Controlling Traffic is Dangerous!
Flagging and traffic control associated with work zones are governed by law in Pennsylvania.

**Title 75, Section 6123**

“Any person performing any work on or near the roadway which may create hazards shall erect traffic-control devices in accordance with the rules and regulations of the department for the maintenance and protection of traffic…”
<table>
<thead>
<tr>
<th>Title</th>
<th>Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Law</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Title 75</td>
<td>Pennsylvania Consolidated Statutes</td>
<td>Section 6123</td>
</tr>
<tr>
<td><strong>Regulations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Title 67</td>
<td>Pennsylvania Code</td>
<td>Chapter 212</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MUTCD – Part 6</td>
</tr>
<tr>
<td><strong>Policies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statement of Policy</td>
<td></td>
<td>Pub. 46</td>
</tr>
<tr>
<td>Strike-off Letters &amp; Publications</td>
<td></td>
<td>Pub. 212</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pub. 213</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pub. 213</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pub. 408</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pub. 236</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SOL 470-06-01</td>
</tr>
</tbody>
</table>
Why are you here?

- Flagger training is important and is required as stated in Publication 213, General Note B-1
  
  “All flaggers at minimum shall have training as per the most current version of Publication 408, Section 901.3 Flagger Training.”

- Training contributes to safety
The number of work zone crashes over the past decade displays a significantly decreasing trend until 2008.

After 2008, the number of work zone crashes has risen significantly with the increasing number of construction projects (*American Recovery & Reinvestment Act of 2009*)
Work Zone Fatalities

Year:
- 2004: 16
- 2005: 28
- 2006: 18
- 2007: 26
- 2008: 23
- 2009: 23
- 2010: 22
- 2011: 23
- 2012: 21
- 2013: 15

Fatalities:
- 2004: 16
- 2005: 31
- 2006: 20
- 2007: 23
- 2008: 23
- 2009: 23
- 2010: 22
- 2011: 23
- 2012: 21
- 2013: 16

Graph showing the number of fatal work zone crashes and fatalities from 2004 to 2013.
Reckless Driver

- A driver was cited after crashing into the rear of a work vehicle that was encroaching upon the right lane.

- Always be alert for reckless drivers.
Speeding Driver

- Two drivers sped through a work zone ignoring a Flagger's STOP Paddle
- The first driver nearly collided with a truck, and fled the scene
- The second driver collided with a car after leaving 198 feet of skid marks; she was cited for speeding
Aggressive Driver
The Human Element

- Flagging is a job with great responsibility and can be dangerous.
- The flagger plays a key role in making work zones safe for workers, motorists and pedestrians.
- Unfortunately, work zone crashes sometimes result in fatalities.
Flagger Training Outline

Module 1 - Flagger Basics
Module 2 - Work Zone Components
Module 3 - Flagger Equipment & Attire
Module 4 - Flagger Stations & Positioning
Module 5 - Flagging Procedures
Module 6 - Review
Module 1 - FLAGGER BASICS

- Purposes of Flagging
- Flagger Characteristics & Abilities
- Flagger Conduct
Primary Function of Flagging

- The primary function of flagging is to provide safety for:
  - Work crew
  - Motorists
  - Bicyclists
  - Pedestrians

within or traveling through work zones.
Flagger’s Duties

- Flaggers are placed at work zones to:
  - Safely stop traffic as needed
  - Maintain safe and continuous traffic flow
    » Reduce speeds
    » Protect work crews
  - Provide positive guidance and direction to the traveling public
Flagger’s Duties

• First & Last:
  ▪ A flagger must be in position *before* the crew starts working
  ▪ A flagger must be in position *until after* the crew stops working and has exited the work zone
Why a good flagger is important

- Flaggers are responsible for:
  - Human safety
  - Being the first and only contact with traveling public
  - Providing guidance and direction to drivers, pedestrians, bicyclists, etc.
Why a good flagger is important

A good flagger must be trained and qualified
Flagger Abilities

- Communicate instructions clearly, firmly, and courteously
Flagger Abilities

• Move and maneuver quickly
Flagger Abilities

- Control signaling devices to provide positive guidance
Flagger Abilities

- Apply safe traffic control practices in sometimes stressful or emergency situations
Flagger Abilities

- Recognize dangerous traffic situations in time to warn workers
Flagger Characteristics

