

**MCPB** 

Item No. 4

Date: 02/20/2020

#### Review of Bill 38-19: Streets and Roads – Permit to Obstruct Public Rights-of-Way – Amendments

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SUMMARY Completed: 02/13/2020

Staff strongly supports Bill 38-19, as it will improve pedestrian safety and comfort countywide. The bill updates requirements for issuing permits to obstruct public rights-of-way, updates the conditions under which rights-of-way can be obstructed, and establishes criteria for providing alternative pathways. In this report, staff offers several suggestions for ways to further strengthen the impact of this bill.

#### **RECOMMENDATION**

Develop and transmit comments regarding Bill 38-19: "Streets and Roads - Permit to Obstruct Public Rights-of-Way – Amendments" to County Council's Transportation, Infrastructure, Energy and Environment (T&E) Committee.

#### **BACKGROUND**

Vision Zero is a proven approach to preventing roadway-related deaths and severe injuries. It represents a fundamental change in how we plan and design our roads, shifting from a focus on maximizing motor vehicle efficiency to ensuring that our roads are safe regardless of whether travel is by car, bus, bicycle or foot. Vision Zero recognizes that people will sometimes make mistakes and that our roads should be designed to ensure those inevitable mistakes do not result in severe injuries or fatalities.

Through its 2016 County Council resolution, Montgomery County committed to eliminating traffic fatalities and severe injuries. In 2017, the County Executive released an initial two-year action plan of activities to advance the County toward Vision Zero and substantial progress has been made toward most of these items. The County will be developing a ten-year action plan to eliminate traffic fatalities and severe injuries by 2030 over the next year.

The Planning Department's ongoing Pedestrian Master Plan is an effort to improve the pedestrian environment across the entire county, providing residents and visitors opportunities to safely and comfortably enjoy their communities on foot for years to come.

One of the levers these twin efforts can use to improve the safety and comfort of pedestrians is to change policy and regulations to take a more pedestrian-friendly approach.

Bill 38-19: "Streets and Roads - Permit to Obstruct Public Rights-of-Way – Amendments" (Bill 38-19), was introduced by Councilmember Andrew Friedson on December 3, 2019 with co-sponsors Councilmembers Glass, Jawando, Riemer, Albornoz, Hucker, Rice and Katz.

A public hearing was held for this bill on January 14, 2020. A work session of the T&E Committee is scheduled for March 12, 2020.

The draft legislation amends Section 49-11 of the County Code. It aims to "alter and clarify the circumstances in which the Department of Permitting Services (DPS) may issue a permit to temporarily close a public sidewalk or walkway in connection with repair work or construction."

Bill 38-19 would improve pedestrian safety by:

- 1) Requiring the Executive to adopt updated permit regulations for closing curb lanes, sidewalks, or shared use paths in the public right-of-way,
- 2) Limiting the circumstances where the aforementioned closures can occur, and
- 3) Requiring the Director of Permitting Services to publish information about those permits that close public rights-of-way.

Under Bill 38-19, permits to temporarily close walkways in the public right-of-way can only be allowed if the permit conditions:

- Minimize public inconvenience;
- Limit how long walkways are closed to the minimum time period necessary; and
- Assure public safety in the work area.

If a temporary closure extends beyond 6 months for a project repairing/replacing a walkway or 15 days for all other closures, the permittee must provide a "safe alternative path" on the same side of the street as the closure.

If enacted in its current form, Bill 38-19 would amend Section 49-11 in the following ways:

- 1) Make the existing requirements to provide safe alternative pathways on the same side of the street as temporary sidewalk closures applicable to the entire county. Currently, they apply only to limited areas Metro Station Policy Areas, Town Center Policy Areas, other specific areas designated in Council resolutions, within 20 feet of a bus stop of mass transit station entrance, or on roads that are major or arterial highways, 4 lanes or more, or business district streets.
- 2) Provide increased transparency for those temporary public right-of-way closures by publishing certain permit information on the DPS website.

This legislation only affects county roads.

#### **STAFF COMMENTS**

Staff strongly supports Bill 38-19, as it will improve pedestrian safety and comfort countywide. Construction zones are locations of tremendous uncertainty and potential danger for pedestrians. Maintaining logical, direct pedestrian access, while separating it from construction activities, is of the utmost importance.

