Notice: This document was developed for the purpose of the Automated Red Light Enforcement (ARLE) Summit held on September 13-14, 2012. All documentation contained within this document will be incorporated into a new PennDOT Publication 736 (Automated Enforcement) which will be available electronically to all municipalities once completed. For more information, please visit the Department’s ARLE webpage at: http://www.dot.state.pa.us/Portal%20Information/Traffic%20Signal%20Portal/arle.html
There are hyperlinks throughout this document that provide connections to other publications, regulations, Vehicle Code, etc. There are also hyperlinks that reference other sections, exhibits, or appendices within this manual to assist you in navigating.

The Table of Contents and the List of Exhibits also include hyperlinks. Simply left click on the section or exhibit number, title, or page number to access the desired information.

You may also find the bookmarks on the left side of the screen helpful.
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Key Automated Red Light Enforcement Links:

- County Commissioners Association of Pennsylvania (CCAP) County information: http://www.pacounties.org/PAsCounties/Pages/CountiesByClass.aspx
- Pennsylvania Chiefs of Police Accreditation: http://www.pachiefs.org/Accreditation
- Current ARLE Law (Act No. 84 of Regular Session 2011-2012 [previously House Bill 254]): http://www.legis.state.pa.us/WU01/LI/LI/US/HTM/2012/0/0084..HTM
- Philadelphia Parking Authority (PPA) ARLE Webpage: http://philapark.org/redlights/
CHAPTER 1 - DOCUMENT OVERVIEW

The primary purpose of Automated Red Light Enforcement (ARLE) in Pennsylvania is to improve safety at signalized intersections by providing automated enforcement at locations where red light running has been an issue. ARLE is a tool to help improve safety at intersections by delivering an automated enforcement activity that would otherwise be done by a police officer, if enough resources were available. By implementing ARLE, it allows police departments to focus their resources on serious crimes while the ARLE system provides 24/7 automated enforcement at dangerous red light-running intersections.

Based on ARLE guidance provided by the Federal Highway Administration Safety website (http://safety.fhwa.dot.gov/intersection/redlight/) and previous traffic studies in other states implementing ARLE, reductions in crash severity are a clear result of implementing the ARLE technology. Additionally, significant reductions in violations will result, thus helping the Commonwealth reach its goal of saving lives and making highways safer.

Pennsylvania is one of 24 states, as well as the District of Columbia, to implement some form of automated enforcement.

A secondary purpose that has grown out of ARLE is a modest competitive funding program with the additional revenue generated by ARLE to make minor safety and mobility upgrades to Pennsylvania’s highways.

This Automated Red Light Enforcement (ARLE) Summit Document is broken up into 13 Chapters and 10 Appendices. The purpose of each is listed below:

- **Chapter 1 – Document Overview**: Provides an overview of the ARLE Summit document and explains the purpose of the material contained within each Chapter or Appendices.
- **Chapter 2 – “What is Automated Red Light Enforcement?”**: Provides background regarding ARLE in other states, explains how an ARLE Violation is determined, explains the history of ARLE in Pennsylvania, and discusses common ARLE complaints.
- **Chapter 3 – ARLE Legislative Guidance**: Provides a breakdown and clarifies some of the language contained within the law.
- **Chapter 4 – ARLE Eligibility Requirements**: Provides clarification as to what are the ARLE eligibility requirements, and defines who meets these requirements at the time of the ARLE Summit.
- **Chapter 5 – System Administrator Requirements and Functions**: Clarifies and defines the requirements, functions, and suggested PennDOT guidance for each ARLE System Administrator.
- **Chapter 6 – ARLE Intersection Request**: Explains the current procedure for intersection selection within the City of Philadelphia and provides a suggested alternative moving forward.
- **Chapter 7 – ARLE Design and Construction Guidance**: Provides key design and construction items that need to be considered when deploying an ARLE system.
- **Chapter 8 – Pennsylvania Chiefs of Police Accreditation**: Provides the key details regarding obtaining Pennsylvania Chiefs of Police Accreditation.
- **Chapter 9 – ARLE Deployment**: Provides guidance and recommendations when implementing an ARLE system.
- **Chapter 10 – ARLE Operation and Maintenance Costs**: Provides an overview and breakdown of the average operation and maintenance costs with the City of Philadelphia’s ARLE system.
- **Chapter 11 – Submitting Additional ARLE Revenue Process**: Provides direction as to when revenue has been generated and how it should be submitted to the Department.
- **Chapter 12 – ARLE Funding Program**: Provides a brief overview of the existing ARLE Funding Program, and brief description of the selection process.
• **Chapter 13 – ARLE Annual Report:** Provides a recommended approach to generating the ARLE annual report.

• **Attachment A – Vehicle Code:** Provides a current version of the Vehicle Code.

• **Attachment B – Current ARLE Municipal Location Maps:** Provides maps showing the municipalities that are currently eligible for ARLE.

• **Attachment C – Currently Approved ARLE locations:** Provides a summary of all of the currently approved ARLE intersections.

• **Attachment D – 2012 Philadelphia Parking Authority Annual Report:** Provides the latest annual report that was submitted by the Philadelphia Parking Authority.

• **Attachment E – DRAFT TE-154 (Application for ARLE Intersection Approval) and Intersection Approval Correspondence Documents:** Provides a recommended ARLE intersection selection form along with correspondence templates when submitting an ARLE request.

• **Attachment F – Sample ARLE Construction Plans:** Provides sample construction plans of previously implemented ARLE systems.

• **Attachment G – ARLE Quarterly Revenue Payment Form:** Provides the ARLE Quarterly Revenue Payment Form that will help streamline the submission of the quarterly payments.

• **Attachment H – ARLE Funding Application:** Provides an example of the current ARLE Funding application form.

• **Attachment I – Hold for Legal:** Example.

All documentation contained within this document will be incorporated into a new PennDOT Publication 736 (Automated Enforcement) which will be available electronically to all municipalities once completed. For more information, please visit the Department’s ARLE webpage at: [http://www.dot.state.pa.us/Portal%20Information/Traffic%20Portal/arle.html](http://www.dot.state.pa.us/Portal%20Information/Traffic%20Portal/arle.html).

For additional information regarding the ARLE Program, please email all questions, concerns, and/or comments to ARLE_Grants@pa.gov or call Daniel Farley at (717) 783-0333.
“What is ARLE?”

Automated enforcement refers to the use of camera technology to enforce existing traffic safety laws. A common type of automated enforcement program is for red light violations. In states that have automated enforcement laws, some authorize enforcement statewide, while others permit use only in specified communities. For a detailed description of how other states use automated enforcement, please see Exhibit 2-2.

The primary purpose of ARLE in Pennsylvania is to improve safety at signalized intersections by providing automated enforcement at locations where red light running has been an issue. ARLE is a tool to help improve safety at intersections by delivering an automated enforcement activity that would otherwise be done by a police officer, if enough resources were available.

Automated Enforcement in other States

As of August 2012, 24 states (see Exhibit 2-1) and the District of Columbia are currently utilizing automated enforcement.