• Sense of responsibility for public and worker safety
• Adequate training
• Good physical condition
• Mentally alert
• Courteous and firm manner
• Neat appearance
Flagger Well-Being

• Work Zone Superintendent / Foreman are responsible for flaggers

• Flaggers must be physically and mentally alert
  ▪ Arrive at work well rested
  ▪ Not under the influence of drugs or alcohol
  ▪ Not hung-over

• Flaggers are the first line of defense for the Work Crew
Flagger Conduct

• *Remember - Safety First!*

• Be courteous and professional

• Be clearly visible

• Be attentive

• Be familiar with the nature of the work being performed
Be Courteous and Professional

- **Use** authoritative and clear hand directions

- **Never use** crude, suggestive, or inappropriate language or hand gestures

- **Never use** personal electronic devices such as:
  - Cell phones (voice or text messages)
  - MP3 Players (iPod, Zune, etc.)
  - AM/FM Radios
What’s Wrong Here?
Be Clearly Visible

- Do not lean or sit on any vehicle and never flag from beside or inside a vehicle
Be Clearly Visible

• Position yourself for the greatest color contrast between you and your surroundings
Be Clearly Visible

- Do not permit workers or individuals to congregate around you
Be Clearly Visible

• Be visible to approaching motorists for a minimum distance of E (shown on the PATA Notes pages in Pub 213)
Be Attentive

- Be ready to respond to emergencies or errant vehicles
- Do not step in front of moving traffic
- Do not watch work in progress or try to do any work other than flagging
- Establish a warning signal with the work crew to alert them to possible work zone intrusions
- Have an escape route
What’s Wrong Here?
Other Duties

• Be familiar with the work

• Recognize when Work Zone Traffic Control may not be working and what to do about it

• Do not leave your position until replaced by another flagger
Work Zone Components

• Advanced Warning Area
• Transition Area
• Activity Area
• Termination Area
**Work Zone Components**

- **Advance Warning Area**: Tells traffic what to expect ahead.
- **Transition Area**: Moves traffic out of its normal path.
- **Activity Area**: Where work is taking place.
- **Termination Area**: Lets traffic resume normal operations.

- **Buffer Space**: Recovery space for errant motorists. This area must be clear and remain free of workers, material, and equipment.
- **Roll Ahead Space**: Workers are not permitted in this space.
- **Work Space**: Space reserved for workers, material, and equipment.
Common Temporary Traffic Control Devices

Warning Signs

Channelizing Devices
Channelizing Devices: Traffic Cones

- Authorized for Short Term Operations (<24 hours)
- Retroreflective bands required if height is greater than 18”
- Fluorescent yellow-green is not an approved color
Channelizing Devices: Drums, Tubular Markers and Vertical Panels

- Authorized for Long Term and Short Term Operations

- Retroreflective bands required on drums and tubular markers. Vertical panel has retroreflective sheeting.
Pub 213 PATA 107
Work in One Lane; Two Flaggers

PATA 107 (Old PATA 10a) - Notes

1. Each flagger shall be clearly visible to traffic for a minimum distance of E and shall be in constant communication with all other flaggers.

2. For operations of 15 minutes or less:
   a. The Road Work (W20-1), One Lane Road (W20-4), and Flagger Symbol (W20-7) signs are not required.
   b. All channelizing devices may be eliminated if a shadow vehicle is present.

3. The buffer space shall be extended so that the two-way traffic taper is placed before a horizontal (or crest vertical) curve to provide adequate sight distance for the flagger and a queue of stopped vehicles.

4. When a shadow vehicle is not used, distance E is measured from end of taper to beginning of work space.

Signs

Sign Spacing Chart

Distance and Spacing Quick Reference Chart

<table>
<thead>
<tr>
<th>Speed</th>
<th>W</th>
<th>L</th>
<th>1/2L</th>
<th>1/3L</th>
<th>Min. Channelizing Devices Per Taper Type (Length)</th>
<th>D</th>
<th>E</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>10</td>
<td>103</td>
<td>53</td>
<td>43</td>
<td>6 6 6 6 50 155 150</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>10</td>
<td>121</td>
<td>62</td>
<td>41</td>
<td>6 6 6 6 60 200 150</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>10</td>
<td>143</td>
<td>76</td>
<td>47</td>
<td>6 6 6 6 70 250 150</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>10</td>
<td>169</td>
<td>91</td>
<td>59</td>
<td>6 6 6 6 80 305 150</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>10</td>
<td>196</td>
<td>111</td>
<td>77</td>
<td>6 6 6 6 90 360 150</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Taper Length Formulas

\[
S = \frac{1000}{V} \quad (40 \text{ MPH or less})
\]

\[
L = \frac{V}{5} \quad (45 \text{ MPH or more})
\]

