CHAPTER 6E. FLAGGER CONTROL

Section 6E.01 Qualifications for Flaggers

Standard:

01 **A flagger shall be a person who provides TTC.**

02 **The flagger shall be certified in accordance with the VDOT Flagger Certification Program, the American Traffic Safety Services Association Flagger Certification Program or any other VDOT approved flagger program. The flagger shall have his/her certification card with them at all times while performing flagging activities.**

03 **A flagger shall be recertified every two years if the flagger is certified by the VDOT Flagger Certification Program. Recertification is required every four years if the flagger is certified by the VDOT Basic or Intermediate Work Zone Traffic Control Training course, or by the ATSSA's classroom Flagger Certification Program.[1]**

04 **Flaggers shall be able to communicate to the traveling public in English while performing their job duty as a flagger at the flagger station.**

05 **Since a flagger can be held legally responsible for their actions, the flagger shall be a minimum of 18 years old.**

Guidance:

06 *Because flaggers are responsible for public safety and make the greatest number of contacts with the public of all highway workers, they should be trained in safe traffic control practices and public contact techniques. Flaggers should be able to satisfactorily demonstrate the following abilities:*

A. *Ability to receive and communicate specific instructions clearly, firmly, and courteously;*
B. *Ability to move and maneuver quickly in order to avoid danger from errant vehicles;*
C. *Ability to control signaling devices (such as paddles and flags) in order to provide clear and positive guidance to drivers approaching a TTC zone in frequently changing situations;*
D. *Ability to understand and apply safe traffic control practices, sometimes in stressful or emergency situations; and*
E. *Ability to recognize dangerous traffic situations and warn workers in sufficient time to avoid injury.*

07 *To assure that a fully alert flagger is present at the flagger station; flaggers should be relieved for a minimum period of fifteen minutes every two hours.*

Section 6E.02 High-Visibility Safety Apparel

Standard:

01 **The flagger shall remain fully clothed, from neck to feet, when flagging. This includes the wearing of shirts with sleeves (at least short sleeves in length), long pants, steel toe shoes and a hardhat.**

02 **Foot Protection shall comply with either: (1) ASTM F-2412-2005 (or more current ASTM), "Standard Test Methods for Foot Protection," and ASTM F-2413-2005 (or more current ASTM), "Standard Specification for Performance Requirements for Protective Footwear," or the previous standard (2) ANSI Z41-1999, "American National Standard for Personal Protection -- Protective Footwear." Head protection shall comply with ANSI Z89.1-1997 (or more current), "American National Standard for Industrial Head Protection."**

03 **Since[1] July 1, 2012, all workers, including emergency responders, media, towing and recovery personnel and others within the right-of-way who are either exposed to traffic or to work vehicles and construction equipment within the TTC zone shall wear high-visibility safety apparel that meets Performance Class 3 requirements of the ANSI/ISEA 107–2010 publication entitled "American National Standard for High-Visibility Safety Apparel and Headwear" (see Section 1A.11 of the Virginia Supplement to the 2009 MUTCD), or equivalent revisions, and labeled as meeting the ANSI 107-2010 standard performance for Class 3[1] risk exposure, except as provided in Paragraph 7. A person designated by the employer to be responsible for worker safety shall make the selection of the appropriate class of garment.**

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04 **Since[1] July 1, 2012, for nighttime activities (from 30 minutes before sunset until 30 minutes after sunrise), or other low light conditions such as inclement weather (fog, rain, sleet, snow, etc.) the flagger shall wear full length[1] Class E trousers or overalls[1] in addition to the standard Performance Class 3 risk requirements of the ANSI/ISEA 107–2010 publication. Shorts shall not be worn.[1]**

Support:[1]

05 Class E trousers are defined as full length waistband trousers or overalls that meet all minimum requirements of the ANSI/ISEA 107-2010 publication.[1]

Standard:

06 **The high-visibility safety apparel background (outer) material color shall be fluorescent orange-red, fluorescent yellow-green, or a combination of the two as defined in the ANSI standard. The retroreflective material shall be orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and shall be visible at a minimum distance of 1,000 feet. The retroreflective safety apparel shall be designed to clearly identify the wearer as a person. All apparel shall be securely fastened such as that the greater conspicuity provided by the fluorescent colors, retroreflectivity and pattern of the high-visibility apparel is visible for 360° around the wearer.[1]**

07 **When uniformed law enforcement officers, firefighters and other first responders[1] are used to direct traffic within a TTC zone, they shall wear high-visibility safety apparel as described in Section 6D.03(09)[1].**

Option:

08 In lieu of ANSI/ISEA 107-2010 apparel, law enforcement personnel, firefighters and other first responders directing traffic[1] within the TTC zone may wear high-visibility safety apparel that meets the performance requirements of the ANSI/ISEA 207-2011[1] publication entitled "American National Standard for High-Visibility Public Safety Vests" (see Section 1A.11 of the Virginia Supplement to the 2009 MUTCD) and labeled as ANSI 207-2011[1].

09 Headwear meeting ANSI 107/ISEA 107-2010 standards may be worn but is not required.[1]

Section 6E.03 Hand-Signaling Devices

Standard:

01 **The STOP/SLOW paddle shall be the primary and preferred hand-signaling device because the STOP/SLOW paddle gives road users more positive guidance than a red flag or a fluorescent orange/red flag.**

02 **The STOP/SLOW paddle shall have an octagonal shape on a rigid handle. STOP/SLOW paddles shall be at least 24 inches wide with letters at least 8 inches high. The STOP (R1-1) face shall have white letters and border on a red background. The SLOW (W20-8 (V)) face shall have black letters and a black border on a fluorescent orange background. Reflective sheeting shall be in compliance with Section 247 of the Road and Bridge Specifications.**

Guidance:

03 *The STOP/SLOW paddle should be fabricated from light semi-rigid material.*

Support:

04 The optimum method of displaying a STOP or SLOW message is to place the STOP/SLOW paddle on a rigid staff, with a minimum of 5 feet from the bottom of the sign paddle to the top of the roadway elevation, in order to display a STOP or SLOW message that is stable and high enough to be seen by approaching or stopped traffic.