Exhibit 2-1 Automated Enforcement in Other States

Source: Insurance Institute for Highway Safety (IIHS), August 2012 (http://www.iihs.org/laws/automated_enforcement.aspx/)

Source: Insurance Institute for Highway Safety (IIHS), August 2012 (http://www.iihs.org/laws/automated_enforcement.aspx/)
## Exhibit 2-2 Detailed Description of ARLE in Other States

<table>
<thead>
<tr>
<th>State</th>
<th>Statewide or only specified locations?</th>
<th>Citation issued to whom?</th>
<th>Who is liable?</th>
<th>What image is taken?</th>
<th>Traditional enforcement penalties</th>
<th>Enforcement penalties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>City of Montgomery</td>
<td>Owner</td>
<td>Owner</td>
<td>2 images; tag included</td>
<td>$100 fine/4 points</td>
<td>$110, no points</td>
</tr>
<tr>
<td>Arizona</td>
<td>Statewide</td>
<td>Not addressed</td>
<td>Not addressed</td>
<td>$250 fine/2 points</td>
<td>$165 fine/2 points</td>
<td></td>
</tr>
<tr>
<td>California</td>
<td>Statewide</td>
<td>Registered owner</td>
<td>Driver</td>
<td>$100 fine/1 point</td>
<td>Same as for traditional citation</td>
<td></td>
</tr>
<tr>
<td>Colorado</td>
<td>Statewide</td>
<td>Registered owner</td>
<td>Driver</td>
<td>$110 fine ([including surcharge]/4 points)</td>
<td>$75; no points or record</td>
<td></td>
</tr>
<tr>
<td>Delaware</td>
<td>Statewide</td>
<td>Registered owner</td>
<td>Owner</td>
<td>2 or more images of the vehicle</td>
<td>$130 maximum fine; not a record or conviction offense; not to be used by insurers</td>
<td></td>
</tr>
<tr>
<td>District of Columbia</td>
<td>Entire District</td>
<td>Registered owner</td>
<td>Owner</td>
<td>$150 fine/2 points</td>
<td>$150; no points</td>
<td></td>
</tr>
<tr>
<td>Florida</td>
<td>Statewide</td>
<td>Registered owner</td>
<td>Owner</td>
<td>License tag, intersection, and light</td>
<td>$1,000 maximum fine/3 points</td>
<td></td>
</tr>
<tr>
<td>Georgia</td>
<td>Statewide</td>
<td>Registered owner</td>
<td>License tag</td>
<td>$70 maximum fine; not a conviction or record offense; no points; not a moving violation; not to be used by insurers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illinois</td>
<td>Cook, DuPage, Kane, Lake, Madison, McHenry, St. Clair, and Will counties; requires local ordinance</td>
<td>Registered owner</td>
<td>Owner</td>
<td>2 or more images of vehicle and tag</td>
<td>$500 maximum fine/20 points</td>
<td></td>
</tr>
<tr>
<td>Iowa</td>
<td>No state law, Municipal initiated.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Louisiana</td>
<td>State law provides that convictions resulting from camera enforcement shall not be reported for inclusion in driver record; law is silent on other issues</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maryland</td>
<td>Statewide</td>
<td>Registered owner</td>
<td>Owner</td>
<td>2 or more images of rear of vehicle and tag in any medium</td>
<td>$500 maximum fine/2 points</td>
<td></td>
</tr>
<tr>
<td>Missouri</td>
<td>No state law, Municipal initiated.</td>
<td></td>
<td></td>
<td></td>
<td>$100 maximum civil penalty; no points or record; not a moving violation; may not be used by insurers</td>
<td></td>
</tr>
<tr>
<td>New Jersey</td>
<td>Local jurisdictions must pass an ordinance and apply to Transportation Commissioner to participate in a pilot program</td>
<td>Registered owner</td>
<td>Registered owner and driver are jointly liable</td>
<td>2 or more images of vehicle and tag</td>
<td>$85</td>
<td></td>
</tr>
<tr>
<td>New Mexico</td>
<td>No state law specifically authorizing automated enforcement; NMDOT has banned red light cameras and mobile enforcement vans on state and federal roadways; state law requires counties and municipalities using camera enforcement to post a warning sign and a warning beacon</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New York</td>
<td>Cities of at least 1 million people, up to 150 intersections in each city; Effective 3/28/09: counties of Nassau and Suffolk, the cities of Buffalo, Rochester and Syracuse, by local ordinance, up to 50 intersections; Yonkers, by local ordinance, up to 25 intersections</td>
<td>Owner</td>
<td>Owner</td>
<td>2 or more images of rear of vehicle and tag in any medium</td>
<td>$100 maximum fine/3 points</td>
<td></td>
</tr>
<tr>
<td>North Carolina</td>
<td>Where specified by statute (Albemarle, Charlotte, Chapel Hill, Cornelius, Durham, Fayetteville, Greensboro, Greenville, High Point, Huntersville, Lumberton, Matthews, Nags Head, Newton, Pineville, Rocky Mount, Spring Lake, and Wilmington)</td>
<td>Owner</td>
<td>Owner</td>
<td>Photo, video, electronic image</td>
<td>$100 maximum fine/3 points</td>
<td></td>
</tr>
<tr>
<td>Ohio</td>
<td>No state law, Municipal initiated.</td>
<td></td>
<td></td>
<td></td>
<td>$75 civil penalty; no points</td>
<td></td>
</tr>
<tr>
<td>Oregon</td>
<td>Cities statewide</td>
<td>Registered owner or driver, if identifiable</td>
<td>Registered owner</td>
<td>Photographs; digital images</td>
<td>$300 maximum fine</td>
<td></td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>Philadelphia, Pittsburgh, and municipalities with a population exceeding 20,000 under 2012 census with a police department accredited by the Pennsylvania Chiefs of Police Association in Bucks, Chester, Delaware, and Montgomery Counties; requires local ordinance</td>
<td>Registered owner</td>
<td>Owner</td>
<td>Photographs</td>
<td>$25 fine/3 points</td>
<td></td>
</tr>
<tr>
<td>Rhode Island</td>
<td>Statewide</td>
<td>Registered owner</td>
<td>Driver</td>
<td>2 or more images of vehicle and tag in any medium</td>
<td>$75 fine</td>
<td></td>
</tr>
<tr>
<td>Tennessee</td>
<td>Statewide except for interstate highways that are not work zones</td>
<td>Registered owner</td>
<td>Registered owner</td>
<td>Red light violations, front tires before the stop line and rear tires past stop line both while signal is red</td>
<td>$50 fine/points</td>
<td></td>
</tr>
<tr>
<td>Texas</td>
<td>Statewide; requires local ordinance</td>
<td>Registered owner</td>
<td>Owner</td>
<td>2 or more photographic or digital images of tag</td>
<td>$200 maximum fine/4 points</td>
<td></td>
</tr>
<tr>
<td>Virginia</td>
<td>Counties, cities, and towns may operate cameras at no more than 1 intersection for every 10,000 residents; requires local ordinance; the exception is the Washington, DC metropolitan area, it permits up to 10 cameras at 1 site per 10,000 residents, whichever is greater</td>
<td>Registered owner</td>
<td>Driver</td>
<td>2 photographs or other recorded images</td>
<td>$200 maximum fine/4 points</td>
<td></td>
</tr>
<tr>
<td>Washington</td>
<td>Cities and counties statewide at arterial road intersections with stoplights meeting MUTCD standards for yellow change intervals; local ordinance required</td>
<td>Registered owner</td>
<td>Registered owner</td>
<td>Vehicle, license tag</td>
<td>$250 maximum fine</td>
<td></td>
</tr>
</tbody>
</table>

“How is an ARLE violation determined?”

Exhibit 2-3 depicts how the Automated Red Light Enforcement (ARLE) works within the City of Philadelphia. American Traffic Solutions is currently the Vendor used by the Philadelphia Parking Authority (PPA) and the following explanation shows how the system works:

**I** First rear image: The “First Image” is the before shot. It is captured from the rear approach and shows the intersection, the back of the violating vehicle still behind the violation line, one or more visible red light signals, and a clear image of the license plate of the offending vehicle.