S = Regulatory Speed Limit
L = Length

Note: Channelizing devices used in taper shall be equally spaced at 1/3D Max.
When channelizing devices are used, the flagger is required to be stationed 40’ minimum from the nearest device.
Common Advanced Warning Signs

ROAD WORK (W20-1)

ONE LANE ROAD (W20-4)

FLAGGER SYMBOL (W20-7)

BE PREPARED TO STOP NEXT X MI (W20-10A)
Pub 213 PATA 107
Work in One Lane; Two Flaggers

PATA 107 (Old PATA 10a) – Notes

1. Each flagger shall be clearly visible to traffic for a minimum distance of E and shall be in constant communication with all other flaggers.

2. For operations of 15 minutes or less:
   a. The Road Work (W20-1), One Lane Road (W20-4), and Flagger Symbol (W20-7) signs are not required.
   b. All channelizing devices may be eliminated if a shadow vehicle is present.

3. The buffer space shall be extended so that the two-way traffic taper is placed before a horizontal (or crest vertical) curve to provide adequate sight distance for the flagger and a queue of stopped vehicles.

4. When a shadow vehicle is not used, distance E is measured from end of taper to beginning of work space.

Signs

<table>
<thead>
<tr>
<th>W20-1</th>
<th>W20-4</th>
<th>W20-7</th>
</tr>
</thead>
</table>

Sign Spacing Chart

Distance and Spacing Quick Reference Chart

<table>
<thead>
<tr>
<th>Condition</th>
<th>W20-1</th>
<th>W20-4</th>
<th>W20-7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>35-39 MPH or less</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Urban</td>
<td>350</td>
<td>350</td>
<td>350</td>
</tr>
<tr>
<td>Greater than 39 MPH</td>
<td>350</td>
<td>350</td>
<td>350</td>
</tr>
<tr>
<td>Rural</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
</tbody>
</table>
| When multiple distances are available on advance warning signs, they shall all be of the same series type. Examples differ all “W20-1” or XXX FEET.

Taper Length Formulas

<table>
<thead>
<tr>
<th>S</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 MPH or less</td>
<td>L = S² / 20</td>
</tr>
<tr>
<td>45 MPH or more</td>
<td>L = W²</td>
</tr>
</tbody>
</table>

S = Regulatory Speed Limit
W = Width of Offset
L = Length

Note: Channelizing devices used in taper shall be equally spaced at ½ D Max.
Sign Placement

- Flagger Symbol signs must be in place before flagging begins.

- Flagger Symbol signs shall be removed or turned away from view of traffic immediately upon cessation of flagging duties.
Optional Advance Cone Setup (PATA 002)

- This is in addition to standard TTC devices
- Cones are to be placed on roadway centerline
- Three cones equally spaced at 10’ to 50’, others placed across from advance warning signs
Minimum of 6 equally-spaced channelizing devices per lane. More may be required based upon speed limit and lane width. Additional channelizing devices may always be used.
TRANSITION AREA

6 Cones Minimum. Equally Spaced.
The Activity Area includes the:

- Buffer Space (E)
- Shadow Vehicle
- Roll Ahead Space (H)
- Work Space
Termination Area is where traffic is redirected back into their normal path.
Termination Area

6 Cones Minimum. Equally Spaced. Taper Length is 50’ Per Lane.
Choosing the Correct Traffic Control Plan

- MUTCD and PennDOT Publication 213
- Variables include:
  - Type and Geometry of Roadway
  - Duration of Operation
  - Traffic Volumes and Speeds
  - Road Users
  - Type and Location of Work

  Flagger’s are *not* allowed to make changes to work zones themselves. They *must* consult the foreman.
Module 3 – Flagger Equipment and Attire
Work Zone Flagger’s Tools
Flagger’s Tools (Stop/Slow Paddle)
Flagger’s Tools (Stop/Slow Paddle)

