally, the applicant shall include in any contracts into which it enters for maintenance, operation, or inspection of the traffic control device this same obligation to indemnify the Commonwealth and its officers, agents, and employees; and it shall require its contractor(s) to provide public liability insurance coverage, naming the Commonwealth and the applicant as additional insureds for bodily injury, including death and property damage, in the minimum amounts of $500,000 per person, $1,000,000 per occurrence, it being the intention of parties to have the contractor fully insure and indemnify the Commonwealth and the applicant.

The applicant shall comply with the study and ordinance requirements of 75 Pa. C.S. § 6109. The applicant submits this application with the intention of being legally bound.

Neither this application nor any Traffic Signal Permit creates any rights or obligations with respect to parties other than the applicant and the Department. Third parties may not rely upon any representations made by either the applicant or the Department in connection with the submission or approval of this application or any work permitted or approved that is related to this application, as regards either payment of funds or performance of any particular item of maintenance precisely as specified.

The applicant agrees to comply with the attached Exhibits:

- Exhibit "A": Preventative and Response Maintenance Requirements (Sheet 3 of 5)
- Exhibit "B": Recordkeeping (Sheet 4 of 5)
- Exhibit "C": Signal Maintenance Organization (Sheet 5 of 5)

Printed Municipal Contact Name : Marie S. Hartman, P.E. **Date :** June 25, 2018

Signed By : Marie S. Hartman, P.E. **Witness or Attest :** Barbara D. Owearingen, CPA

Title of Signatory : Engineer/Manager **Title of Witness or Attester:** BARBARA OWEARINGEN, CPA CONTROLLER

Exhibit "A":

Preventative and Response Maintenance Requirements

pennsylvania
DEPARTMENT OF TRANSPORTATION

DEPARTMENT USE ONLY

County : Beaver

Engineering District : 11

Department Tracking # :

Initial Submission Date :

Preventive Maintenance

The APPLICANT or its contractor will provide preventive maintenance for each individual component of the traffic signal installation covered by this application at intervals not less than those indicated in the Preventive Maintenance Summary, PA DOT Publication 191, current version. This is the recommended level of maintenance to keep the intersection control equipment and signals in mechanically, structurally and aesthetically good condition.

Response Maintenance

The APPLICANT or its contractor will provide response maintenance in accordance with the provisions of the Response Maintenance Schedule. It encompasses the work necessary to restore a traffic signal system to proper and safe operation. Includes Emergency Repair and Final Repair.

FINAL REPAIR:
Repair or replace failed equipment to restore system to proper and safe operation in accordance with permit within a 24-hour period.

EMERGENCY REPAIR:
Use alternative means or mode to temporarily restore system to safe operation within a 24-hour period. Final repair must then be completed within 30 days unless prohibited by weather conditions or availability of equipment.

Response Maintenance Schedule

KNOCKDOWNS	TYPE OF REPAIR PERMITTED
Support - Mast arm	Emergency or Final
Support - Strain pole	Emergency of Final
Span wire/tether wire	Final Only
Pedestal	Emergency or Final
Cabinet	Emergency of Final
Signal heads	Final Only
EQUIPMENT FAILURE	
Lamp burnout (veh. & ped.)	Final Only
Local controller	Emergency or Final
Master controller	Emergency or Final
Detector sensor	
- Loop	Emergency or Final
- Magnetometer	Emergency or Final
- Sonic	Emergency or Final
- Magnetic	Emergency or Final
- Pushbutton	Emergency or Final
Detector amplifier	Emergency or Final
Conflict monitor	Final Only
Flasher	Final Only
Time clock	Emergency or Final
Load switch/relay	Final Only
Coordination unit	Emergency or Final
Communication interface, mode	Emergency or Final
Signal cable	Final Only
Traffic Signal Communications	Final Only
Traffic Signal Systems	Final Only

Exhibit "B":
Recordkeeping

pennsylvania
DEPARTMENT OF TRANSPORTATION

DEPARTMENT USE ONLY

County : Beaver

Engineering District : 11

Department Tracking # :

Initial Submission Date :

Recordkeeping

Accurate and up-to-date recordkeeping is an essential component of a good traffic signal maintenance program. In recognition of this fact, the APPLICANT must prepare, retain, and make available to the COMMONWEALTH, on request, a record of all preventive and response maintenance activities performed on the traffic signal equipment covered by this application.

