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Typical Traffic Control  
Shoulder Operation with Minor Encroachment  
(Figure TTC-5.2)

## NOTES

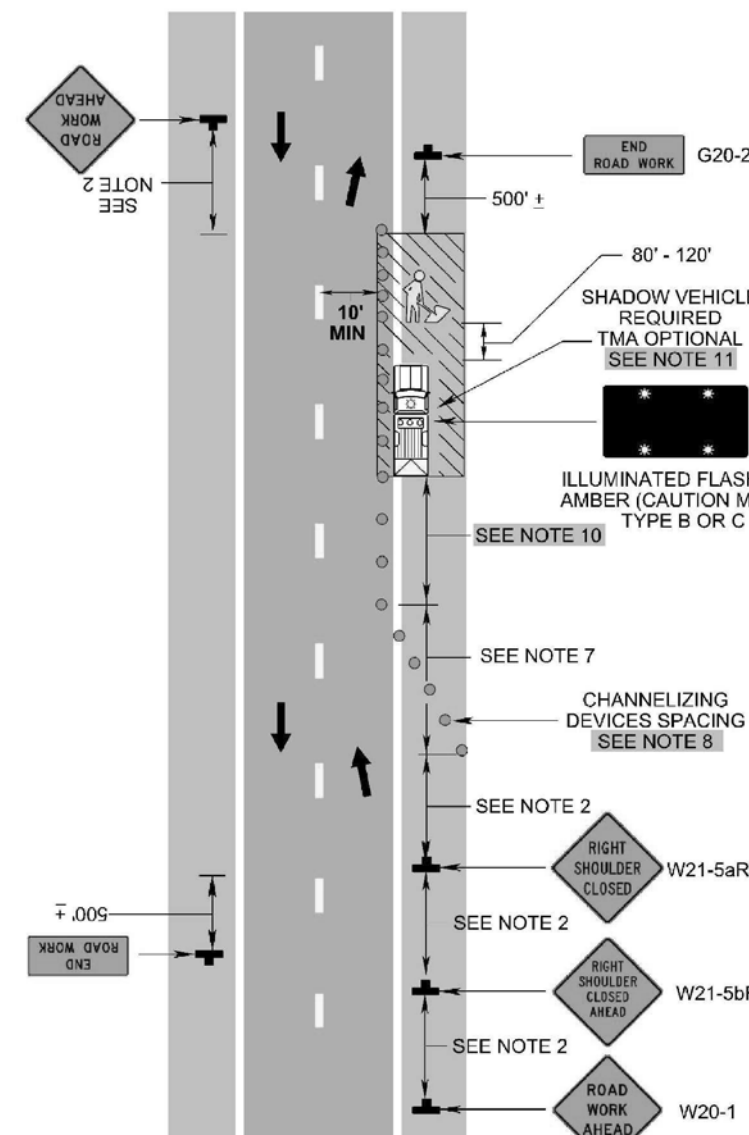
1. For required sign assemblies for multi-lane roadways see Note 1, TTC-4.1
- Guidance:
- Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.
  - When work takes up part of a lane on a high volume roadway: vehicular traffic volumes, vehicle mix, speed and capacity should be analyzed to determine whether the affected lane should be closed. Unless the lane encroachment analysis permits a remaining lane width of 10 feet, the lane should be closed. If the closure operation is on a Limited Access highway, the minimum lane width is 11 feet.
- Option:
- The ROAD WORK AHEAD (W20-1) sign on an intersecting roadway may be omitted where drivers emerging from that roadway will encounter another advance warning sign prior to this activity area.
- Standard:
- A shadow vehicle with either an arrow board operating in the caution mode, or at least one high-intensity amber rotating, flashing, or oscillating light shall be parked 80' - 120' in advance of the first work crew.
  - Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, or oscillating lights.
  - Taper length (L) and channelizing device spacing shall be at the following:
- | Taper Length (L)  |     |     |     |     | Channelizing Device Spacing |     |     |     |     |
|-------------------|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|
| Speed Limit (mph) | 9   | 10  | 11  | 12  | Speed Limit (mph)           | 9   | 10  | 11  | 12  |
| 25                | 95  | 105 | 115 | 125 | L+SW                        | 50  | 450 | 500 | 550 |
| 30                | 135 | 150 | 165 | 180 | L+SW                        | 65  | 495 | 550 | 600 |
| 35                | 185 | 205 | 225 | 245 | L+SW                        | 80  | 540 | 600 | 660 |
| 40                | 240 | 270 | 300 | 330 | L+SW                        | 95  | 585 | 650 | 715 |
| 45                | 405 | 450 | 495 | 540 | L+SW                        | 110 | 630 | 700 | 770 |
- Remarks: Limited Access highways shall use a 100' merging taper regardless of the posted speed, a 750' shifting taper for posted speeds < 45 mph and a 1000' shifting taper for posted speeds ≥ 45 mph.
- Shoulder Taper = 5% Minimum