- Used to control one-lane, two-way traffic
- Shall comply with Federal and State regulations
Flagger’s Tools (Stop/Slow Paddle)

- Octagonal
- 18” minimum size STOP sign
- 6” tall lettering
- 72” staff (minimum)
- Diamond-shaped SLOW sign
- Retroreflective
Flagger’s Tools (Stop/Slow Paddle)
Flagger’s Tools (Stop/Slow Paddle)
Flagger’s Tools (Red Flag)

- Use at intersection with single flagger
- For *emergencies* when STOP/ SLOW Paddle is not available
Flagger’s Tools (Red Flag)

- *Red* material, visible and durable
- 24” x 24” minimum
- 36” staff
- Stiff/weighted material so flag hangs vertically
Orange Flags

*Do NOT use these orange flags for controlling traffic at an intersection*
Flagger Equipment - Supplemental

- Red Wand (Flashlight with Red Glow Cone)
- Flares (emergency situations ONLY)
- Communication Equipment
Lighting of Flagger Station

- Pub 213 General Notes **requires** illumination of a flagger station at night
- Exception for emergencies
Emergency Situations with No Illumination

- Flashlight with a red glow cone
  - or -

- One or more light sticks (steady burn mode only) or flares *should* be used to *supplement* the retro-reflective STOP/SLOW Paddle or red flag
  (only in emergencies)
Remember...

• Flaggers use their free hand to direct traffic – not the paddle or flag hand!
Communication Equipment

• Prearranged hand signals

• Voice

• Hand-held or portable radios
Alternate Communication Methods

- Passing flags or batons
  - Flag-carrying Car
  - Official Car
- Pilot Car
Flagger Attire - Dressing for Safety

**PennDOT Employees**

- Protective Helmet/Hard Hat
- ANSI Class 3 Vest
  (high visibility yellow-green having silver retroreflective stripes with orange trim)
- ANSI Class E Leggings / Chaps
  – high visibility yellow-green or orange-red required
- ANSI Class 3 high visibility yellow-green rain gear in inclement weather
- Proper footwear

ANSI 107-2004
Flagger Attire - Dressing for Safety

Non-PennDOT Flaggers

- Protective Helmet/Hard Hat
- ANSI Class 2 Safety Apparel – fluorescent yellow-green, fluorescent orange-red or a combination
- Proper footwear
- ANSI Class 3 apparel is recommended at night
- Same standards for optional rain gear

Unless otherwise written in the contract
Proper Flagger Equipment and Attire
Module 4 – Flagger Stations and Positioning

- What is a flagger station?
- Where is it located?
- Where do I position myself as a flagger in order to safely and effectively use the equipment to stop traffic intermittently?
- How can I maximize my visibility to the motoring public and effectively communicate with them?
What is a Flagger Station?
What Determines the Location of Flagger Stations?

Located such that approaching road users have sufficient distance to stop at the intended stopping point

- Visibility
- Location of work space
- Flagger escape route availability
- Channelizing Devices
Flagger Visibility
Flagger Visibility

From PennDOT Publication 213 PATA Notes Pages

“Flagger Stations should be located such that an errant vehicle has space to stop without entering the work space.”

<table>
<thead>
<tr>
<th>Speed</th>
<th>W</th>
<th>L</th>
<th>1/2L</th>
<th>1/3L</th>
<th>Min. Channelizing Devices Per Taper Type (Length)</th>
<th>D</th>
<th>E</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>10</td>
<td>105</td>
<td>55</td>
<td>35</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>115</td>
<td>60</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>125</td>
<td>65</td>
<td>45</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>10</td>
<td>150</td>
<td>75</td>
<td>50</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>165</td>
<td>85</td>
<td>55</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>180</td>
<td>90</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>10</td>
<td>205</td>
<td>105</td>
<td>70</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>225</td>
<td>115</td>
<td>75</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>245</td>
<td>125</td>
<td>85</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>10</td>
<td>270</td>
<td>135</td>
<td>90</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>295</td>
<td>150</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>320</td>
<td>160</td>
<td>110</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>10</td>
<td>450</td>
<td>225</td>
<td>150</td>
<td>11</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>495</td>
<td>250</td>
<td>165</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>540</td>
<td>270</td>
<td>180</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>10</td>
<td>500</td>
<td>250</td>
<td>170</td>
<td>11</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>550</td>
<td>275</td>
<td>185</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>600</td>
<td>300</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>10</td>
<td>550</td>
<td>275</td>
<td>185</td>
<td>11</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>605</td>
<td>305</td>
<td>205</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>660</td>
<td>330</td>
<td>220</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Flagger Visibility