**II** Second rear image: The “Second Image” is the shot of the vehicle in the intersection. It is also captured from the rear approach and shows the intersection, the back of the violating vehicle after the rear axle has crossed the stop line and the vehicle has illegally entered the intersection, one or more visible red light signals, and a clear image of the license plate of the offending vehicle.

**III** License plate crop: The court and police Department use these images for easy viewing. The cropped license plate close-up is not a separate image, but rather a close-up view of either of the two images captured.

**IV** Upon receiving the above information the System Administrator will review and determine whether a violation has occurred. For additional information regarding the ARLE violation review and processing, please see Chapter 5 - (System Administrator Requirements and Functions).

Exhibit 2-3  ARLE Enforcement in the City of Philadelphia
History of ARLE in Pennsylvania

The following list outlines major events relating to or impacting the current ARLE program:

- **October 4, 2002**: 2002 Session Act No. 123 authorizes ARLE in Cities of the First Class.
- **December 9, 2002**: ARLE legislation was updated to extend the program to December 31, 2006.
- **July 16, 2003**: Kelly Michener, Inc. provides a finalized report providing public feedback regarding Automated Red Light Enforcement (ARLE) to PennDOT.
- **February 9, 2004**: ARLE legislation was updated to address System Administrator’s operation and maintenance costs, authorizes PennDOT to develop a regulation for the ARLE Funding Program, and extends the program to December 31, 2007.
- **November 29, 2004**: Philadelphia Parking Authority (PPA) submits request for first 3 ARLE intersections.
- **December 14, 2004**: PennDOT approves the November 29th PPA request for the first 3 ARLE intersections.
- **February 23, 2005**: 1st ARLE intersection (Grant Ave. & Roosevelt Blvd.) was installed.
- **June 23, 2005**: 1st ARLE intersection (Grant Ave. & Roosevelt Blvd.) begins enforcement.
- **July 14, 2005**: ARLE legislation was updated to reduce the warning period and clarify the violation notification period.
- **August 7, 2007**: PennDOT approves 10th ARLE intersection request.
- **December 18, 2007**: ARLE legislation was updated to allow digital images instead of 35mm photos and extends the program to December 31, 2011.
- **October 31, 2010**: Publish PennDOT ARLE Funding Policy and requests municipal submissions.
- **April 26, 2011**: PennDOT announces first ARLE Funding Awards.
- **October 1, 2011**: State Transportation Advisory Committee (TAC) finalizes their Evaluation of the ARLE Program Final Report.
- **November 14, 2011**: Pennsylvania House Transportation Committee holds a formal hearing on ARLE.
- **December 22, 2011**: ARLE legislation was updated to extend the program to June 30, 2012.
- **March 2, 2012**: PennDOT announces second round of the ARLE Funding Awards.
- **July 2, 2012**: ARLE legislation was updated to reduce the warning period and extend the program to June 30, 2017. The legislation also expanded ARLE to cities of the second class and certain municipalities as defined within Section 3117 of the Vehicle Code (Title 75).
- **September 13-14, 2012**: ARLE Summit
Common ARLE Complaints

Some of the most common complaints from the general public or those against ARLE placement include:

- Invasion of privacy (some ARLE programs must identify the vehicle’s driver).
- Program was implemented and intersections were selected to generate revenue instead of improve safety.
- Local governments shorten the “yellow” interval to increase red light running violations.
- Red light cameras actually increase crashes (by causing potentially unsafe driver behaviors including speeding up or sudden stopping).
- Cameras make mistakes.

All of the complaints listed above can be addressed within the law or by addressing prior to implementing ARLE. Exhibit 2-4 below lists each complaint presented above and provides solutions that other states have used to curb complaints and improve public perception.

### Exhibit 2-4  Common ARLE Complaints

<table>
<thead>
<tr>
<th>Common ARLE Complaints</th>
<th>Possible Solutions</th>
<th>Pennsylvania Approach</th>
</tr>
</thead>
</table>
| Invasion of privacy    | • Consider holding the vehicle responsible instead of the driver, negating the need for positive identification of the driver.  
                         • Establish controls that photographic records of automated systems are kept confidential and only sent to the confirmed violator. | • Law holds the driver responsible, does not require positive identity of the driver.  
• Law requires only a rear photo of the violating vehicle.  
• Law states that photographic records can only be used for red light running violations.  
• Law defines that all photographic records are destroyed within 30 days of final disposition of any recorded event. |
| Revenue generator, not a safety program | • Consider a flat fee contract for vendors, eliminating the opportunity for fees per violation.  
• Create a system of checks and balances between the champion agency, local stakeholder, and vendors to verify the program is operating as intended.  
• Establish guidelines for intersection selection. | • Law requires standard contracting fee for the vendor.  
• Currently Philadelphia Parking Authority reviews violations twice before sending to the city police department to confirm violation and sign-off on citation. |
| Local governments tamper with the length of the yellow indication | • Require champion agency to verify signal timings are per national standards (MUTCD).  
• Require oversight/approval of camera intersections by the state DOT. | • PennDOT must approve each intersection before ARLE can be installed.  
• Duration of the yellow interval shall be in accordance with the Traffic Signal Permit issued by the Department or City (Philadelphia and Pittsburgh) |
| Red light cameras increase accidents | • Provide up-to-date crash data to the public through media networks.  
• Make sure the public is aware of red light camera intersections.  
• Cite statistics and results from other studies when performing public outreach. | • Municipalities complete the TE-154 [Application for ARLE Intersection Approval], providing documentation as to why an ARLE intersection was selected.  
• PennDOT annually evaluates crash data to look for problem intersections/corridors.  
• Municipalities should consider performing annual crash evaluations of all ARLE intersections.  
• Currently Philadelphia Parking Authority engages the community through press releases when new ARLE intersections come on-line. |
| Cameras make mistakes | • Require equipment to be calibrated or tested on a daily or weekly basis by the champion agency/vendor. | • Currently Philadelphia Parking Authority inspects each site weekly to verify signs and that cameras haven’t been damaged or removed. |

Source: Transportation Advisory Committee (TAC) Consulting Team, October 2011
CHAPTER 3 - ARLE LEGISLATIVE GUIDANCE

Attachment A contains the recently passed Act No. 84 of Regular Session 2011-2012 [previously House Bill 254] (June 2, 2012) extending the City of Philadelphia’s program along with expanding to municipalities as defined within Chapter 4 - (ARLE Eligibility Requirements). To further clarify Title 75 (Motor Vehicle Code) Section 3117 (Automated Red Light Enforcement in Certain Municipalities), refer to ( ).
“Who’s Eligible in Pennsylvania?”

Based on the recently passed ARLE Law (Act No. 84 of Regular Session 2011-2012 [previously House Bill 254]) on July 2, 2012, certain municipalities are now authorized to use the ARLE technology with Department intersection approval to enforce the duty of a motorist to stop at a steady red indication of a traffic control signal [Section 3112(A)(3) of Title 75 (Motor Vehicle Code) of PA Consolidated Statutes].

Not all municipalities can utilize ARLE and therefore Sections 3116 and 3117 further defines what requirements are needed to be eligible for ARLE. Exhibit 4-1 and Exhibit 4-2 show what municipalities meet the criteria listed below. The law authorizes the following:

1) Cities of the First Class - Philadelphia
2) Cities of the Second Class – Pittsburgh
3) Certain Counties that can meet all of the following criteria:
   (1) Class 2-A counties (Bucks, Delaware, and Montgomery) as defined by the County Commissioners Association of Pennsylvania or a Class 3 county with a 2010 Census population between 490,000 and 510,000 (Chester).
   (2) Municipalities within the counties listed above that have a 2010 Census population exceeding 20,000 and a police agency accredited by the Pennsylvania Chiefs of Police Association.