Option:

05 The STOP/SLOW paddle may be modified to improve conspicuity by incorporating either white or red flashing lights on the STOP face, and either white or yellow flashing lights on the SLOW face. The flashing lights may be arranged in any of the following patterns:

A. Two white or red lights, one centered vertically above and one centered vertically below the STOP legend; and/or two white or yellow lights, one centered vertically above and one centered vertically below the SLOW legend;

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B. Two white or red lights, one centered horizontally on each side of the STOP legend; and/or two white or yellow lights, one centered horizontally on each side of the SLOW legend;

C. One white or red light centered below the STOP legend; and/or one white or yellow light centered below the SLOW legend;

D. A series of eight or more small white or red lights no larger than 1/4 inch in diameter along the outer edge of the paddle, arranged in an octagonal pattern at the eight corners of the border of the STOP face; and/or a series of eight or more small white or yellow lights no larger than 1/4 inch in diameter along the outer edge of the paddle, arranged in a diamond pattern along the border of the SLOW face; or

E. A series of white lights forming the shapes of the letters in the legend.

06 For surveying and other operations occurring on the shoulder or near the centerline of two-lane roadways, a combination STOP/SLOW paddle and SLOW/SLOW paddle utilizing a double sided SLOW flip panel may be used to prevent unnecessary stopping of vehicles by the flagger.

Standard:

07 **If flashing lights are used on the STOP face of the paddle, their colors shall be all white or all red. If flashing lights are used on the SLOW face of the paddle, their colors shall be all white or all yellow.**

08 **If more than eight flashing lights are used, the lights shall be arranged such that they clearly convey the octagonal shape of the STOP face of the paddle and/or the diamond shape of the SLOW face of the paddle.**

09 **If flashing lights are used on the STOP/SLOW paddle, the flash rate shall be at least 50, but not more than 60, flashes per minute.**

10 **Flags, when used, shall be red or fluorescent orange/red in color; shall be a minimum of 24 x 24[1] inches square; and shall be securely fastened to a staff that is 1 to 1¼ inches in diameter and[1] approximately 36 inches in length.**

11 **Use of flags shall be limited to emergency situations, traffic spotters and TTC spotters.**

12 **When used at nighttime, both sides of the flag[1] shall be retroreflectorized orange/red in color.[1]**

Guidance:

13 *The free edge of a flag should be weighted so the flag will hang vertically, even in heavy winds.*

Standard:

14 **When a flashlight is used at night it shall be equipped with a steady burn red glow cone or steady burn traffic baton/wand to supplement the STOP/SLOW paddle or flag. The flagger shall hold the flashlight in the left hand, shall hold the paddle or flag in the right hand as shown in Figure 6E-3, and shall use the flashlight in the following manner to control approaching road users:**

A. To inform road users to stop, the flagger shall hold the flashlight with the left arm extended and pointed down toward the ground, and then shall slowly wave the flashlight in front of the body in a slow arc from left to right such that the arc reaches no farther than 45 degrees from vertical.

B. To inform road users to proceed, the flagger shall point the flashlight at the vehicle's bumper, slowly aim the flashlight toward the open lane, then hold the flashlight in that position. The flagger shall not wave the flashlight.

C. To alert or slow traffic, the flagger shall point the flashlight toward oncoming traffic and quickly wave the flashlight in a figure eight motion.

Section 6E.04 Automated Flagger Assistance Devices

Support:

01 Automated Flagger Assistance Devices (AFADs) enable a flagger(s) to be positioned out of lane of traffic and are used to control road users through temporary traffic control zones. These devices are designed to be remotely operated either by a single flagger at one end of the TTC zone or at a central location, or by separate flaggers near each device's location.

02 There are two types of AFADs:

A. An AFAD (see Section 6E.05) that uses a remotely controlled STOP/SLOW sign on either a trailer or a movable cart system to alternately control right-of-way.

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B. An AFAD (see Section 6E.06) that uses remotely controlled red and yellow lenses and a gate arm to alternately control right-of-way.

03 AFADs might be appropriate for short-term and intermediate-term activities (see Section 6G.02). Typical applications include TTC activities such as, but not limited to:

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A. Bridge maintenance;
B. Haul road crossings;
C. Guardrail repair; and
D. Pavement patching.

Standard:

04 **AFADs shall only be used when all of the following conditions are met:**

A. On a two-lane, two-way roadway closed to one lane of traffic;
B. Where there is only one lane of approaching traffic in the direction to be controlled;
C. Average daily traffic (ADT) count is 12,000 vehicles per day or less or as directed by the Regional Traffic Engineer;
D. The operator must have an unobstructed view of the Automatic Flagger Assistance Device and approaching traffic in both directions and;
E. Approval required by the Regional Traffic Engineer for multiple operators and distances greater than 800 feet.

05 **When used at night, the AFAD location shall be illuminated in accordance with Section 6E.08.**

Guidance:

06 *AFADs should not be used for long-term stationary work (see Section 6G.02).*

Standard:

07 **Because AFADs are not traffic control signals, they shall not be used as a substitute for or a replacement for a continuously operating temporary traffic control signal as described in Section 6F.93.**

08 **Small, highly portable, movable cart AFAD systems that are position manually without the use of a vehicle are treated as a portable sign stand and shall meet the crashworthy performance criteria contained in Section 6F.01.**

Support:

09 A trailer-mounted, towable, AFAD is a NCHRP Report 350 Category IV device.

Guidance:

10 *If used, AFADs should be located in advance of one-lane, two-way tapers and downstream from the point where approaching traffic is to stop in response to the device.*

Standard:

11 **If used, AFADs shall be placed so that all of the signs and other items controlling traffic movement are readily visible to the driver of the initial approaching vehicle with advance warning signs alerting other approaching traffic to be prepared to stop.**

12 **If used, an AFAD shall be operated only by a certified flagger (see Section 6E.01) who has been trained on the operation of the AFAD. The flagger(s) operating the AFAD(s) shall not leave the AFAD(s) unattended at any time while the AFAD(s) is being used.**

13 **The use of AFADs shall conform to one of the following methods:**

A. An AFAD at each end of the TTC zone using Stop/Slow signs (Method 1).[1]
B. An AFAD at each end of the TTC zone using Red/Yellow Lens (Method 2).[1]

14 **Two AFADs shall be used to control one-lane, two-way traffic as illustrated in Figures 6E-1 and 6E-2.[1]**