- Rule of Thumb visibility distance to flagger = 10 x posted speed limit

**Example:**

Posted Speed = 35 MPH

\[
10 \times \frac{35}{\text{SPEED LIMIT}} = 350' 
\]

- In this case, the rule of thumb distance is 100’ more than the minimum required.
Flagger Visibility

- Take into consideration hills, curves, signs, etc.
Flagger Visibility

- Never allow a group of workers or individuals to congregate around flagger station
Flagger Visibility

• Choose position to provide greatest color contrast
  – Do not stand in the shade when possible. A more brilliant color contrast can usually be seen by drivers if the flagger is standing in direct sunlight.
  – Be aware of the background and surroundings. For example, leaf foliage may inhibit visibility.
Flagger Station Location
(Stationary Operation)

Excerpt from Pub 213 PATA 107
Stationary Operation

Buffer Space
Flagger Station Location (Mobile Operation)

Excerpt from Pub 213 PATA 302 Mobile Operation

www.dot.state.pa.us
Flagger Station Location
(Single Flagger)

- Single flagger operation: Always directly opposite the work space
Flagger Escape Route

- **NEVER** block a flagger’s escape route!
Flagger Escape Route

• Be aware of:
  ▪ Guiderail
  ▪ Structures
  ▪ Trees/vegetation
  ▪ Drainage
  ▪ Vehicles
  ▪ Signs
  ▪ Personal Items
    ▪ Lunchbox, cooler, etc
Proper Flagger Positioning

- Stand (never sit) on shoulder of the road or in barricaded lane
Proper Flagger Positioning

- Stand adjacent to the traffic you are to control and face oncoming traffic
Proper Flagger Positioning

- NEVER stand in the center of the road as vehicles are approaching
- Flaggers may move from the shoulder into the lane only after first vehicle approaching the flagger station has stopped
Proper Positioning of Flagger

Good Example
What’s Wrong Here?
What’s Wrong Here?
What’s Wrong Here?
Module 5 – Flagging Procedures
To Stop Traffic – Using Paddle

- Stand on shoulder, face traffic
- Hold STOP side of paddle in stationary position
- Extend arm horizontally from body
- Raise palm of free hand toward approaching traffic
- If visibility can be increased by moving to the middle of the lane, the flagger may proceed toward middle of road AFTER traffic has stopped - keep palm extended
When, How, Where, and Why to Move from Shoulder

- Move with STOP sign showing to stopped vehicles at all times
- After first vehicle has come to a full stop
- Keep arm extended and palm up
- Move just inside center of roadway in the lane you are controlling
- Watch traffic approaching from rear
To Release Traffic – Using Paddle

- Return to standing position at shoulder, showing STOP sign
- Face traffic, turn paddle to SLOW
- Gesture with free hand in direction of travel
To Slow Traffic – Using Paddle

- Stand on shoulder, facing traffic
- Display SLOW sign on paddle
- Raise and lower free hand
To Stop Traffic – Using Flag

- Face traffic from shoulder position
- Extend flag horizontally across traffic lane
- Be sure full area of flag is visible
- Use free arm with palm facing approaching traffic
To Release Traffic – Using Flag

- Stand parallel to flow of traffic
- Flag and arm lowered from view
- Motion traffic ahead with free arm
- DO NOT wave the red flag!
To Slow Traffic – Using Flag

- Face traffic from shoulder
- Slowly lower and raise the red flag from the horizontal position to a vertical position pointing downward
- Motion is up and down slowly
Flaggers use their free hand to direct traffic for both STOP/SLOW Paddle and Red Flag methods.
To Stop Traffic – Flashlight with Red Glow Cone

- Stand on shoulder, face traffic
- Hold flashlight with left arm extended
- Flashlight pointed to ground
- Wave in slow arc
To Release Traffic – Flashlight with Red Glow Cone

• Point flashlight at vehicle bumper
• Aim flashlight towards open lane
• Then hold flashlight in that position
• Do not wave the flashlight
To Slow Traffic – Red Wand (Flashlight with Red Glow Cone)

- Point the red wand downward in the direction oncoming traffic

- Quickly move flashlight in figure 8 motion.