Exhibit 4-1 ARLE Approved Municipalities in PennDOT Engineering District 6-0
## Exhibit 4-2  Status of ARLE Approved Municipalities as of 8/27/2012

<table>
<thead>
<tr>
<th>Municipal Name</th>
<th>County</th>
<th>Currently ARLE Eligible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abington Township</td>
<td>Montgomery County</td>
<td>YES</td>
</tr>
<tr>
<td>Bensalem Township</td>
<td>Bucks County</td>
<td>NO</td>
</tr>
<tr>
<td>Bristol Township</td>
<td>Bucks County</td>
<td>NO</td>
</tr>
<tr>
<td>Buckingham Township</td>
<td>Bucks County</td>
<td>NO</td>
</tr>
<tr>
<td>Cheltenham Township</td>
<td>Montgomery County</td>
<td>NO</td>
</tr>
<tr>
<td>City of Chester</td>
<td>Delaware County</td>
<td>NO</td>
</tr>
<tr>
<td>Falls Township</td>
<td>Bucks County</td>
<td>YES</td>
</tr>
<tr>
<td>Haverford Township</td>
<td>Delaware County</td>
<td>NO</td>
</tr>
<tr>
<td>Horsham Township</td>
<td>Montgomery County</td>
<td>YES</td>
</tr>
<tr>
<td>Lower Makefield Township</td>
<td>Bucks County</td>
<td>NO</td>
</tr>
<tr>
<td>Lower Merion Township</td>
<td>Montgomery County</td>
<td>YES</td>
</tr>
<tr>
<td>Lower Providence Township</td>
<td>Montgomery County</td>
<td>YES</td>
</tr>
<tr>
<td>Marple Township</td>
<td>Delaware County</td>
<td>NO</td>
</tr>
<tr>
<td>Middletown Township</td>
<td>Bucks County</td>
<td>YES</td>
</tr>
<tr>
<td>Montgomery Township</td>
<td>Montgomery County</td>
<td>YES</td>
</tr>
<tr>
<td>Norristown Borough</td>
<td>Montgomery County</td>
<td>YES</td>
</tr>
<tr>
<td>Northampton Township</td>
<td>Bucks County</td>
<td>NO</td>
</tr>
<tr>
<td>City of Philadelphia</td>
<td>Philadelphia County</td>
<td>Operational</td>
</tr>
<tr>
<td>City of Pittsburgh</td>
<td>Allegheny County</td>
<td>YES</td>
</tr>
<tr>
<td>Pottstown Borough</td>
<td>Montgomery County</td>
<td>NO</td>
</tr>
<tr>
<td>Radnor Township</td>
<td>Delaware County</td>
<td>NO</td>
</tr>
<tr>
<td>Ridley Township</td>
<td>Delaware County</td>
<td>NO</td>
</tr>
<tr>
<td>Springfield Township</td>
<td>Delaware County</td>
<td>YES</td>
</tr>
<tr>
<td>Tredyffrin Township</td>
<td>Chester County</td>
<td>NO</td>
</tr>
<tr>
<td>Upper Darby Township</td>
<td>Delaware County</td>
<td>NO</td>
</tr>
<tr>
<td>Upper Dublin Township</td>
<td>Montgomery County</td>
<td>YES</td>
</tr>
<tr>
<td>Upper Merion Township</td>
<td>Montgomery County</td>
<td>NO</td>
</tr>
<tr>
<td>Upper Moreland Township</td>
<td>Montgomery County</td>
<td>NO</td>
</tr>
<tr>
<td>Upper Providence Township</td>
<td>Montgomery County</td>
<td>NO</td>
</tr>
<tr>
<td>Warmister Township</td>
<td>Bucks County</td>
<td>YES</td>
</tr>
<tr>
<td>Warrington Township</td>
<td>Bucks County</td>
<td>NO</td>
</tr>
<tr>
<td>West Goshen Township</td>
<td>Chester County</td>
<td>NO</td>
</tr>
</tbody>
</table>

For the eligible municipalities, the system administrator can submit a request to PennDOT, and the Secretary of Transportation has 60 days to review the request and approve, deny, or recommend an alternate intersection. See Chapter 6 - (ARLE Intersection Request) for additional details.
Factors to Consider When Determining Whether to Implement ARLE

PennDOT suggests that you work with PennDOT’s Highway Safety and Traffic Operations Division when evaluating whether to consider ARLE. Several factors such as crash history, red light running crash clusters, intersection prioritization, driver behavior, and evaluating other countermeasures should be considered prior to implementing an ARLE program. (contact info to ARLE email) Additionally, the municipality would need to have their system administrator finance the upfront capital and operations costs until those costs could be reimbursed through the revenue that is generated. It is critical to select appropriate locations where ARLE would be beneficial since this should be implemented as a safety countermeasure and not as a source of revenue generation as clearly indicated within the law.

For any questions concerning ARLE, please contact PennDOT’s Highway Safety and Traffic Operations Division at ARLE_Grants@pa.gov.
CHAPTER 5 - SYSTEM ADMINISTRATOR REQUIREMENTS AND FUNCTIONS

Requirements and Functions

The system administrator or designee is responsible for the following:

- Notifying the Local Municipality (if not serving as the system administrator), State Legislator(s) having jurisdiction of the ARLE intersection, and PennDOT (appropriate District office and Central Office ARLE contacts) two weeks prior to beginning construction of an ARLE intersection, indicating the ARLE intersection location(s) and details regarding the warning period and expected violation-beginning date.

- Develop an appropriate public awareness campaign for the new ARLE intersection.

- Ensure that the Secretary of Transportation approval has been secured prior to beginning the warning period.

- Assure PennDOT that all effort required for the additional processing and review of violations can be covered by adding any additional ARLE intersections.

- Ensure that the Traffic Signal Permit has been approved/updated.

- Ensure that all required ARLE signs (see Publication 236, W16-10-1) are in place prior to the beginning of the warning period.

- Perform all necessary calibration and testing prior to the beginning of the enforcement period.

- Prepare a notice of violation providing the following:
  - A copy of the recorded image showing the vehicle.
  - The registration number and state of insurance of the vehicle registration.
  - The date, time, and place of the alleged violation.
  - Notice that the violation charged is under Section 3112(a) (3).
  - Instructions for responding to the notice of violation.

- A police officer employed by the police department with primary jurisdiction over the area where the violation occurred to determine whether the violation occurred shall issue the notice of violation.

- Process the fines:
  - Monitor and retain any operations and maintenance costs associated with the ARLE system.
  - Remove operations and maintenance costs and submit additional revenue electronically or by mail to PennDOT to be placed into a restricted Motor License Fund account.

- Submit an annual report (see Chapter 13 - (ARLE Annual Report)) to the chairman and minority chairman of the Pennsylvania House and Senate. The annual report shall be considered a public record and shall include the following:
  - Number of violations and fines issued.
  - Total number of fines paid and outstanding.
  - The amount of money paid to the vendor or manufacturer under the ARLE law.
PennDOT Guidance

It is strongly recommended that system administrator, municipality, and PennDOT work together to support the deployment of your ARLE system. PennDOT also suggests the following:

- Work with both PennDOT’s Central Office and District Office to get assistance on evaluating crash data and correspondence with the public.
- Consider multijurisdictional vendor contracts.
- Communicate and work with other system administrators to ensure ARLE program consistency.
- Recommend a similar violation review and Quality Assurance/Quality Control (QA/QC) plan to the one established by the Philadelphia Parking Authority.
- Provide transparent information to the public regarding your municipal program and strongly consider an ARLE municipal website. Some of the information that should be included on the website should include:
  - Location of ARLE intersections
  - Clearly explain how ARLE works within your municipality
  - Identification of the violation screening process
  - Municipal resolutions and PennDOT approvals of the ARLE intersections
  - ARLE Annual Reports to the House and Senate Transportation Committees
  - System Administrator and/or municipal policy regarding your ARLE program
- If you have additional questions, submit to ARLE_Grants@pa.gov or contact Daniel Farley, Manager Traffic Signal and Operational Analysis at (717) 783-0333.
CHAPTER 6 - ARLE INTERSECTION REQUEST

Existing procedure in the City of Philadelphia

Exhibit 6-1 below provides a summary of the process that the Philadelphia Parking Authority (PPA) (system administrator) currently uses when adding intersections to the ARLE program.