Staff recommends the following comments be transmitted to strengthen this important legislation:

1) Maintain the scope of this legislation at the countywide level.

The major change this draft legislation proposes is expanding the requirement for same-side, safe alternative pathways from certain limited locations in the County to all County roads. It is important this legislation pertains to all County roads, as it is currently written, because someone walking in Long Branch or Olney or Montgomery Village should be no less safe or more inconvenienced than someone walking in Silver Spring or Bethesda.

# 2) Clarify that "minimize inconvenience to the public" refers to pedestrians and other vulnerable right-of-way users.

As written, Line 55 of the draft legislation stipulates that a permit for temporary closure must have conditions necessary to "minimize inconvenience to the public." "The public" should be defined for purposes of this legislation as pedestrians, bicyclists, and transit users. This legislation should be as explicit as possible that limiting the inconvenience of these vulnerable groups is more important than limiting that of those driving motor vehicles. Decisions about allocating limited right-of-way, even temporarily, should reflect this hierarchy. In practice, when choosing between converting a travel lane to a temporary sidewalk and requiring pedestrians to cross the street to detour around a closure, the travel lane should be converted.

### 3) Include safe alternate pathways for bicyclists when all bikeway types in the public right-ofway are closed temporarily.

In addition to providing a safe alternative path around temporary closures for pedestrians, in line with the County's Vision Zero policy, bicyclists should also be accommodated. While the legislation does address shared use paths, there are other types of bikeways that are not covered. If a bikeway in the public right-of-way is temporarily closed, a safe alternative that meets or improves upon the comfort of the existing bikeway should be provided. When a bikeway is closed, the available routes should not be a circuitous detour or sharing the road with motor vehicle traffic. Washington, D.C. has adopted a safe accommodations policy (Attachment B) that considers both pedestrians and bicyclists, and their approach is a national model for how vulnerable road users can be accommodated and prioritized through construction zones.

# 4) Reduce the length of time sidewalks and paths can be closed without a safe alternative pathway on the same side of the street.

Left unchanged by this draft legislation are the length of temporary public right-of-way closures that trigger a safe alternative pathway on the same side of the street as the closure. In the existing code, walkway repair and reconstruction projects can close walkways for six months before a safe alternative pathway on the same side of the street must be provided. For all other projects, a walkway can be closed 15 days before a safe alternative pathway must be provided. Without a safe alternative pathway, pedestrians must detour around the closure by crossing the street multiple times, increasing their trip distance and the opportunities for conflict with motor vehicles. The 6-month and 15-day time limits for temporary closures without a safe alternative pathway on the same side of the street should be lowered significantly. Alexandria requires a safe alternative pathway on the same side of the street if the temporary closure extends to seven days or more (Attachment C). Washington, DC requires a safe alternative pathway for temporary closures of any duration and specifically stipulates that detouring pedestrians to the opposite side of the street is "a last resort... in the absence of all other practicable routing

options." If there is an emergency project that requires a temporary closure without a safe alternative pathway on the same side of the street, that is understandable. However, for preplanned temporary closures, it is not equitable or in the spirit of Vision Zero for pedestrians to increase their exposure to motor vehicles and travel out of their way for six months or two weeks respectively.

5) Provide audio messaging devices in addition to signage to ensure that pedestrians with low or no vision can navigate along pedestrian pathways with temporary closures.

Bill 38-19 maintains the Section 49-11 language stipulating that a temporary traffic control plan must meet standards established by the Executive, to include specifically that a professional engineer must certify that the plan minimizes public inconvenience, provides necessary warnings, and includes safe and reasonable pedestrian alternatives in accordance with accepted engineering standards. Additionally, the plan and closure permit must require signage during construction to share how long the closure will take place, the permit number, and a County contact phone number. Throughout Montgomery County, people with low or no vision use walkways to transact daily business. They may be unable to see signage notifying them of a sidewalk closure, and they should not have to rely on the kindness of other pedestrians in their vicinity to help them get around. To engage with these low/no-vision pedestrians, in addition to signage, audio messaging devices providing the same information should be located at the approaches of sidewalk closures. Current MCDOT Temporary Traffic Control Plan Guidelines (Attachment D) do not require any audible notice. This inclusive approach is encouraged in Washington, D.C., preferred in the Virginia DOT Work Zone Bicycle Pedestrian Guidance (Attachment E) and is discussed in the US Access Board's Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG).