15. **When one flagger is used to operate both AFADs, the flagger shall have an unobstructed view of the AFADs and approaching traffic in both directions.[1]**

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Guidance:

16 *When an AFAD is used, the advance warning signing should include a ROAD WORK AHEAD (W20-1) sign, a ONE LANE ROAD AHEAD (W20-4) sign, and a BE PREPARED TO STOP (W3-4) sign.*

17 *Advance warning signs spacing for the AFAD should be adjusted if traffic queues extend beyond the ONE LANE ROAD AHEAD sign.*

Standard:

18 **When the AFAD is not in use, the signs associated with the AFAD, both at the AFAD location and in advance, shall be removed or covered.**

Section 6E.05 STOP/SLOW Automated Flagger Assistance Devices

Standard:

01 **The STOP/SLOW Automated Flagger Assistance Device (AFAD) (see Section 6E.04) shall include a STOP/SLOW sign that alternately displays the STOP (R1-1) face and the SLOW (W20-8 (V)) face of a STOP/SLOW paddle (see Figure 6E-1).**

02 **The AFAD's STOP/SLOW sign shall have an octagonal shape, shall be fabricated of rigid material, and shall be mounted with the bottom of the sign a minimum of 6 feet above the pavement on an appropriate support. The size of the STOP/SLOW sign shall be at least 36 x 36 inches with letters at least 12 inches high. The background of the STOP face shall be red with white letters and border. The SLOW face shall be fluorescent orange, diamond shape, with black letters and border. The reflective sheeting for the STOP/SLOW sign shall be in compliance with Section 247 of the Road and Bridge Specifications.**

03 **The AFAD's STOP/SLOW sign shall have a means to positively lock, engage, or otherwise maintain the sign assembly in a stable condition when set in the STOP or SLOW position.**

04 **The AFAD's STOP/SLOW sign shall be supplemented with active conspicuity devices by incorporating either:**

A. White or red flashing lights within the STOP face and white or yellow flashing lights within the SLOW face meeting the provisions contained in Section 6E.03; or

B. A LED Stop Beacon (see Section 4L.05 of the 2009 MUTCD) mounted a maximum of 24 inches above the STOP face and a LED Warning Beacon (see Section 4L.03 of the 2009 MUTCD) mounted a maximum of 24 inches above, below, or to the side of the SLOW face. The Stop Beacon shall not be flashed or illuminated when the SLOW face is displayed, and the Warning Beacon shall not be flashed or illuminated when the STOP face is displayed. Except for the mounting locations, the beacons shall comply with the provisions of Chapter 4L of the 2009 MUTCD.

Option:

05 Type B warning light(s) (see Section 6F.91) may be used in lieu of the Warning Beacon during the display of the SLOW face of the AFAD's STOP/SLOW sign.

Standard:

06 **If Type B warning lights are used in lieu of a Warning Beacon, they shall flash continuously when the SLOW face is displayed and shall not be flashed or illuminated when the STOP face is displayed.**

Option:

07 The faces of the AFAD's STOP/SLOW sign may include louvers to improve the stability of the device in windy or other adverse environmental conditions.

Standard:

08 **If louvers are used, the louvers shall be designed such that the full sign face is visible to approaching traffic at a distance of 50 feet or greater.**

09 **The STOP/SLOW AFAD shall include a gate arm that descends to a down position across the approach lane of traffic when the STOP face is displayed and then ascends to an upright position when the SLOW face is displayed.**

Option:

10 In lieu of a stationary STOP/SLOW sign with a separate gate arm, the STOP/SLOW sign may be attached to a mast arm that physically blocks the approach lane of traffic when the STOP face is displayed and then moves to a position that does not block the approach lane when the SLOW face is displayed.

Standard:

11 **Gate arms shall be fully retroreflectorized on both sides, and shall have vertical alternating fluorescent white and fluorescent red prismatic lens, from left to right, stripes at 16-inch intervals measured horizontally as shown in 2009 MUTCD (see Figure 8C-1). The reflective sheeting shall be in compliance with Section 247 of the Road and Bridge Specifications. When the arm is in the down position blocking the approach lane:**

A. The minimum vertical aspect of the arm and sheeting shall be 4 inches;
B. The end of the arm shall reach at least to the center of the lane being controlled but shall not extend beyond the lane being controlled;
C. A minimum of 24 inches square red flag or a fluorescent orange/red flag shall be fastened to the end of the gate arm.

12 **A WAIT ON STOP (R1-7) sign and a GO ON SLOW (R1-8) sign (see Figure 6E-1) shall be displayed to road users approaching the AFAD. The signs shall be rectangular in shape and be at least 24 x 30 inches in size with letters at least 6 inches high. The background of the sign face shall be fluorescent white prismatic lens with black letters and border and its reflective sheeting shall be in compliance with Section 247 of the Road and Bridge Specifications**

13 **The signs shall be positioned on the same support structure as the AFAD or immediately adjacent to the AFAD such that they are in the same direct line of view of approaching traffic as the sign face of the AFAD.**

14 **To inform road users to stop, the AFAD shall display the STOP face and the red or white lights, if used, within the STOP face shall flash or the Stop Beacon shall flash. To inform road users to proceed, the AFAD shall display the SLOW face and the yellow or white lights, if used, within the SLOW face shall flash or the Warning Beacon or the Type B warning lights shall flash.**

15 **If STOP/SLOW AFADs are used to control traffic in a one-lane, two-way TTC zone, safeguards shall be incorporated to prevent the flagger(s) from simultaneously displaying the SLOW face at each end of the TTC zone. Additionally, the flagger(s) shall not display the AFAD's SLOW face until all oncoming vehicles have cleared the one-lane portion of the TTC zone.**

Section 6E.06 Red/Yellow Lens Automated Flagger Assistance Devices

Standard:

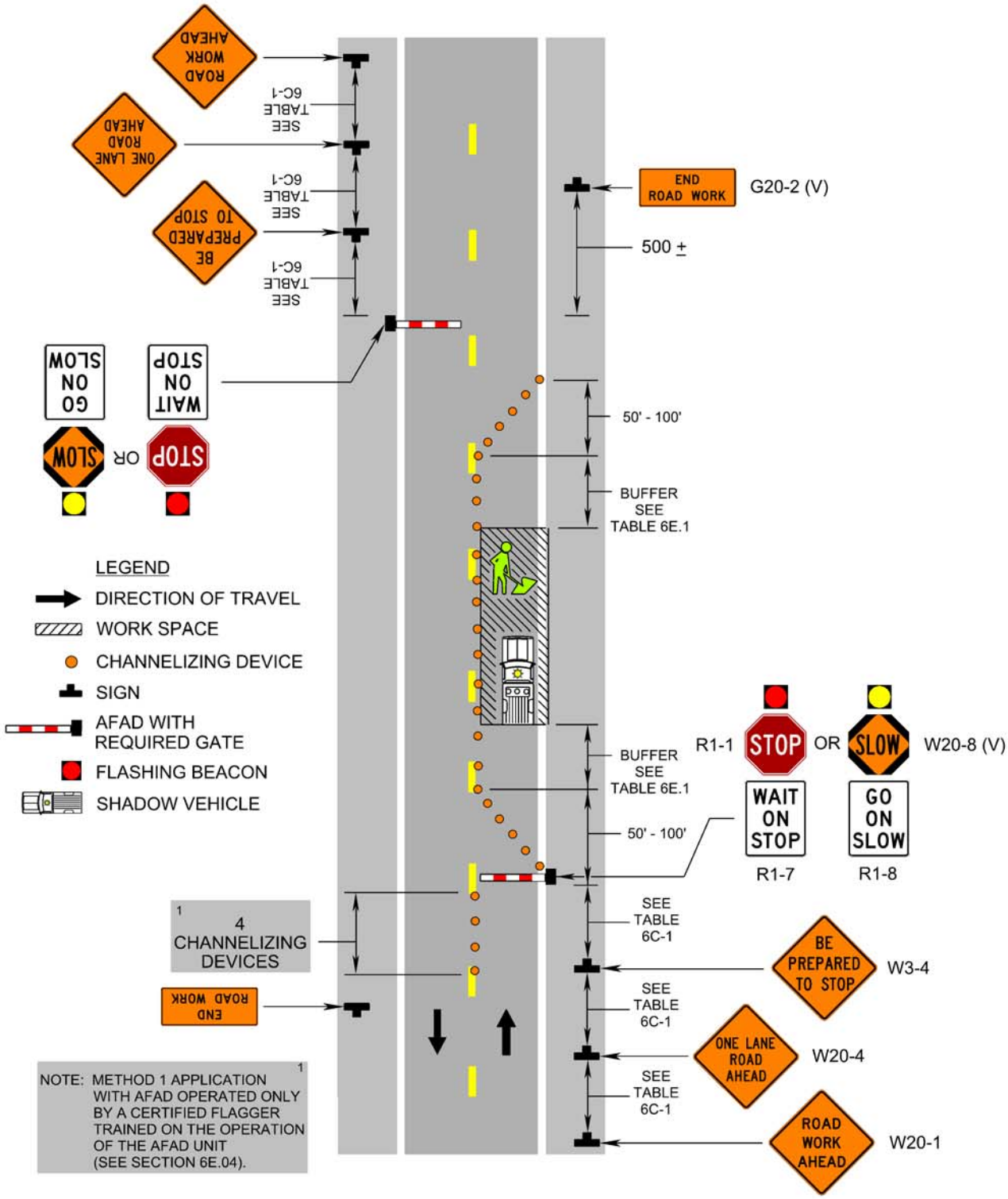
01 **A Red/Yellow Lens Automated Flagger Assistance Device (AFAD) (see Section 6E.04) shall alternately display a steadily illuminated CIRCULAR RED LED lens and a flashing CIRCULAR YELLOW LED lens to control traffic without the need for a flagger in the immediate vicinity of the AFAD or on the roadway (see Figure 6E-2).**

02 **Red/Yellow Lens AFAD shall have at least one set of CIRCULAR RED and CIRCULAR YELLOW lenses that are 12 inches in diameter. Unless otherwise provided in this Section, the lenses and arrangement, CIRCULAR RED on top and CIRCULAR YELLOW below, shall comply with the bottom of the housing (including brackets) shall be at least 7 feet above the pavement. If the set of lenses is located over any portion of the highway that can be used by motor vehicles, the bottom of the housing (including brackets) shall be at least 15 feet above the pavement.**

Option:

03 Additional sets of CIRCULAR RED and CIRCULAR YELLOW lenses, located over the roadway or on the left-hand side of the approach and operated in unison with the primary set, may be used to improve visibility and/or conspicuity of the AFAD.

Figure 6E-1, Example of the Use of a Stop/Slow Automated Flagger Assistance Device (AFAD)



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Standard:

04 **A Red/Yellow Lens AFAD shall include a gate arm that descends to a down position across the approach lane of traffic when the steady CIRCULAR RED lens is illuminated and then ascends to an upright position when the flashing CIRCULAR YELLOW lens is illuminated. The gate arm shall be fully retroreflectorized on both sides, and shall have vertical alternating red and white stripes at 16-inch intervals measured horizontally as shown in Figure 8C-1 of the 2009 MUTCD. When the arm is in the down position blocking the approach lane:**

A. The minimum vertical aspect of the arm and sheeting shall be 2 inches; and

B. The end of the arm shall reach at least to the center of the lane being controlled but shall not extend beyond the lane being controlled.

05 **A STOP HERE ON RED (R10-6 or R10-6a) sign (see Section 2B.53 of the Virginia Supplement to the 2009 MUTCD) shall be installed on the right-hand side of the approach at the point at which drivers are expected to stop when the steady CIRCULAR RED lens is illuminated (see Figure 6E-2). The sign shall be rectangular in shape and each shall be at least 24 x 30 inches in size with letters at least 6 inches high. The background of the sign face shall be fluorescent white prismatic lens with black letters and border and its reflective sheeting shall be in compliance with Section 247 of the Road and Bridge Specifications.**

06 **To inform road users to stop, the AFAD shall display a steadily illuminated CIRCULAR RED lens and the gate arm shall be in the down position. To inform road users to proceed, the AFAD shall display a flashing CIRCULAR YELLOW lens and the gate arm shall be in the upright position.**