8. Channelizing device spacing shall be at the following:
- | Channelizing Device Spacing |                   |                     |                   |
|-----------------------------|-------------------|---------------------|-------------------|
| Location                    | Speed Limit (mph) | Location            | Speed Limit (mph) |
| Transition                  | 20' - 40'         | Traveled Way        | 40' - 80'         |
| Construction Access         | 0.25' - 0.50'     | Construction Access | 80' - 120'        |
9. On roadways with paved shoulders having a width of 8 feet or more, channelizing devices shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the traveled way.
10. The buffer space length The buffer space length shall be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.
11. A truck-mounted attenuator (TMA) shall be used on Limited Access highways and multi-lane roadways with posted speed limit equal to or greater than 45 mph.
12. When a side road intersects the highway within the temporary traffic control zone, additional traffic control devices shall be placed as needed.

1: Revision 1 - 4/1/2015  
2: Revision 2 - 9/1/2019

1: Revision 1 - 4/1/2015  
2: Revision 2 - 9/1/2019

Shoulder Operation with Minor Encroachment  
(Figure TTC-5.2)



Typical Traffic Control  
Lane Closure on a Two-Lane Roadway Using Flaggers  
(Figure TTC-23.2)

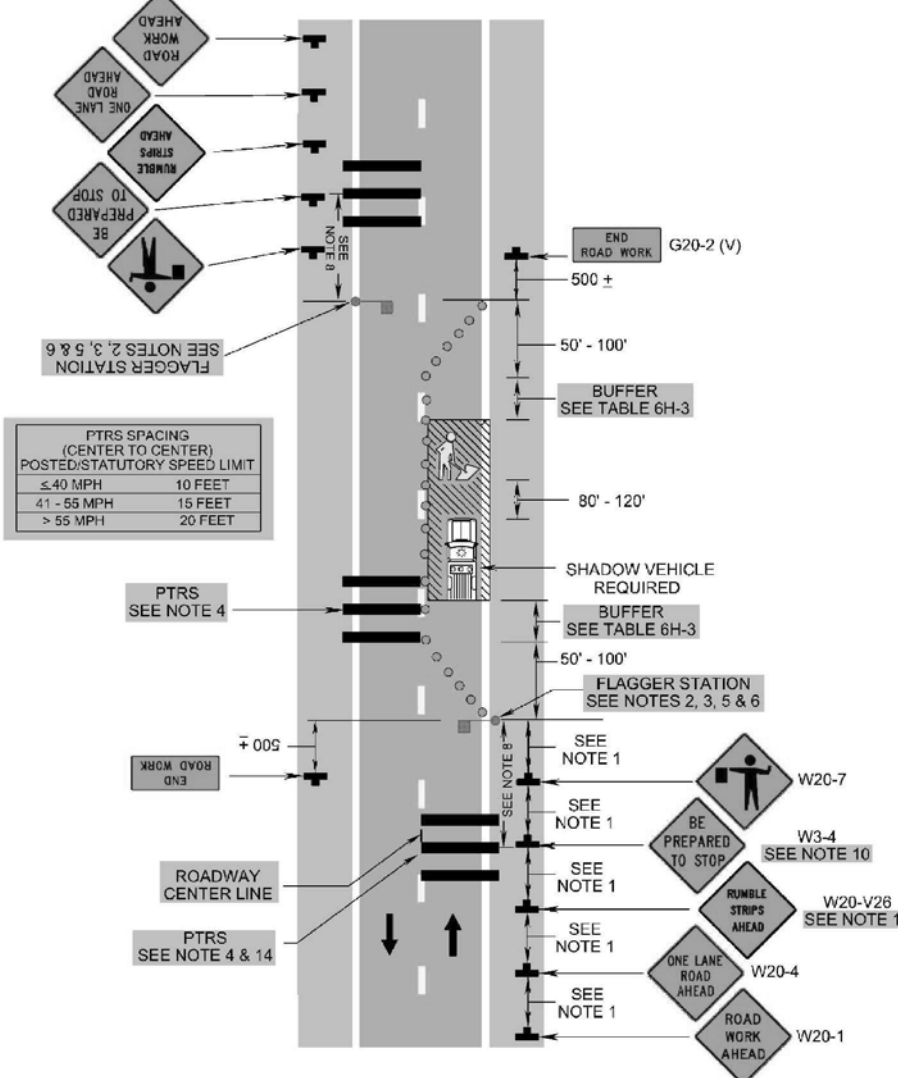
## NOTES

- Guidance:
- Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.
  - Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the flagger station and transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-5. Generally speaking, motorists should have a clear line of sight from the graphic flagger symbol sign to the flagger.
  - To maintain efficient traffic flow in a flagging operation on a two-lane roadway, the maximum time motorists should be stopped at a flagger station is 8 minutes for high volume roadways (average daily traffic of 500 or more vehicles per day) to a maximum of 12 minutes for low volume roadways (less than 500 vehicles per day). For additional information see Section 6E-9.7.
- Standard:
- Portable Temporary Rumble Strips (PTRS) shall be used as noted in Section 6E-9.9.2