### Exhibit 6-1  Existing City of Philadelphia process for adding intersections to the ARLE program

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>City Council approves a recommendation to add an intersection to the ARLE program</td>
<td>PPA will research intersections at the request of City Council. PPA has red light running crash data it uses in advising the council. The authority also weighs public opinion and crash projections when considering a recommendation.</td>
</tr>
<tr>
<td>2</td>
<td>Intersection request is reviewed by the City’s Streets and Services Committee with PPA and vendor</td>
<td>Group will perform a site visit at the proposed intersection to discuss approaches and aspects such as sign placement and the signal hardware.</td>
</tr>
<tr>
<td>3</td>
<td>City formally makes a request to PennDOT to install ARLE cameras at an intersection</td>
<td>In addition to the other data it uses, PPA’s vendor will perform a Violation Incident Monitoring study. They will install temporary cameras to examine red light running trends or right turns on red in order to evaluate the intersection.</td>
</tr>
<tr>
<td>4</td>
<td>PennDOT performs a field evaluation</td>
<td>Representatives the Bureau of Maintenance and Operations and PennDOT District 6-0 will participate with PPA and the City Streets Department to view the intersection and proposed installation.</td>
</tr>
<tr>
<td>5</td>
<td>PennDOT authorizes the intersection</td>
<td>PennDOT will respond with a letter from the Secretary or his designee. The letter will either indicate approval, disapproval, or note if modifications are required.</td>
</tr>
<tr>
<td>6</td>
<td>City Council formally approves each ARLE-controlled intersection by ordinance.</td>
<td>The City approves a specific ordinance for each installation of a camera, or Council may do it by groupings of cameras.</td>
</tr>
<tr>
<td>7</td>
<td>PPA’s vendor installs cameras</td>
<td>Equipment is installed and a 60-day warning period commences before fines formally go into effect.</td>
</tr>
<tr>
<td>8</td>
<td>PPA operates and maintains ARLE intersections</td>
<td>PPA will issue a press release alerting the media of the new ARLE-enabled intersection. PPA and the vendor will also inspect each site weekly to verify that signs are still in place and that the cameras have not been damaged or removed.</td>
</tr>
</tbody>
</table>

ARLE Intersection Requests Moving Forward

Based on previous lessons learned along with the public’s possible misconception that ARLE is a revenue-generation tool, PennDOT proposes the following updated procedure to ensure all intersections are documented, along with trying to streamline the ARLE intersection approval process. To ensure that appropriate intersections are receiving ARLE systems, the Department has established the following procedures, requirements, and guidelines:

- ARLE systems are not necessarily intended for all signalized intersections, but only those intersections where documented red light violation and/or crash problems exist.
- Other appropriate countermeasures should be implemented prior to considering an ARLE system.
- The implementation of an ARLE system is not intended for intersections where crashes are not directly related to red light violations.
- Ensure that prior to considering an ARLE system, determine whether appropriate signal visibility is available in compliance with PennDOT Publication 149 and the 2009 Federal Manual on Uniform Traffic Control Devices (MUTCD). A field evaluation should be considered prior to deciding whether ARLE should be used at the intersection. If obstructions may be creating the red light running violations, please remove the obstructions and monitor the site for several weeks. If no traffic signal visibility issues exist, document and incorporate a note onto the plan that this should be evaluated routinely.
- Ensure that the Yellow Change and All-Red clearance intervals are in compliance with PennDOT Publication 46 (Traffic Engineering Manual), Chapter 4 unless otherwise Engineering Judgment is documented indicating otherwise.
- Ensure that no geometric issues are causing the red light running issue. If there is a geometric issue causing the red light running issue, document all other safety improvements that were made to correct this issue.

*Note: The following process is only proposed at this time. It is being submitted to all municipalities that are eligible for ARLE. PennDOT plans to address any concerns prior to its adoption.*

Proposed ARLE Intersection Approval Process

The approval process for ARLE systems will generally conform to the following steps:

1) An eligible municipal traffic signal owner/ARLE system administrator shall identify a candidate location(s) for an Automated Red Light Enforcement system.

2) The eligible municipal traffic signal owner/ARLE system administrator shall obtain a municipal resolution indicating that the municipality concurs with the placement of an ARLE at an intersection(s) with the Secretary of Transportation’s approval.

3) The eligible municipal traffic signal owner/ARLE system administrator shall complete a TE-154, Application for Automated Red Light Enforcement (ARLE) Intersection Approval *(ATTACHMENT E).*
4) The eligible municipal traffic signal owner/ARLE system administrator shall submit a completed TE-154, municipal resolution, and other requested documentation electronically to ARLE_Grants@pa.gov. If the municipality would like to submit a request by mail, please send to:

   Secretary of Transportation
   Automated Red Light Enforcement Approval Request
   400 North Street – 8th Floor
   Harrisburg, PA 17120-0064

5) The Secretary of Transportation will review each request and will issue a recommendation to the municipality which may include the following:
   o Concurrence that the proposed intersection can be an ARLE intersection.
   o Request additional information regarding the proposed ARLE intersection.
   o Identify an alternative intersection to apply ARLE.

   **Note:** Each ARLE intersection request undergoes a field evaluation by PennDOT to ensure existing compliance with current standards prior to the Secretary of Transportation responding.

6) After receiving notification from the Secretary of Transportation regarding the ARLE intersection request, the municipal traffic signal owner/ARLE system administrator shall proceed in accordance with direction proved in the approval letter.

7) The system administrator shall notify the Secretary of Transportation two weeks prior to beginning an ARLE warning period.

**Removal of ARLE System**

When a municipality wishes to remove an ARLE system, a resolution shall be passed stating the municipality’s desire to remove the ARLE system from the operation of the traffic signal. The municipal traffic signal owner/ARLE system administrator shall submit a letter along with the resolution to the Secretary of Transportation.

**Ordinance**

The municipality must pass an ordinance authorizing enforcement of Section 3112(a)(3) of the Vehicle Code by recording violations using an ARLE system approved by the Department. Enforcement by means of an ARLE system is not valid without an ordinance.
Design Guidance

In addition to PennDOT’s Publication 148 (Traffic Standards - Signals [TC-8800 Series]) and Publication 149 (Traffic Signal Design Handbook), special consideration should be made regarding the following items:

- **Permits Required** - Once PennDOT has approved the location as a viable ARLE intersection, a revised traffic signal permit plan must be provided by the municipality showing the following:
  - Camera pole locations
  - Monitored approaches
  - Form of stop bar detection being used
  - Location of advance ARLE signage

  These items should be added to the existing traffic signal permit plan.

- **Right of Way** – All ARLE system equipment shall be on public Right-of-Way. Several ARLE approaches have not been approved because no public Right-of-Way was available to place the ARLE camera and associated detection equipment.