07 **If Red/Yellow Lens AFADs are used to control traffic in a one-lane, two-way TTC zone, safeguards shall be incorporated to prevent the flagger(s) from actuating a simultaneous display of a flashing CIRCULAR YELLOW lens at each end of the TTC zone. Additionally, the flagger shall not actuate the AFAD's display of the flashing CIRCULAR YELLOW lens until all oncoming vehicles have cleared the one-lane portion of the TTC zone.**

08 **A change interval shall be provided as the transition between the display of the flashing CIRCULAR YELLOW indication and the display of the steady CIRCULAR RED indication. During the change interval, the CIRCULAR YELLOW lens shall be steadily illuminated. The gate arm shall remain in the upright position during the display of the steadily illuminated CIRCULAR YELLOW change interval.**

09 **A change interval shall not be provided between the display of the steady CIRCULAR RED indication and the display of the flashing CIRCULAR YELLOW indication.**

Guidance:

10 *The steady illuminated CIRCULAR YELLOW change interval should have a duration of at least 5 seconds, unless a different duration, within the range of durations recommended by Section 4D.26 of the 2009 MUTCD, is justified by engineering judgment.*

11 *The AFAD unit should notify the flagger of any unit failure.*

Section 6E.07 Flagger Procedures

Support:

01 The use of paddles and flags by flaggers is illustrated in Figure 6E-3.

Standard:

02 **Flaggers shall use a STOP/SLOW paddle, a flag, or an Automated Flagger Assistance Device (AFAD) to control road users approaching a TTC zone. The use of hand movements alone without a paddle, flag, or AFAD to control road users shall be prohibited except for law enforcement personnel or emergency responders at incident scenes as described in Section 6I.01.**

Figure 6E-2, Example of the Red/Yellow Lens Automated Flagger Assistance Device (AFAD)

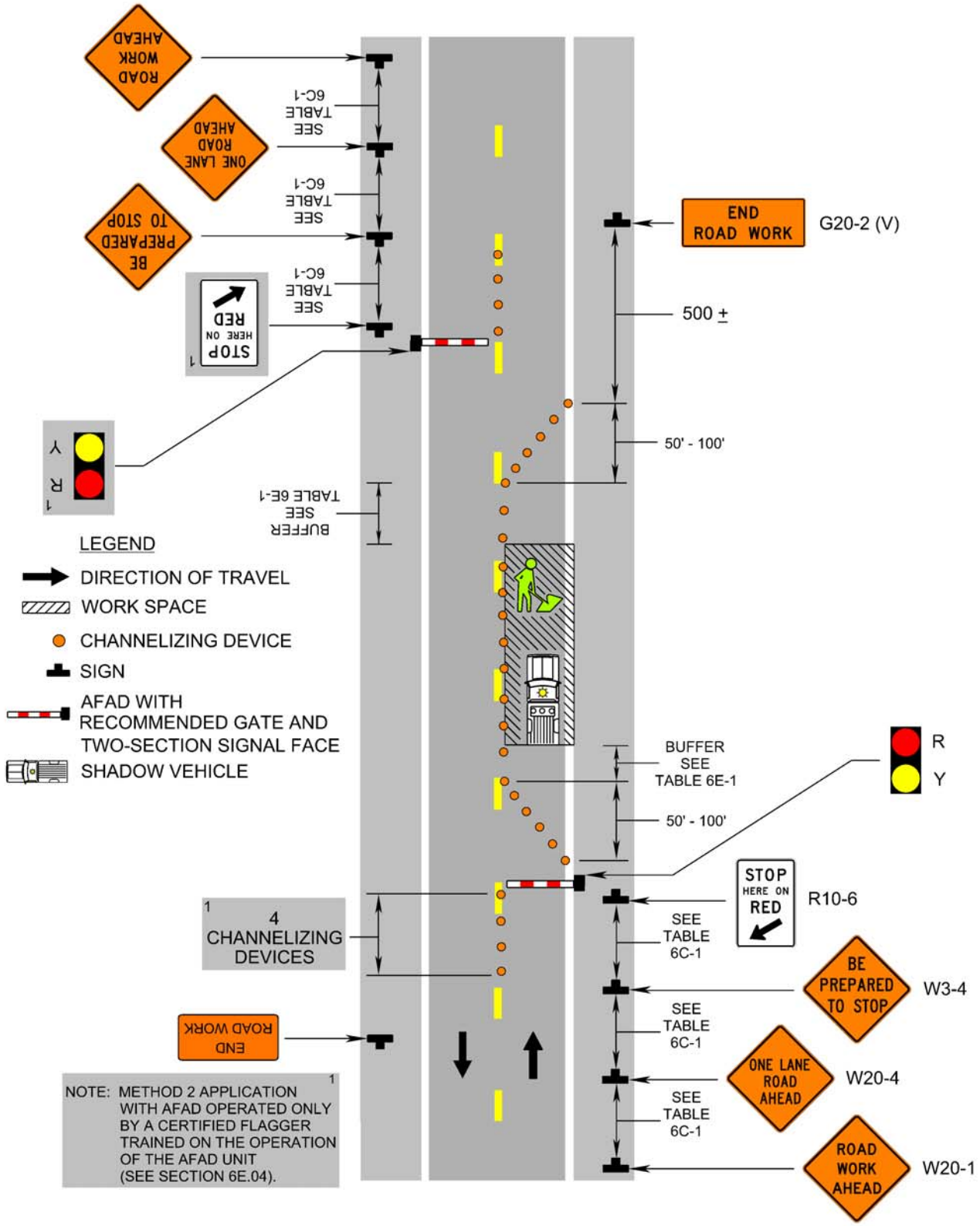

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Figure 6E-3, Use of Hand Held Signal Devices