- Never shine the light into eyes of drivers
Two or More Person Flagger Teams

- All flaggers must work with “one mind”
- Appoint “chief flagger” to coordinate
- Maintain clear and precise communication amongst all flaggers at all times
- On short one-lane sections, remain clearly visible to each other
Two Flagger Procedure

1. STOP traffic as previously described using the Stop/Slow Paddle.

2. If visibility can be increased by moving to the middle of the travel lane, the flagger may proceed toward middle of travel lane AFTER traffic has stopped – keep palm extended.

3. Signal partner to release traffic.
Two Flagger Procedure (cont’d)

4. Wait for *all clear* sign from partner and that traffic is stopped.

5. Return to shoulder, keep stop signal visible.

6. Release traffic by displaying SLOW sign and hand signals.
Special Flagging Situations

Four Special Scenarios:

1. Single Flagger Operations
2. Emergency Vehicles
3. Intersections
4. Nighttime Flagging
Single Flagger Procedure

- Stand on shoulder opposite work zone
- Stop traffic on the left, extend your right arm with the STOP sign facing the first vehicle
- Raise and expose the palm of your left hand
- Making sure the traffic on the left remains stopped
  - Rotate the paddle to display STOP to the traffic on the right
  - Keep your left hand in the Stop position for the traffic on the left
Single Flagger Procedure (continued)

- Switch the paddle to your left hand and extend your right palm to stop traffic on your right.

- When traffic on your right is stopped, switch the paddle back to your right hand and release traffic on your left with your left hand.

- When you need to stop a car on your left, turn the STOP sign to the car and put your left hand up in the STOP position.

- When traffic to the left has stopped, switch the paddle to your left hand and direct traffic on your right to proceed through the work zone.
Emergency Vehicles

- Priority vehicle cannot override flagger instructions

- Flaggers must work together to clear the way

- As soon as safely possible:
  - Stop traffic in both directions
  - Move emergency vehicle(s) through

- Communicate with all applicable motorists
Intersections

- Single flagger control means using the red flag
- Only use STOP/SLOW paddles at intersections where there is one flagger per approach
  (4 leg intersection = 4 flaggers)
- Traffic signals must be in flash mode
- Work with law enforcement if possible
Nighttime Flagging

- Same procedures as daytime
- ANSI Class 3 garments recommended
- Illuminated flagger station
- Optional additional equipment

(PennDOT employee required)
Module 6 - Review

Review
The Flagger Uses Three Methods to Give Directions

1. STOP/SLOW Paddle
2. Red Flag
3. Red Wand (Flashlight with Red Glow Cone - supplemental)

The Common Element is:

STOP – RELEASE – SLOW (SRS)
STOP Command

STOP/SLOW Paddle

Red Flag
RELEASE AND PROCEED Command

STOP/SLOW Paddle

Red Flag
ALERT/SLOW TRAFFIC Command

STOP/SLOW Paddle

Red Flag
Correct Position
Ineffective Flagging Procedures can be Dangerous!

PennDOT flag man hit by car, dies at construction zone in East Hanover Township, Lebanon County

A 80-year-old driver to be charged

PennDOT flag man hit by car, dies at construction zone in East Hanover Township, Lebanon County

PennDOT flagman killed in Western Pa. construction zone

A second worker, Jim Burrows was also struck by the vehicle. He was taken to Hamot Medical Center in Erie, where he was listed in stable condition.

Griffin is the 82nd PennDOT worker killed on the job since 1970 and the third this year.
What’s Wrong Here?
What’s Wrong Here?
What’s Wrong Here?
What’s Wrong Here? (Non-PennDOT Flagger)
What’s Wrong Here?
What’s Wrong Here?
Don’t Forget the Human Factor

- The average work zone situation takes five to seven seconds of decision and response time

- At travel speed of 45 mph (66 feet per second)
  - in 5 seconds, distance traveled is 330 feet
  - in 7 seconds, it is nearly 462 feet
For additional information or questions, contact your District Safety Coordinator