  - Flagging stations shall be located far enough in advance of the work space to permit approaching traffic to reduce speed and/or stop before passing the work space and allow sufficient distance for departing traffic in the left lane to return to the right lane before reaching opposing traffic (see Table 6H-3 on Page 6H-5).
  - All flaggers shall be state certified and have their certification card in their possession when performing flagging duties (see Section 6E-9.1, Qualifications for Flaggers).
  - Cone spacing shall be based on the posted speed and the values in Table 6H-4 on Page 6H-6.
  - A shadow vehicle with at least one high intensity amber rotating, flashing, or oscillating light shall be parked 80'-120' in advance of the first work crew.
- Option:
- A SLOW (W21-10) sign may be required in this area to give advance warning of the operation ahead by slowing approaching traffic prior to reaching the flagger station or queued traffic.
- Guidance:
- If the queue of traffic reaches the BE PREPARED TO STOP (W3-4) sign then the signs, and if used the PTRS should be readjusted at greater distances.
  - When a highway-rail crossing exists within or upstream of the transition area and it is anticipated that queues resulting from the lane closure might extend through the highway-rail grade crossing, the temporary traffic control zone should be extended so that the transition area precedes the highway-rail crossing (see Figure TTC-56 for additional information on highway-rail crossings).
- Standard:
- At night, flagger stations shall be illuminated, except in emergencies (see Section 6E-9.8).
- Option:
- Cones may be eliminated when using a pilot vehicle operation or when the total roadway width is 20 feet or less.
  - For low-volume situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger, positioned to be visible to road users approaching from both directions, may be used (see Chapter 6A).
- Standard:
- When used, three portable temporary rumble (PTRS) strips shall be installed across the entire travel lane adjacent to the BE PREPARED TO STOP (W3-4) sign. The portable temporary rumble strips shall be monitored and adjusted as necessary during the work shift to ensure proper placement on the roadway. When the PTRS are installed, the RUMBLE STRIPS AHEAD (W20-230) sign shall also be utilized.