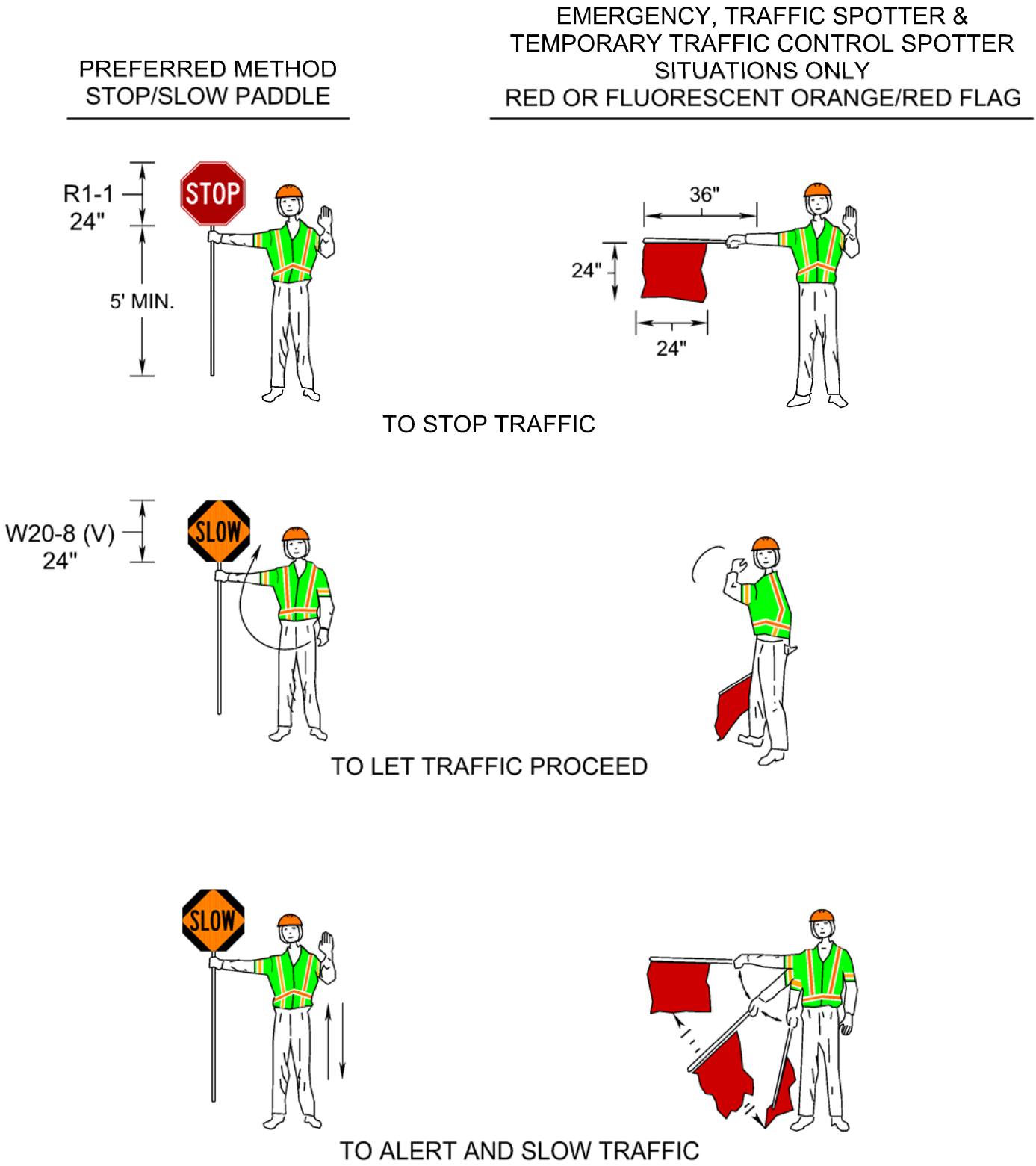


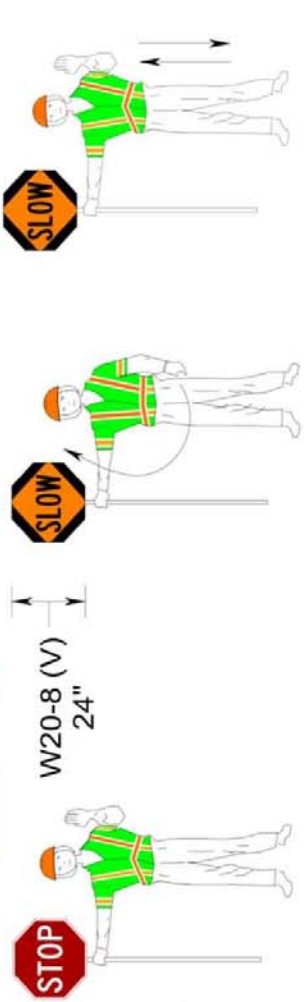
Figure 6E-4, Flagger Requirements (Sheet 1 of 2)

Virginia Department of Transportation

Flagging Requirements

Paddle

(Primary Devices)



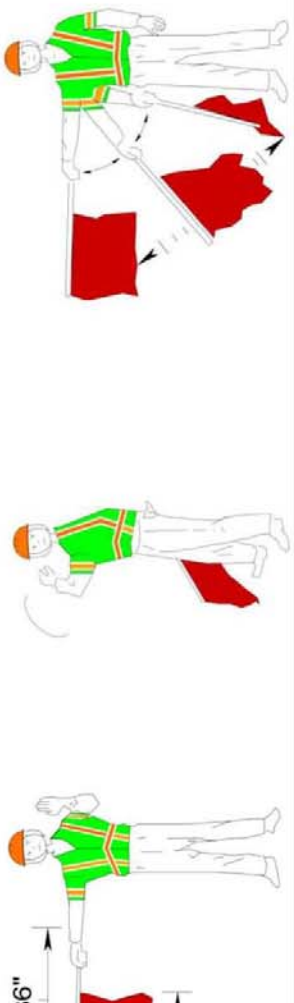
To Stop Traffic

Traffic Proceed

To Alert and To Slow Traffic

Flag

(Emergencies, Traffic Spotters and TTC Spotters)



Safeguard Traffic

1. A sufficient number of competent, certified, courteous, neat and fully dressed flaggers shall be provided and available at all times when required.
2. The flagger is responsible for safeguarding his fellow workers on the job, warning motorist of dangers ahead, and guiding them safely through a work area.
3. Flaggers shall be available to stop traffic, advise the motorist of any delay, and to keep vehicles in the proper lanes along the work area.
4. Flaggers shall communicate in English specific instructions clearly, firmly and courteously while flagging.
5. Flagger shall be at least 18 years old.