6) Provide audio messaging devices to ensure that pedestrians with low or no vision are informed when transit stops are closed temporarily.

In addition to providing information about temporarily closed sidewalks to those with low or no vision, audio messaging devices should be used to share information about transit stops that may be closed temporarily and the closest location for pedestrians to access the transit routes that serve the closed stop.

7) Clarify how safe alternative pathways are to be provided for temporary sidewalk closures that affect intersections.

In situations where a temporary closure requires removing access to a pedestrian curb ramp or the entire corner of an intersection, the legislation should require temporary traffic control to be installed, including curb ramps, crosswalk markings, and vehicular stop bars. It is not reasonable for pedestrians to have to backtrack down an entire block to cross the street because an intersection is closed.

#### **ATTACHMENTS**

Attachment B – Washington, D.C. Safe Accommodations for Pedestrians and Bicyclists <a href="http://dcrules.elaws.us/dcmr/24-3315">http://dcrules.elaws.us/dcmr/24-3315</a>

Attachment C – Alexandria, VA Memorandum to Industry

https://www.alexandriava.gov/uploadedFiles/tes/info/2018.04.03 Open%20Sidewalks%20Memo%20to %20Industry%20FINAL.pdf

Attachment D – MCDOT TTCP Guidelines & Requirements

https://www.montgomerycountymd.gov/DOT-

<u>Traffic/Resources/Files/PDF/TCPstandards/TTCP%20guidelines%20%26%20requirements.pdf</u>

Attachment E – VDOT Work Zone Bicycle Pedestrian Guidance

http://www.virginiadot.org/business/resources/wztc/2016 WZ Ped BikeGuide.pdf

# **Attachment A**



**Committee:** Transportation & Environment

Committee Review: At a future date

**Staff:** Christine M.H. Wellons, Legislative Attorney **Purpose:** To receive testimony – no vote expected

**Keywords:** #RightOfWayPermit

AGENDA ITEM #11 January 14, 2020 **Public Hearing** 

#### **SUBJECT**

Bill 38-19, Streets and Roads - Permit to Obstruct Public Rights-of-Way - Amendments

Lead Sponsor: Councilmember Friedson

Co-Sponsors: Councilmembers Glass, Jawando, Riemer, Albornoz, Council Vice-President Hucker,

Councilmember Rice and Council President Katz

#### **EXPECTED ATTENDEES**

Department of Permitting Services Members of the Public

#### **COUNCIL DECISION POINTS & COMMITTEE RECOMMENDATION**

N/A; Receive public testimony.

### **DESCRIPTION/ISSUE**

Bill 38-19 would: (1) require the Executive to adopt certain regulations regarding permits to close curb lanes, sidewalks, or shared use paths in the public rights-of-way; (2) limit the circumstances in which the Department of Permitting Services may grant or extend a permit to close a curb lane, sidewalk, or shared use path; and (3) require the Director of Permitting Services to publish certain information regarding permits to close curb lanes, sidewalks, or shared use paths.

#### SUMMARY OF KEY DISCUSSION POINTS

N/A; Receive public testimony.

#### This report contains:

Staff Report Bill 38-19 Legislative Request Report Pages 1-2

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#### MEMORANDUM

January 9, 2020

TO:

County Council

FROM:

Christine M.H. Wellons, Legislative Attorney

SUBJECT:

Bill 38-19, Streets and Roads - Permit to Obstruct Public Rights-of-Way -

Amendments<sup>1</sup>

PURPOSE:

Public Hearing – no Council votes required

Bill 38-19, Streets and Roads – Permit to Obstruct Public Rights-of-Way - Amendments, sponsored by Lead Sponsor Councilmember Friedson and Co-Sponsors Councilmembers Glass, Jawando, Riemer, Albornoz, Council Vice-President Hucker, Councilmember Rice and Council President Katz, was introduced on December 3, 2019. A Transportation and Environment Committee worksession is tentatively scheduled for March 12, 2020.

Bill 38-19 would alter and clarify the circumstances in which the Department of Permitting Services (DPS) may issue a permit to temporarily close a public sidewalk or walkway in connection with repair work or construction.