1: Revision 1 - 4/1/2015  
2: Revision 2 - 9/1/2019

1: Revision 1 - 4/1/2015  
2: Revision 2 - 9/1/2019

Lane Closure on a Two-Lane Roadway Using Flaggers  
(Figure TTC-23.2)



## GENERAL NOTES:

- PROJECT CATEGORY: CATEGORY "A" PROJECT (MINIMAL LEVEL OF CONSTRUCTION)
  - THIS PROJECT WILL BE PERMITTED WORK
  - THIS PROJECT WILL INVOLVE TRAFFIC CONTROL DEVICES AND/OR LANE CLOSURES TO ENSURE SAFE TRAVEL AROUND THE WORK ZONES.
- TEMPORARY TRAFFIC CONTROL PLAN:
  - THE MAJOR COMPONENTS WILL CONSIST OF GENERAL NOTES, TYPICAL SECTIONS, AND SPECIAL DETAILS AS NECESSARY.
  - TRAFFIC CONTROL DEVICES SHALL BE USED AS SHOWN ON THIS PLAN.
  - ALL SIGNS, STRIPING, AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH VIRGINIA'S WORK AREA PROTECTION MANUAL AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES STANDARDS.
- PUBLIC COMMUNICATION PLAN:
  - SALEM TRAFFIC OPERATIONS CENTER - (540) 375-0170. THE TOC SHOULD BE NOTIFIED OF PROPOSED LANE CLOSURES AT THE BEGINNING AND END OF EACH WORK DAY.
  - COUNTY OF ROANOKE
    - ROANOKE COUNTY POLICE: (540) 777-8601
    - ROANOKE COUNTY FIRE AND RESCUE: (540) 777-8701
    - ROANOKE COUNTY COMMUNICATION CENTER: (540) 562-3265
    - ROANOKE COUNTY SCHOOLS: (540) 562-3900
    - ROANOKE COUNTY BOARD OF SUPERVISORS ADMINISTRATOR OFFICE: (540) 772-2003
  - VIRGINIA STATE POLICE (DIVISION SIX HEADQUARTERS): (540) 375-9500

## MAINTENANCE OF TRAFFIC NOTES:

- GENERAL SEQUENCE OF CONSTRUCTION NOTES ARE PROVIDED FOR MAINTENANCE OF TRAFFIC AND NOT TO DETAIL EVERY TASK THAT MUST BE PERFORMED FOR THE CONSTRUCTION OF THE PROJECT.
- CONTRACTOR MAY ELECT TO ALTER THE SEQUENCE OF CONSTRUCTION. HOWEVER, THE CONTRACTOR MUST FOLLOW THE VIRGINIA WORK AREA PROTECTION MANUAL AND OBTAIN APPROVAL FROM VDOT.
- CONTRACTOR SHALL CAREFULLY EVALUATE THE SEQUENCE OF CONSTRUCTION PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES IN THE VDOT RIGHT OF WAY.
- CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING INGRESS/EGRESS TO ALL DRIVES, AS WELL AS MAINTAINING EXISTING DRAINAGE PATTERNS DURING CONSTRUCTION.
- ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE PROVIDED, INSTALLED, MAINTAINED, AND REMOVED BY THE CONTRACTOR. TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE PLACED IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL AND THE MUTCD.
- ALL SIGNS, INCLUDING BUT NOT NECESSARILY LIMITED TO "ROAD WORK AHEAD", "RIGHT LANE CLOSED AHEAD", "LANE ENDS MERGE LEFT," AND "END OF WORK", SHALL BE PLACED PER THE VIRGINIA WORK AREA PROTECTION MANUAL, MUTCD, AND VDOT & COUNTY POLICY AND SPECIFICATIONS.
- WORK ZONE SIGNS PLACED FOR LONGER THAN 72 CONSECUTIVE HOURS SHOULD BE PLACED ON PERMANENT POSTS PER THE VIRGINIA WORK AREA PROTECTION MANUAL.
- WHEN WORK IS NOT BEING PERFORMED, THE CLEAR ZONE OF THE ROADWAY SHALL BE FREE OF STORED MATERIALS AND PARKED EQUIPMENT.