Flaggers shall perform their duties in the following manner:

1. Ensure all signs are installed prior to performing flagging operations.
2. Be alert and attentive at all times.
3. The flagger shall stand alone, never permitting a group of workers to congregate around the flagger station or allow work vehicles near the flagger station.
4. Always stand while waiting for traffic.
5. Have an avenue of escape if approached by an errant vehicle.
6. Use proper hand signals with the STOP/SLOW paddle.
7. Make eye contact with motorists.
8. Do not leave your post until you are properly relieved.
9. Coordinate with other flaggers.
10. Have your certification card in your possession while performing flagging duties.

Proper Dressed

1. Hard hat.
2. Retroreflective highly-visibility safety apparel meeting ANSI/ISEA 107-2010 Class 3 risk exposure for daytime and nighttime ANSI/ISEA 107-2010 Class 3 risk exposure shall include Type E trousers.
3. Protective footwear must comply with ANSI Z41-1999, ASTM F-2412-2005, ASTM F-2413-2005 (or more current ASTM).
4. Shirt with sleeves and long pants. (Removal of shirt is prohibited).
5. Headphones are prohibited.

Note - Nighttime hours are defined as starting 30 minutes before sunset to 30 minutes after sunrise.

Flagging Devices

Sign Paddle

1. The sign paddle shall be octagon shaped, at least 24" wide with 8" series C" letters. The SLOW face shall be fluorescent orange prismatic lens sheeting. The STOP face shall be red encapsulated lens sheeting.
2. When flashing white lights are used on the STOP/SLOW paddle, the standard size of the paddle may be reduced to 18" wide with 6" series "C" letters.
3. Sign paddle shall be legible and clean.
4. 5' minimum height from the bottom of the sign paddle to the roadway.

Flag

1. Flag use shall be limited to emergency situations or by a traffic spotter.
2. The flag shall be red, not less than 24 inches square on a staff at least 36" long, made of a good grade red material and should be weighted at the bottom with adequate weight to hang vertically in heavy winds.
3. The flag shall be retroreflective red when used at night.

Figure 6E-4, Flagger Requirements (Sheet 2 of 2)

Virginia Department of Transportation

Methods of Flagging Traffic

Where to stand

1. Flagging stations shall be preceded by proper advance warning signs. Signs shall be removed when the flagger is no longer at their station. At night, flagging stations shall be illuminated with a minimum of horizontal luminance of 5-foot candles (50 lux).
2. Stand where you can see and be seen by approaching traffic. Clear sight distance from the graphic flagger sign to the flagger station should be 350' to 500' where the posted speed limit is 45 m.p.h. or 500' to 800' where the posted speed limit is greater than 45 m.p.h. (Less spacing may be necessary in areas where conditions warrant).
3. Stand facing traffic either on the edge of the shoulder of the road or near the edge of pavement.
4. Flagger stations should be located such that an errant vehicle has additional space to stop without entering the work area. The distance from the flagger station to the work area should be as shown in the table below plus the 50 to 100 foot one-lane, two-way taper length: 1

Posted Speed	≤ 20	25	30	35	40	45	50	55	60
Distance (Feet)	115 - 120	155 - 165	200 - 210	250 - 260	305 - 320	360 - 380	425 - 445	500 - 520	570 - 600

How to stop traffic

1. Stand on the shoulder of the roadway facing traffic.
2. (a) With a Paddle - Hold the STOP sign paddle in a stationary position. Look directly at the approaching traffic. Raise your free hand with palm exposed to approaching driver and make eye contact with the driver.
   (b) With a Flag - Hold the staff in a horizontal position and extend it toward the travel lane being careful not to encroach the travel lane. Look direcely at the approaching traffic. Raise your free hand with palm exposed to approaching driver and make eye contact with the driver.
3. If time permits, drivers may be informed concerning the reason for the delay. Speaking in English be courteous and brief. For example, "Patching a hole, please drive on the left."

How to release traffic

1. Before releasing traffic the flagger will return to the normal flagging location. Keep your paddle on STOP or flag extended until you are safely on the shoulder of the roadway.
2. (a) With a Paddle--Stand facing traffic. Hold the SLOW sign paddle in a stationary position with the paddle facing the road user. With your free arm signal the drivers to proceed into the open lane.
   (b) With a Flag--Stand parallel to roadway facing the road users. drop the flag to your side and with you free hand motion traffic to proceed to the open lane.
   (c) Where traffic is stopped temporarily in one lane, release traffic by turning the paddle a quarter turn so that the word "STOP" faces you and is parallel to the roadway. With your free arm signal the drivers to proceed into the open lane.

How to alert and slow traffic but not stop it

1. Stand facing traffic.
2. (a) With a Paddle - Hold the SLOW sign paddle in a stationary position with the arm extended horizontally away from the body. For added emphasis, the flagger may raise and lower the free hand with the palm down.
   (b) With a Flag - Stand parallel to traffic movement. The flagger should raise the flag from the ground to the shoulder and slowly motion up and down with the free palm down.

Never wave a paddle or flag

1. Signals must be clear and direct.
2. Use hand signals with devices. Don't make drivers guess what they should do.
3. Never wave a paddle or flag to stop traffic or for it to proceed.

03 **The following methods of signaling with STOP/SLOW paddles shall be used:**

A. To stop road users, the flagger shall face road users and aim the STOP paddle face toward road users in a stationary position with the arm extended horizontally away from the body. The free arm shall be held with the palm of the hand above shoulder level toward approaching traffic.

B. To direct stopped road users to proceed, the flagger shall face road users with the SLOW paddle face aimed toward road users in a stationary position with the arm extended horizontally away from the body. The flagger shall motion with the free hand for road users to proceed.

C. To alert or slow traffic, the flagger shall face road users with the SLOW paddle face aimed toward road users in a stationary position with the arm extended horizontally away from the body.

Option:

04 To further alert or slow traffic, the flagger holding the SLOW paddle face toward road users may motion up and down with the free hand, palm down.

Standard:

05 **The following methods of signaling with a flag shall be used:**

A. To stop road users, the flagger shall face road users and extend the flag staff horizontally across the road users' lane in a stationary position so that the full area of the flag is visibly hanging below the staff. The free arm shall be held with the palm of the hand above shoulder level toward approaching traffic.

B. To direct stopped road users to proceed, the flagger shall face road users with the flag and arm lowered from the view of the road users, and shall motion with the free hand for road users to proceed. Flags shall not be used to signal road users to proceed.