- **Utilities** – Coordination with utilities is essential for an ARLE system. Aerial (overhead) utilities, such as electric, telephone, and cable lines, are typically attached to wooden utility poles. Underground utilities, such as gas, sewer, and water lines, can vary greatly in depth. All aerial and underground utilities must be verified and shown on the construction plans, and the location and depth of all traffic signal support foundations and conduit must be designed accordingly. Additional utilities, such as railroad crossings must also be considered. Prior to visiting the site, trigger the PA One Call System by dialing 8-1-1.

- **ARLE Field Evaluation Meeting** – Prior to submission to PennDOT, a walkthrough of the project intersection should be conducted with the governing municipality, the ARLE vendor, the design engineer, and PennDOT to discuss which approaches are being enforced, pole locations, required signal upgrades, etc. This meeting serves as an opportunity to discuss any issues that may arise during design and construction and gets all stakeholders on the same page.

- **ARLE camera placements** – Consult with the ARLE vendor to determine the appropriate distance and angle to each stop bar. It is recommended that a preliminary ARLE camera placement plan be developed prior to the field evaluation to help determine the final camera locations. The camera pole should be placed where it has a clear view of vehicles running the red light, and a clear view of the “RED” signal indication. Both of these are required in the photo to issue a citation.

- **Limitations with ARLE Enforcement** – Consult with the ARLE vendor to anticipate all limitations of the ARLE system. For example, if an approach has 5 potential enforcement lanes and the equipment can only monitor a maximum of 4 lanes, a decision needs to be made as to whether to add another camera location or define on the plan which lane/approach will not have automated enforcement.

- **Traffic Signal and ARLE Enforcement Signs** – When performing the field evaluation ensure that all existing traffic signal permit signs are installed in the field. When performing the field evaluation, location(s) of advanced ARLE warning signs shall be determined and documented for placement onto the final traffic signal permit plan.
• **Americans with Disabilities Act (ADA)** – All accessible pedestrian routes shall be ADA accessible around all ARLE camera pole locations. Upgrades to the existing ADA curb ramps at the intersection may be required due to construction.

• **Detection loop layout and location** - Consult with the ARLE vendor to determine the optimal loop layout and location. When existing detection is present for the signal operation, the designer must incorporate the ARLE detection system while maintaining the signal detection. A revision to the existing signal detection location / type may be necessary.

• **Signal Indications** – Please ensure the following:
  - All Traffic Signal indications are Light Emitting Diode (LED) Modules and 12-inch diameter.
  - All Traffic Signal housings have backplates.
  - If Black Traffic Signal housings are being used, then a retro-reflective backplate border is required. This should also be considered for standard yellow traffic signal housings, but is not required.
  - Ensure proper traffic signal indication spacing.

• **Automated Red Light Enforcement Pole Locations** – All ARLE pole locations should comply with the Department’s Publication 148 (Traffic Standards – Signals [TC-8800 Series]) and lateral distances specified within Publication 149 (Traffic Signal Design Handbook).

• **No Turn on Red restrictions** – No turn on red restrictions should be evaluated for all intersection approaches when considering ARLE. If ARLE is to be enforced for a right turn lane, then No Turn on Red Signs shall be installed and documented as to why they were installed.

• **Traffic Signal Controller requirements and determination of an ARLE violation** - Consult with the ARLE vendor to ensure that the existing traffic signal controller can handle the addition of ARLE equipment.

• **Traffic Signal Wiring and Conduit requirements** - Consult with the ARLE vendor to ensure that all traffic signal wiring is incorporated into the design. Consulting with the ARLE vendor, verify that all existing conduit and junction boxes can adequately support the additional wiring.

• **Pedestrian Countdown Signals** – In addition to improving vehicle compliance with the traffic signal indications, consider updating the pedestrian indications to countdown.

• **Traffic Signal Permit Update** – Work with the appropriate Engineering District early when developing the ARLE plans so that the designer has a clear understanding of what needs to be updated on the Traffic Signal Permit Plan.

• **Other factors to consider**– Other factors such as parking, bus or mass transit stop locations, pedestrian and bike access should also be documented and considered when evaluating an intersection for ARLE.

• **Power** – Determination of how to power the ARLE system (stand alone or from existing controller) must be considered. If the existing intersection has UPS Battery back-up, the red light camera system should be disengaged in the event of a power failure.
Construction Guidance

Be guided by PennDOT’s Publication 148 (Traffic Standards - Signals [TC-8800 Series]) and Publication 408 (Specifications). Special consideration should be made regarding the following items:

- **Required design documentation and specifications** - Aside from the revised traffic signal permit plan, a detailed construction plan shall be prepared for both PennDOT review and for use by the contractor during construction. The construction plan should indicate in further detail the following:
  - New conduit locations. Where existing conduit is being utilized, conduit fill calculations must be conducted to ensure the new wiring does not exceed the maximum 60% fill.
  - Details on how each red light camera ties into its respective red light phase (pole base, controller, junction box, etc.) and where it ties in for power. A wiring diagram should be included on the plan.
  - Pole Details indicating the location of the camera, strobe light, controller, etc.
  - A Detection Detail showing the layout (WVD, Video, or Inductive loops, etc) particularly in areas where signal detection is already present.
  - Connection for remote access of the ARLE system, if necessary

- **Key construction information** –
  - It is essential to coordinate with the necessary Utilities during the permitting phase and during construction.
  - If the camera poles are in a residential area, it may be required to shield the flash strobes as to not disturb nearby residents.
  - In order to make maintenance of the ARLE system and the existing traffic signal as smooth as possible, it is essential that the wiring for the ARLE system be colored or appropriately labeled so that maintenance providers can differentiate between the two.

- **Inspection of the ARLE system** – It is important to ensure that the ARLE system has been installed as per plan. The following operational items should checked:
  - Make sure the Warning Signs are in advance of the intersection and are visible.
  - Location of the proposed poles should be as per plan. Ensure the poles and the equipment on the poles do not limit the pedestrian access on adjacent sidewalks both horizontally and vertically. Also ensure that the equipment on the pole does not hang over the roadway unless it is placed at a height of 16’ or greater.
  - The ARLE vendor will coordinate with the local policing agency to verify that the cameras are operating satisfactorily.
  - If changes were made during construction, it is essential that an as-built be prepared so an accurate record of the system is available.

- **Other factors during construction** – Contact the PennDOT press office prior to the start of construction for notification.
CHAPTER 8 - PENNSYLVANIA CHIEFS OF POLICE ACCREDITATION

What is Pennsylvania Law Enforcement Accreditation?

The Pennsylvania Chiefs of Police Association introduced the Pennsylvania Law Enforcement Accreditation Program to the Commonwealth in July 2001. Since then, over 300 agencies have enrolled and 83 agencies currently have attained accredited status.

Accreditation is a progressive and time-proven way of helping institutions evaluate and improve their overall performance. The cornerstone of this strategy lies in the promulgation of standards containing a clear statement of professional objectives. Participating administrators then conduct a thorough analysis to determine how existing operations can be adapted to meet these objectives. When the procedures are in place, a team of independent professionals is assigned to verify that all applicable standards have been successfully implemented. The process culminates with a decision by an authoritative body that the institution is worthy of accreditation.

The Pennsylvania Law Enforcement Accreditation Program was designed and developed by professional law enforcement executives to provide a reasonable and cost effective plan for the professionalization of law enforcement agencies within the Commonwealth. The underlying philosophy of the program is to have a user-friendly undertaking for the departments that will result in a “success” oriented outcome.

Your law enforcement peers want the program to be consistent and achievable for all types and sizes of law enforcement agencies within Pennsylvania. That perspective has been used in the development of the program and in its implementation. Whether your agency has 10 personnel, 100 members, or a cadre of thousands, you and your department can successfully undertake and complete the Pennsylvania Law Enforcement Accreditation Program of the Pennsylvania Chiefs of Police Association.