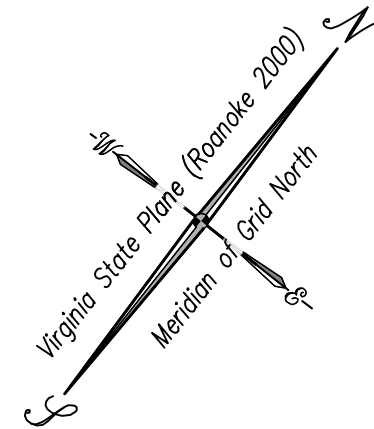
## SEQUENCE OF CONSTRUCTION:

- CONTRACTOR TO NOTIFY VDOT SALEM AREA LAND USE SECTION WHEN WORK IN/ALONG ROADWAY A MINIMUM OF 72 HOURS IN ADVANCE OF PROPOSED WORK.
- PRIOR TO UTILITY WORK ALONG FALLOWATER LANE, INSTALL PROPER NOTIFICATIONS FOR VEHICLES TRAVELING WITHIN THE EXISTING ROADWAY INCLUDING SIGNS INDICATING "ROAD WORK AHEAD" AND "END OF WORK".
- AS CONDITIONS DICTATE, INSTALL TEMPORARY TRAFFIC CONTROL AS SHOWN PER TTC 5.2 OF THE VIRGINIA WORK AREA PROTECTION MANUAL (WAPM) AND ADJUST AS NEEDED ACCORDING TO REQUIRED UTILITY EXTENSIONS.

REFER TO 2019 REVISION TO THE VIRGINIA WORK AREA PROTECTION MANUAL FOR APPLICABLE TEMPORARY TRAFFIC CONTROL DETAILS.

POTENTIAL TRAFFIC CONTROL METHODS AND APPLICATIONS ARE PROVIDED ON THIS SHEET AS A REFERENCE.

ASPHALT PARKING AREA



NOTE:

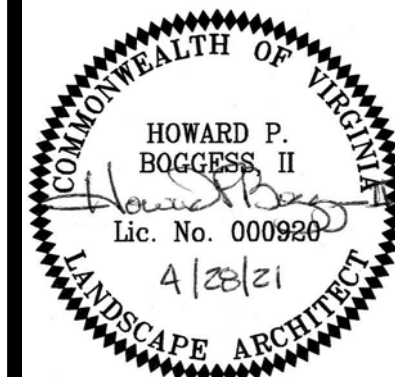
THIS MAINTENANCE OF TRAFFIC PLAN IS INTENDED TO PROVIDE A BASIC OVERVIEW OF THE TYPES OF TRAFFIC CONTROL MEASURES NECESSARY FOR THE MAJOR WORK ZONES ON THIS PROJECT. THIS PLAN IS NOT INTENDED TO SHOW EVERY FEATURE OF THE TRAFFIC CONTROL PLAN. THE G.C. SHALL PROVIDE VDOT WITH A COMPLETE MAINTENANCE OF TRAFFIC PLAN PRIOR TO COMMENCEMENT OF WORK WITHIN THE EXISTING RIGHT-OF-WAY AND THE G.C. SHALL ULTIMATELY BE RESPONSIBLE FOR ENSURING SAFE TRAVEL AROUND ALL WORK AREAS.

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# MAINTENANCE OF TRAFFIC PLAN

## FALLOWATER SQUARE OFFICE BUILDING

PREPARED FOR

ABRE Holdings, Inc.  
SITUATED ALONG FALLOWATER LANE, SW  
ROANOKE COUNTY, VIRGINIA

REVISIONS		DESCRIPTION					
NO.	DATE						
1							
2							
3							
4							
5							

DATE:	April 28, 2021
SCALE:	1" = 20'
COMMISSION NO:	20-339
SHEET 11 OF 13	

APPROVED, 4/13/2022