#### BACKGROUND

The purposes of this bill are to increase pedestrian safety, and to assure that public sidewalks and walkways may be closed only for the minimum time periods necessary, with minimum disruption and inconvenience to the public. In particular, the bill would:

- (1) require the Executive to adopt certain regulations regarding permits to close curb lanes, sidewalks, or shared use paths in the public rights-of-way:
- (2) limit the circumstances in which the Department of Permitting Services may grant a permit to close a curb lane, sidewalk, or shared use path in the public right-of-way; and
- (3) require the Director of Permitting Services to publish certain information regarding permits to close public-rights of way.

<sup>1 #</sup>RightOfWayPermit

#### BILL DESCRIPTION

Under Bill 38-19, a temporary closure of a sidewalk or walkway in the right-of-way would be permitted only if several specific conditions are met, including but not limited to conditions necessary to:

- minimize inconvenience to the public;
- limit the duration of the closure to the minimum time period necessary; and
- assure public safety in the work area.

If a temporary closure would last beyond certain time periods (6 months in the case of sidewalk reconstruction, or 15 days in the case of all other closures), then the bill would require the permittee to provide a safe alternative pathway for pedestrians on the same side of the street as the closure. Extensions of these time periods would be allowed only in limited circumstances that are prescribed through Executive regulations.

The bill would require increased transparency by requiring the Director of Permitting Services to publish on the Department's website a copy of each application received, and each permit granted, to close sidewalks and walkways in the public right-of-way.

This packet contains:	Circle #
Bill 38-19	1
Legislative Request Report	8

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RIII NO	38-19	<del>)</del>	
Concerning:	Streets an	d Roads – Po	ermit
to Obst	truct Public	Rights-of-W	aγ -
<u>Amendr</u>	<u>nents</u>		
Revised:1	11/19/2019	Draft No.	4
introduced:	December	er 3, 2019	
Expires:	June 3, 2	2021	
Enacted:			
Executive: _			
Effective:			
Sunset Date	: None		
Ch, L	aws of Mont	t. Co.	

# **COUNTY COUNCIL** FOR MONTGOMERY COUNTY, MARYLAND

Lead Sponsor: Councilmember Friedson

Co-Sponsors: Councilmembers Glass, Jawando, Riemer, Albornoz, Council Vice-President Hucker, Councilmember Rice and Council President Katz

#### AN ACT to:

- (1) require the Executive to adopt certain regulations regarding permits to close curb lanes, sidewalks, or shared use paths in the public rights-of-way;
- (2) limit the circumstances in which the Department of Permitting Services may grant a permit to close a curb lane, sidewalk, or shared use path in a public right-of-way;
- (3) require the Director of Permitting Services to publish certain information regarding permits to close public rights-of-way; and
- (4) generally amend the law regarding permits to obstruct public rights-of-way.

#### By amending

Montgomery County Code Chapter 49, Streets and Roads Section 49-11

**Boldface** Heading or defined term. Underlining [Single boldface brackets] Double underlining [[Double boldface brackets]]

Added to existing law by original bill. Deleted from existing law by original bill. Added by amendment.

Deleted from existing law or the bill by amendment.

Existing law unaffected by bill.

The County Council for Montgomery County, Maryland approves the following Act:

1	Sec. 1. Sec	ction 49	-11 is amended as follows:
2	49-11. Permit to	obstru	ct public rights-of-way.
3	(a) <u>Def</u>	<u>ìnitions.</u>	In this section, the following terms have the meanings
4	<u>indi</u>	cated.	
5	<u>(1)</u>	<u>Temp</u>	orary closure. Temporary closure means a temporary
6		<u>obstru</u>	action, blockage, or occupation of a right-of-way to:
7		<u>(A)</u>	reconstruct or repair a sidewalk, shared use path, driveway,
8			curb, or other structure;
9		<u>(B)</u>	install, repair, locate, or replace underground utilities or
10			infrastructure under a sidewalk or shared use path;
11		<u>(C)</u>	construct or reconstruct an abutting structure; or
12		<u>(D)</u>	otherwise install a temporary, removable obstruction or
13			occupation of the right-of-way.
14	<u>(2)</u>	<u>Safe</u> <u>a</u>	alternative path. Safe alternative path means an alternate
15		<u>walk</u> w	vay or shared use path that:
16		<u>(A)</u>	is on the same side of the street as a temporary closure; and
17		<u>(B)</u>	provides safe access and passage to pedestrians.
18	[(a)] <u>(b)</u>	[Unles	s this Section prohibits the issuance of a permit]
19	Notw	<u>ithstanc</u>	ling Section 49-10, the Director of Permitting Services may
20	issue	a permi	t to:
21	(1)	[recon	struct or repair a sidewalk, shared use path, driveway, curb,
22	•	or othe	er structure;
23	(2)	install,	repair, locate, or replace underground utilities or
24		infrasti	ructure under a sidewalk or shared use path; or
25	(3)	install	a temporary, removable obstruction or occupation of a right-
26		of-way	· • • • • • • • • • • • • • • • • • • •

27	(4) close a curb lane, sidewalk, or shared use path in conjunction with
28	the construction or reconstruction of an abutting structure] create a
29	temporary closure that complies with subsection (c); or
30	[(5)] (2) install permanent, nonstandard structures in the right-of-
31	way that were approved by the Planning Board, the City of

(5) (2) install permanent, nonstandard structures in the right-of-way that were approved by the Planning Board, the City of Rockville, or the City of Gaithersburg in a site plan as a site element of streetscape. Streetscape includes street furnishings, fixtures and elements in connection with public use of the right-of-way but does not include enclosed structures or vaults or improvements for private use. The permit applicant must execute a declaration of covenants that runs with the land on which the project associated with the streetscape is being developed to perpetually maintain the permitted streetscape in a good and safe condition; return the right-of way to its condition before the permitted streetscape was installed if the nonstandard permitted streetscape is removed; and indemnify the County from any cost or liability associated with the construction, maintenance, use or removal of the nonstandard permitted streetscape.

[(b)] (c) Permits for temporary obstructions. The Director [must not] may issue a permit for [reconstruction or repair of a sidewalk or shared use path for more than 6 months, or to close a curb lane, sidewalk, or shared use path for work on an abutting structure, utilities, or infrastructure for more than 15 days, unless a safe alternate walkway or shared use path is provided on the same side of the street] a temporary closure under subsection (b)(1) only if:



52	(1)	[in a	Metro Station Policy Area, Town Center Policy Area, or other
53		area	expressly identified in a Council resolution] the permit has
54		cond	itions necessary to:
55		<u>(A)</u>	minimize inconvenience to the public;
56		<u>(B)</u>	limit the duration of the closure to the minimum time period
57			necessary; and
58		<u>(C)</u>	assure public safety in the work area;
59	(2)	[with	in 20 feet of a bus stop or mass transit station entrance; or]
60		the D	irector of Transportation approves a temporary traffic control
61		<u>plan ı</u>	under subsection (g);
62	(3)	[on a	road:
63		(A)	designated as a major or arterial highway;
64		(B)	of 4 lanes or more; or
65		(C)	designated as a business district street.] the area subject to
66		the ter	mporary closure is not used for vehicle parking or storage
67		of cor	astruction materials;
68	<u>(4)</u>	the pe	rmittee has any franchise required under Section 49-20; and
69	<u>(5)</u>	the du	ration of the permit complies with subsection (d).
70	[The	Directo	or may allow a covered walkway to serve as an alternate
71	walk	way.]	
72	[(c)] <u>(d)</u>	[The I	Director may issue a permit to rebuild or repair a sidewalk or
73	share	d use pa	ath for more than 6 months, or to close a curb lane, sidewalk,
74	or sl	nared u	ise path for work on abutting structures, utilities, or
75	infras	structure	e for more than 15 days, without requiring that a safe
76	altern	ate side	walk or shared use path be provided on the same side of the