The APPLICANT shall establish a separate file for each installation and keep its records in the municipal building, signal maintenance shop, or other weather-protected enclosure.

At a minimum, the following records will be kept by the APPLICANT or its contractor for each traffic signal. These forms can be found in Section 10.0, Maintenance Record Forms, PA DOT Publication 191, current version.

FORM 1 - Master Intersection Record

This form, which lists all maintenance functions performed at the intersection, should be updated within one day of the activity but no more than one week later.

FORM 2 - Response Maintenance Record

Each time response maintenance is required at the intersection, this form is to be completed. Once the pertinent information is transferred to the master intersection record, this form is to be placed in the intersection file.

FORM 3 - Preventive Maintenance Record

This form will be used to provide a record of the preventive maintenance activities performed at each intersection. The date, the activities performed, and the signature of the person in charge of the work must be recorded in the form.

This form may be kept at the intersection, if it is adequately protected from the weather. Form 1 must be updated at the central file, however, to reflect the date and activity.

Exhibit "C":
Signal Maintenance Organization

pennsylvania
DEPARTMENT OF TRANSPORTATION

DEPARTMENT USE ONLY

County : Beaver

Engineering District : 11

Department Tracking # :

Initial Submission Date :

Personnel Classifications

In order to properly maintain the traffic signal equipment covered by this applicant, the APPLICANT agrees to provide, as minimum, the following staff throughout the useful life of equipment. The APPLICANT agrees to abide by all guidance provided in PA DOT Publication 191.

Traffic Engineer - The administrative position which has prime responsibility for the proper operation of traffic signal equipment. The principal function of this position is the supervision and control of subordinate personnel and the planning of their activities to ensure adequate preventive and response maintenance programs.

Minimum Position Requirements

1. A thorough understanding of traffic signal design, installation and maintenance.
2. A working knowledge of the interaction between the following traffic characteristics: Intersection geometry, traffic flow theory, control type (fixed time, actuated, etc.), signal phasing and timing, and interconnection.
3. An ability to supervise subordinate personnel effectively in the assignment of their work.
4. Possession of a college degree in engineering, which includes course work in traffic engineering.
5. Either four years experience in the field of traffic engineering or its equivalent in graduate college work.

Signal Specialist - The individual responsible for the diagnostics and repair of all traffic signal equipment including solid state equipment.

Minimum Position Requirements

1. Extensive training and troubleshooting skills in electronics and software.
2. Ability to repair modules in the shop and to design test equipment needed to diagnose and repair a problem.
3. Ability to make design and modifications to implement or omit special functions.
4. Ability to implement a recordkeeping system to include maintenance activities, inventory control and identification of recurring problems.
5. Ability to perform all tasks required of a signal technician.

Signal Technician - Individual responsible for the operation and maintenance of traffic signals and electromechanical equipment.

Minimum Position Requirements

1. Ability to perform response maintenance on solid state equipment up to the device exchange level.
2. Capability to diagnose a vehicle loop failure and initiate corrective action.
3. Ability to tune detector amplifiers.
4. Ability to follow wiring schematics, check and set timings from plan sheet and check all field connections.
5. Ability to perform preventive maintenance on all equipment and to maintain accurate records of all work perform.

Training

The APPLICANT agrees to secure training in order to upgrade the ability of its present staff to properly perform the required maintenance functions. The APPLICANT agrees to abide by all guidance provided in PA DOT Publication 191.

Budget Requirements

The APPLICANT agrees to provide, in its annual operating budget, dedicated funds which are sufficient to cover the cost of the personnel, training, contractors (if utilized) and specialized maintenance equipment which are required, by virtue of this application. The APPLICANT agrees to abide by all guidance provided in PA DOT Publication 191..