C. To alert or slow traffic, the flagger shall face road users and slowly wave the flag in a sweeping motion of the extended arm from shoulder level to straight down without raising the arm above a horizontal position. The flagger shall keep the free hand down.

Guidance:

06 *The flagger should stand either on the shoulder adjacent to the road user being controlled or in the closed lane prior to stopping road users. A flagger should only stand in the lane being used by moving road users after road users have stopped.*

Standard:

07 **Flaggers shall be positioned so they are clearly visible to the first approaching road user at all times and also be visible to other road users. Flaggers shall be stationed sufficiently in advance of the workers to warn them of an errant vehicle.**

08 **The flagger shall stand alone, away from other workers, work vehicles, or equipment.**

Option:

09 At spot lane closures where adequate sight distance is available for the reasonably safe handling of traffic, the use of one flagger may be sufficient. *Guidance*:

10 *When a single flagger is used, the flagger should be stationed on the shoulder opposite the spot lane closure work space, or in a position where good visibility and traffic control can be maintained at all times.*

Standard:

11 **Only uniformed law enforcement officers are allowed to direct traffic through an operating traffic signal (see Section 46.2-834 of Highway Laws of Virginia). Flaggers do not have the authority and shall not direct vehicles through an operating traffic signal at an intersection.**

12 **A flagger shall control only one lane of traffic approaching an intersection as shown in Figure TTC-30.0.**

Support:

13 Flaggers may use whistles, air horns, or other audible devices to alert and warn workers of the approach of a vehicle which failed to stop at the flagger station when instructed to do so.

Section 6E.08 Flagger Stations

Standard:

01 **Except in emergency situations, flagger stations shall be preceded by an advance warning sign or signs. The Flagger (W20-1) symbol[1] sign shall be removed or covered [1] from road users when the flagger operation is suspended.**

02 **Except in emergency situations, flagger stations shall be illuminated at night by an overhead or ground-mounted light source with a minimum of horizontal luminance of 5-foot candles (50 lux). The light source shall be mounted ensuring that it does not prohibit the escape route of the flagger or the light's glare does not prohibit the sight of the traveling public or the flagger.**

03 **The intensity of the light source for the flagger station in foot-candle shall be available in written documentation.**

Support:

04 Foot-candle measures the intensity of a light source, while lux measures luminance. Luminance is the amount of light falling on an area or the flagger station. The reference to horizontal luminance means the area of the flagger station is covered at minimum rate of 50 lux over the entire area and not just in spots. To obtain horizontal luminance, the light source is higher than the flagger station and points down on the flagger. The lighting source must not interfere with the flagger or motorist line of sight.

05 1 foot-candle equals 10.8 lux, so a 5 foot-candle light source will produce more than 50 lux (5 x 10.8 = 54 lux).

Standard:

06 **The requirement for flagger station illumination shall not be considered to be satisfied by street or highway lights or vehicle headlights.**

07 **Flagger stations shall be located such that approaching road users will have sufficient distance to stop at an intended stopping point.**

08 **Additional flagger stations shall be located on intersecting roadways within the work zone such that approaching road users will have sufficient distance to stop and be controlled by the flagger.**

Guidance:

09 *The distances shown in Table 6E-1, which provides information regarding the stopping sight distance as a function of speed, should be used for the location of a flagger station measured from the beginning of the work area. The distances in Table 6E-1 should also be used to provide a clear line of sight to traffic approaching the flagger station. Generally speaking, motorists should be able to see the flagger at the flagger station when they reach the position of the graphic flagger symbol sign. These distances should be increased for downgrades and other geometric conditions that affect stopping distance.*

10 *Flagger stations should be located such that an errant vehicle has additional space to stop without entering the work space. The flagger should identify an escape route that can be used to avoid being struck by an errant vehicle.*

11 *A supplemental flagger should be considered in advance of the primary flagger(s) when geometric conditions prevent adequate sight distance to the primary flagger.*

Option:

12 Where inadequate shoulders exist, the supplemental flagger may be replaced with a 48" x 48" SLOW (W21-V10) sign.

Section 6E.09 Traffic Spotter

Support:

01 A traffic spotter is a certified flagger whose primary function is to alert and assist motorists through temporary traffic control zones on low volume (under 500 VPD), low speed subdivision streets.

Standard:

02 **Qualifications, clothing requirements, and hand signaling procedures for traffic spotters shall be the same as for flaggers. The hand signaling devices for traffic spotter shall be a red flag or a fluorescent orange/red flag a minimum of 24 inches square fastened to a staff that is approximately 36 inches in length.**

1: Revision 1 – 4/1/2015

Table 6E-1, Length of the Longitudinal Buffer Space[1]

Posted Speed Limit (mph)	Distance (Feet)
≤ 20	115 – 120
25	155 – 165[1]
30	200 – 210
35	250 – 260
40	305 – 325[1]
45	360 – 380
50	425 – 445
55	500 – 530[1]
60	570 – 600[1]
65	645 – 675
70	730 – 760

Guidance:

03 *The location of the traffic spotter should be where he is visible and capable of directing traffic from both directions.*

Standard:

04 **The ROAD WORK AHEAD (W20-1) sign shall be the minimum sign requirement for traffic spotters.**

Option:

05 Additional signing and other traffic control devices may be required depending on the type and visibility of the operation.

Section 6E.10 Temporary Traffic Control Spotter

Support:

01 A temporary traffic control (TTC) spotter is a certified flagger whose primary function is to monitor traffic conditions and warn co-workers who are performing tasks such as installing or removing temporary traffic control devices, traffic counters and removing debris from the roadway of oncoming traffic.

Standard:

02 **Qualifications, clothing requirements, and hand signaling procedures for TTC spotters shall be the same as for flaggers. The hand signaling device for a TTC spotter shall be a red flag or a fluorescent orange/red flag a minimum of 24 inches square fastened to a staff that is approximately 36 inches in length.**

03 **The location of the TTC spotter shall be highly visible to oncoming traffic and the TTC spotter shall stop traffic if necessary when co-workers are installing or removing devices.**

Option:

04 TTC spotters may be used for other work operations such as conducting inventory reviews, measuring guardrail, reviewing damaged guardrail, and measuring lane width.

1: Revision 1 – 4/1/2015

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