Of course there will be complex work involved, but that is true of any professional project that is worth accomplishing. However, the Commission members, the accreditation staff, and the accreditation coalition support groups in various parts of the state are in place to assist you and your personnel with the process leading to accredited status and Commission recognition and certification.

It is the goal of the Pennsylvania Law Enforcement Accreditation Program to be affordable, Pennsylvania-specific, and user-friendly. We will continue to endeavor to accomplish those purposes for the law enforcement agencies of the Commonwealth of Pennsylvania.

Feel free to contact Andrea Sullivan (asullivan@pachiefs.org) or Joseph Blackburn (jblackburn@pachiefs.org) or call (717) 236-1059 with any questions you may have.

Three Phases to obtain Accreditation

The program can be broken down into three steps or phases . . .

Phase One ... Application

The police department and local government officials make the joint decision to pursue police accreditation. Together, you notify the accreditation staff at the Pennsylvania Chiefs of Police Association via a Letter of
Intent. Staff then provides all materials to begin the accreditation process. Not only does the agency receive the manuals, but also organizational materials such as labels for the accreditation folders and a software tracking program. A video is included to assist you in concisely explaining the program to your agency staff. A free training class is also available for newly appointed Accreditation Managers and their Chief. There is a onetime fee of $250 to participate in the Pennsylvania Law Enforcement Accreditation program. This payment should accompany the Letter of Intent.

**Phase Two ... Self-Assessment**

The Accreditation Manager will begin the process internally by performing a self-assessment of the agency. This begins as an exercise in comparison. The Accreditation Manager will compare how the current policies comply with the program’s 132* standards. *Smaller agencies without certain facilities or functions will only be required to comply with less than 100 standards. Most agencies will discover that they are closer to compliance than expected.

When the agency has completed the self-assessment phase, it will want to host a mock-assessment. Mock assessments are conducted by the Pennsylvania Police Accreditation Coalition (PPAC). It is important for agencies pursuing accreditation to join and actively participate in PPAC. This is a final review to ensure a smooth assessment in Phase Three. Staff is available throughout the process, offering support and guidance to ensure every agency’s success. In addition, several localized coalitions have been formed by Accreditation Managers to assist one another.

**Phase Three ... Formal Assessment**

The final phase of the accreditation process is the Commission assessment. Trained assessors will do an on-site, two day review of agency files ensuring compliance with all standards. Please note that the assessment is a success oriented process.

Your accredited status will remain valid for a three year period. With accredited status, your agency may experience insurance savings; stronger community relations; and increased employee input, interaction and confidence in the agency.
Current ARLE Municipalities Accreditation Status

Exhibit 8-1 specified below contains the status of the municipalities that require Pennsylvania Chief of Police Association Accreditation as defined within 75 Pa. C.S. §3117(s) as of 8/27/2012.

Exhibit 8-1  ARLE Municipal Accreditation Status as of September 2012.

<table>
<thead>
<tr>
<th>Municipality</th>
<th>ACCREDITED</th>
<th>ENROLLED</th>
<th>NEITHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bucks County</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Bensalem Twp.</td>
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<td>Bristol Twp.</td>
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<tr>
<td>Falls Twp.</td>
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<td>X</td>
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<tr>
<td>Lower Makefield Twp.</td>
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<td>Middletown Twp.</td>
<td></td>
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<tr>
<td>Northampton Twp.</td>
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<tr>
<td>Warminster Twp.</td>
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<td>Chester County</td>
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<tr>
<td>West Goshen Twp.</td>
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<td>Delaware County</td>
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<td>Radnor Twp.</td>
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<td>Upper Darby Twp.</td>
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<td></td>
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</tr>
<tr>
<td>Montgomery Co.</td>
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<td></td>
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<tr>
<td>Abington Twp.</td>
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<td>X</td>
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</tr>
<tr>
<td>Cheltenham Twp.</td>
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<td>Horsham Twp.</td>
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<td></td>
</tr>
<tr>
<td>Lower Merion Twp.</td>
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<td>X</td>
<td></td>
</tr>
<tr>
<td>Lower Providence Twp.</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Montgomery Twp.</td>
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<td>X</td>
<td></td>
</tr>
<tr>
<td>Norristown Borough</td>
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<td></td>
<td>X</td>
</tr>
<tr>
<td>Pottstown Borough</td>
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<td></td>
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<tr>
<td>Upper Dublin Twp.</td>
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<td>X</td>
<td></td>
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<tr>
<td>Upper Merion Twp.</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Upper Moreland Twp.</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Upper Providence Twp.</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

**TOTALS:** 12 12 6
CHAPTER 9 - ARLE DEPLOYMENT

Prior to Warning Period

Prior to an ARLE intersection going into a warning period, the system administrator shall complete the following:

- Notify the following individuals two weeks prior and indicate the ARLE intersection location(s) and details regarding the warning period and expected violation beginning date:
  - Local Municipality
  - State Legislator(s) having jurisdiction of the ARLE intersection.
  - PennDOT (appropriate District office and Central Office ARLE contacts).

- Develop an appropriate public awareness campaign for the new intersection. Additional information regarding this may be found in Federal Highway Administration’s (FHWA) publication titled “Red Light Camera Systems, Operational Guideline” dated January 2005. It states the following regarding public awareness campaigns.

  “Education on improving traffic safety is a crucial component for any significant change to occur with traffic control systems. Appropriate educational elements should be applied regardless of the chosen solution. For red light camera programs, often the initial education program includes issuance of warning citations to likely violators for limited period, and clear public communication, of the date on which warning citations will be halted and actual enforcement citations will begin. However, education and media outreach efforts should continue throughout the life of the program to keep the public informed of results and need for safety vigilance. Ongoing awareness of the presence of enforcement measures is key to deterrence and long-term behavior changes.”

The municipality should consider embarking on a public awareness campaign that follows the general spirit of the recommendations above. The details of the campaign may be submitted to the Department prior to beginning construction of the ARLE system.

- The system administrator shall ensure that the Secretary of Transportation approval has been secured prior to beginning the warning period.

- Assure PennDOT that all effort required for the additional processing and review of violations can be covered by adding any additional ARLE intersections.

- Ensure that the Traffic Signal Permit has been approved/updated.

- Ensure that all required ARLE signs are in place prior to the beginning of the warning period.

- The system administrator shall perform all necessary calibration and testing prior to the enforcement period beginning.

- Once all equipment is installed and ready for operation a warning period will begin.
CHAPTER 10 - ARLE OPERATION AND MAINTENANCE COSTS

Revenue received from violations may be able to operate an ARLE system. Based on the Philadelphia Parking Authority (PPA) annual summary reports, the ARLE program now requires an average of 368 monthly violations per traffic signal (or 11.8 violations daily) in order to recoup the operation and maintenance costs (average $441,600/year) at each intersection. This is an important issue when considering the potential expansion of your ARLE program. Exhibit 10-1 provides more detail as to all of the line items associated with the operation and maintenance of an ARLE system.