TE-160 (6-12)

Application Instructions

pennsylvania
DEPARTMENT OF TRANSPORTATION

A - Applicant's (Municipal) Contact Information

Municipal Contact's Name: Provide the municipal contact name that is (or will be responsible) for the traffic signal. Typically this is either the Municipal Manager or Roadmaster.

Title: Provide the title of the municipal contact name.
Municipal Name: Provide the official municipal name.
Municipal Address: Provide the full address of the municipal building.
Municipal Phone Number: Provide the municipal phone number of the municipal contact.
Alternative Phone Number: Provide an alternative phone number of the municipal contact.
E-mail Address: Provide the e-mail address of the municipal contact.
Municipal Hours of Operation: Please provide the municipalities normal operating hours (i.e. Monday-Thursday 9 AM - 2 PM)

B - Application Description

Location (*intersection*): Please provide a detailed location of the device or devices being considered for approval.

Please include any State Route and/or local road names in your description.

Traffic Control Device is: (Please select one of the two following categories)

NEW Traffic Signal: This item should be selected when requesting approval of a traffic signal that is currently not in operation at the device location indicated above.

EXISTING Traffic Signal: This item should be selected when requesting approval to make a modification or update to an existing traffic signal.

(*Permit Number*): Please provide the traffic signal permit number.

Type of Device (select one): (Please select one of the four following categories)
Traffic Control Signal: As defined in federal Manual on Uniform Traffic Control Devices (MUTCD) Sections 4D, 4E, and 4G. When selecting this category this is the typical red/yellow/green and pedestrian signal indications
Flashing Beacon: As defined in federal Manual on Uniform Traffic Control Devices (MUTCD) Section 4L. When selecting this category, this is typically either the flashing yellow/red signal at an intersection and/or the flashing yellow warning sign.
School Warning System: As defined in federal Manual on Uniform Traffic Control Devices (MUTCD) Section 7B. When selecting this category, this is typically the flashing school warning sign with a 15 mph indication.
Other: When selecting this category, this pertains to all other permitted electrically powered traffic control devices approved by the Department.

Is Traffic Signal part of a system?: Check off the appropriate box, either YES or NO. If YES, please fill in the **System Number (*if applicable*):** line.

Explain the proposed improvements: Provide a description of the proposed improvements to the intersection. This may be as complex as installing and/or upgrading a traffic signal or as non-complex as placement of a new traffic sign to supplement an existing traffic signal.
Associated with Highway Occupancy Permit (HOP)?: Check off the appropriate box, either YES or NO. If YES, please fill in the **Application #:** line.

C - Maintenance and Operation Information

Maintenance and Operations are typically performed by?: Please indicate if maintenance and operation will be performed by Municipal Personnel or through Contract Services.

Maintenance and Operations Contact Name: Provide the primary maintenance contact name for the individual that is (or will be responsible) for the maintenance and operation of the traffic signal.

Company/Organization: Provide the name of the company/organization with which the primary maintenance contact is affiliated.

Phone #: Provide the phone number for the primary maintenance contact.

Alternative Phone #: Provide an alternative phone number for the primary maintenance contact or affiliated company/organization.

E-mail: Provide the e-mail address for the primary maintenance contact.

D - Attachments Listing

Check off all documents which will be submitted along with this application. Note that a Municipal Resolution, authorizing the municipal contact to submit and sign the application, is a required document.

A sample Municipal Resolution has been provided on the next page.

E - Applicant (Municipal) Certification

Printed Municipal Contact Name: Please print the name of the municipal contact person signing the application.

Date: Please provide the date on which the application was signed.

Signed By: Please provide the signature of the named municipal contact.

Title of Signatory: Please provide the title of municipal contact.

Witness or Attest: Please provide the signature of the person witnessing or attesting the signature.

Witness or Attester: Please provide the title of the person witnessing or attesting the signature.