Exhibit 10-1  Summary of Philadelphia Parking Authority Maintenance and Operation Expenses

<table>
<thead>
<tr>
<th>Line Item</th>
<th>Average % of Operating and Maintenance Costs</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATS Processing Fee</td>
<td>64.91%</td>
<td>Installs and maintains the cameras, manages data and provides technical support.</td>
</tr>
<tr>
<td>Ticket Processing Fees</td>
<td>5.74%</td>
<td>Paid to ACS for collection services</td>
</tr>
<tr>
<td>Philadelphia Police Dept.</td>
<td>0.62%</td>
<td>Reviews and approves/rejects violation photographs</td>
</tr>
<tr>
<td>Philadelphia Dept. of Finance</td>
<td>1.25%</td>
<td>The Office of Administrative Review is the office responsible for first-level hearings on contested violations.</td>
</tr>
<tr>
<td>Personnel Costs</td>
<td>7.68%</td>
<td>Includes current staff salaries and fringe benefits as well as approximately one year staff support prior to implementation.</td>
</tr>
<tr>
<td>PPA Support</td>
<td>14.47%</td>
<td>The allocated expense for PPA support services such as human resources, purchasing, IT, management, security, etc.</td>
</tr>
<tr>
<td>Equipment Rent Expense</td>
<td>1.08%</td>
<td>Allocated rent expense to PPA equipment</td>
</tr>
<tr>
<td>Government Relations/Media Consulting</td>
<td>0.57%</td>
<td>Public awareness</td>
</tr>
<tr>
<td>Technical Program Review</td>
<td>0.43%</td>
<td>Includes report production costs</td>
</tr>
<tr>
<td>Credit Card Fees</td>
<td>0.64%</td>
<td>Fees paid on collection of credit card payments</td>
</tr>
<tr>
<td>Intersection Upgrade</td>
<td>0.80%</td>
<td>Required ARLE Intersection upgrades based on PennDOT Field Evaluation.</td>
</tr>
<tr>
<td>Other Expenses</td>
<td>2.99%</td>
<td>Miscellaneous expenses such as office supplies, uniforms, auto expenses, etc.</td>
</tr>
</tbody>
</table>

CHAPTER 11 - SUBMITTING ADDITIONAL ARLE REVENUE PROCESS

Process for Submitting Additional Revenue

The purpose of this chapter is to clarify and define the process in which the system administrator and/or municipality shall submit additional revenue for the ARLE Funding Program as defined within 75 Pa. C.S. §§3116(l)(2), 3117(m)(2), and 3117(m)(2.1). Please follow the following process when submitting additional revenue generated through ARLE.

**Step 1:** The system administrator shall remit the system administrator’s operation and maintenance cost and prepares a quarterly payment to PennDOT. **Quarterly payments should be submitted on March 1st, June 1st, September 1st, and December 1st of each year.**

**Step 2:** Complete the Automated Red Light Enforcement (ARLE) Quarterly Revenue Payment document either by mailing with the check and/or through email ([ARLE_Grants@pa.gov](mailto:ARLE_Grants@pa.gov)). A copy of the ARLE Quarterly Revenue Payment document can be found at: [ftp://ftp.dot.state.pa.us/transfer/Traffic Signals/ARLE/ARLE Quarterly Revenue Payment.pdf](ftp://ftp.dot.state.pa.us/transfer/Traffic Signals/ARLE/ARLE Quarterly Revenue Payment.pdf) or Attachment G.

**Step 3:** Submit all quarterly payments to:
- Pennsylvania Department of Transportation
- ATTN: Automated Red Light Enforcement (ARLE) Revenue
- PO Box 2047
- Harrisburg, PA 17105-2047

**Step 4:** Upon receiving the quarterly payment, PennDOT will email both the system administrator and municipality that the quarterly payment was received and is being processed.

If the system administrator and/or municipality have any questions, contact PennDOT’s Bureau of Fiscal Management at (717) 787-8598.
CHAPTER 12 - ARLE FUNDING PROGRAM

Brief History

The ARLE funding program was established in 2010, with the intent of using the extra revenue generated by ARLE to help fund transportation projects focusing on safety throughout Pennsylvania. It is important to note that the ARLE funding program is a truly competitive process, meaning that selection of projects is based on the quality of projects submitted and how well the projects meet the criteria outlined in Exhibit 12-1 below.

Exhibit 12-1  ARLE Funding Program Selection Criteria

<table>
<thead>
<tr>
<th>Grant Selection Criteria Description</th>
<th>Grant Selection Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsor’s past maintenance and operational history</td>
<td>At what level does the applicant maintain and operate their existing traffic control devices? (Higher level of maintenance scores higher.)</td>
</tr>
<tr>
<td>Project benefits</td>
<td>How does the project improve safety, enhance mobility, reduce congestion, and reduce greenhouse gases? (Higher score for more benefits.)</td>
</tr>
<tr>
<td>Project cost</td>
<td>Is the request within the scope of available funds? Is the project cost-effective?</td>
</tr>
<tr>
<td>Previous grant project type results</td>
<td>Does the applicant have a successful track record of completing projects in an efficient and effective manner?</td>
</tr>
<tr>
<td>Previously completed projects by the sponsor</td>
<td>Did the applicant receive prior ARLE grant funds? (Higher score for not receiving funds previously.)</td>
</tr>
<tr>
<td>Cost sharing</td>
<td>Are there matching funds from other sources? (Higher score for matching funds.)</td>
</tr>
<tr>
<td>Origination of ARLE funds</td>
<td>Did the funds originate from the municipality that is applying for the grant? (Highest score if ARLE funds originate from the municipality.)</td>
</tr>
</tbody>
</table>

Source: PennDOT Center for Program Development and Management
Application Process

An announcement is posted on “The Pennsylvania Bulletin”, inviting applicants to submit their applications under the ARLE Transportation Enhancement Grants Program before a given deadline established each year. The application can be seen in Exhibit 12-2 or Attachment H.

Exhibit 12-2     ARLE Application

The applications are submitted electronically to PennDOT’s Central Office, where they are processed and organized for review.

Selection Process

As previously indicated, a selection committee (see Exhibit 12-3 for details on membership) will be identified to determine what transportation enhancement grants will be awarded from the municipality’s additional revenue, which has been deposited into the Motor License Fund. The Department may not reserve, designate, or set aside a specific level or percentage of funds to a particular municipality or group of municipalities. However, applications seeking funding for projects in the municipality where the ARLE system is operated have priority.
Updated Funding Program

Exhibit 12-3 shows an overview of the updated ARLE funding program.

Exhibit 12-3  ARLE Funding Program Overview
CHAPTER 13 - ARLE ANNUAL REPORT

Annual ARLE Report

The following is suggested ARLE annual report information that should be considered to comply with the legal ARLE requirement. As previously indicated, 75 Pa. C.S. 3117(i)(3) defines that the system administrator shall submit an annual report to the chairman and minority chairman of the Pennsylvania House and Senate Transportation Committees. PennDOT suggests that information listed below be incorporated into the annual report to provide consistency to the ARLE program. PennDOT also suggests a cover letter to the chairman and minority chairman of the Pennsylvania House and Senate Transportation Committees. The annual report should include:

- A municipal overview of your ARLE program.
- The dates that the ARLE annual report covers.
- All the ARLE intersections along with the date installed, date warning period began, length of warning period, date that violations began, number of ARLE cameras at each intersection, and number of warnings of each intersection during this ARLE evaluation period.
- A summary of violations during this ARLE reporting period and explaining how this compares to previous years.
- A detailed line item summary of the revenue and expenses (Maintenance and Operations costs). This should include the amount of money paid to a vendor or manufacturer by the municipality, and also the number of outstanding violations.
- A summary of violation history over the life of each intersection. PennDOT suggests that the municipality provide a summary of the violation information at each location along with providing information regarding reportable and non-reportable crashes.
- A municipal conclusion as to the effectiveness of the ARLE program within your municipality.

To further assist municipalities and provide guidance regarding the annual report, PennDOT will be developing a more streamlined and simplified form so that all ARLE system administrators and/or municipalities may choose to use. For a copy of the most recent Philadelphia Parking Authority ARLE annual report, please go to their ARLE webpage (http://philapark.org/redlights/). The future PennDOT-developed form will be incorporated into the future PennDOT Publication 736 (Automated Enforcement).