77		stre	et,] <u>Tin</u>	<u>ne limits for temporary closures without safe alternative paths</u>
78		Exc	ept as	provided in subsections (e) and (f):
79		<u>(1)</u>	a te	mporary closure to reconstruct or repair a sidewalk or shared
80			use	path must not exceed 6 months without the provision of a safe
81			<u>alter</u>	rnative path; and
82		<u>(2)</u>	<u>any</u>	other temporary closure must not exceed 15 days without the
83			prov	vision of a safe alternative path.
84	<u>(e)</u>	<u>Exte</u>	nsions	- in general. The Director may extend a time period under
85		<u>subs</u>	<u>ection</u>	(d), for a time period designated by the Director, if the Director
86		finds	that:	
87		(1)	<u>(A)</u>	based on a certification submitted by a professional
88				engineer, construction of [such a sidewalk or shared use] a
89				safe alternative path is not possible; or
90			[(2)]	(B) the street is closed[.]; and
91		<u>(2)</u>	the e	extension meets minimum requirements established under
92			Meth	nod (2) regulations, including requirements that the permit
93			must	• <u>•</u>
94			<u>(A)</u>	limit the temporary closure to the minimum time necessary;
95			<u>(B)</u>	be subject to regular review by the Director to determine
96				whether the temporary closure without a safe alternative
97				path remains necessary; and
98			<u>(C)</u>	if the Director determines that the temporary closure
99				without a safe alternative path is no longer necessary,
100				require the permittee immediately to:
101				(i) provide a safe alternative path; or
102				(ii) terminate the temporary closure.
				(- 5 <del>-</del> )

103	[(d)]	<u>(f)</u>	<u>Short extensions for hardship.</u>
104		<u>(1)</u>	The Director may grant one extension of a time period under
105			subsection (d), for no more than 15 days, [of a permit to close a
106			roadway lane, sidewalk, or shared use path for work on abutting
107			structures, utilities, or infrastructure without requiring that a safe
108			alternate walkway or shared use path be provided on the same side
109			of the street] on a showing of extreme hardship.
110		<u>(2)</u>	The Executive must adopt regulations under Method (2) to specify
111			the standards a permittee must meet to demonstrate extreme
112			hardship.
113	[(e)	The 1	Director must not issue or extend in duration or area any permit to
114		close	a sidewalk or shared use path to use the area for vehicle parking or
115		stora	ge of construction materials.
116	(f)	The	Director must include conditions in each permit to assure public
117		safety	y in the work area.]
118	(g)	[Befo	ore the Director issues a permit under this Section to close a
119		sidew	valk, curb lane, or shared use path, the Director of Transportation
120		must	approve a] Temporary traffic control plan. A temporary traffic
121		contr	ol plan under subsection (c) must meet standards established by the
122		Execu	utive under Method (2) regulations, including that[.]:
123		(1)	[A] a professional engineer must certify for the applicant that the
124			plan minimizes inconvenience to the public, provides necessary
125			warnings, and includes safe and reasonable pedestrian alternatives
126		-	in accordance with accepted engineering standards[.]; and
127		(2)	[The] the permit and the traffic control plan must require signage
128			during construction to inform pedestrians about the duration of the

129		obstruction, the permit number, and the County contact telephone
130		number to call.
131	(h)	[A permittee must have a valid franchise, as defined in Section 49-20,
132		before the permittee installs, repairs, or maintains any utility or
133		infrastructure in the public right-of- way.] Public access to permit
134		information. The Director must publish on the Department's website a
135		copy of each application received and permit granted under this section.

### LEGISLATIVE REQUEST REPORT

Bill 38-19

Streets and Roads - Permit to Obstruct Public Rights-of-Way - Amendments

**DESCRIPTION:** 

Permit to Obstruct Public Rights-of-Way - Amendments

PROBLEM:

Assure pedestrian safety; minimize inconvenience to the public related to sidewalk closures; increase transparency about permits to

close sidewalks.

GOALS AND OBJECTIVES:

Bill 38-19 would require the Executive to adopt certain regulations regarding permits to close curb lanes, sidewalks or shared use paths in the public rights-of-way; limit the circumstances in which the Department of Permitting Services may grant a permit to close a curb lane, sidewalk or shared use path in the public rights-of-way; and require the Director of Permitting Services to publish certain information about permits on the Department's website.

**COORDINATION:** 

Department of Permitting Services

FISCAL IMPACT:

**OMB** 

ECONOMIC IMPACT:

Department of Finance

**EVALUATION:** 

To be done.

**EXPERIENCE** 

To be researched.

**ELSEWHERE:** 

SOURCE OF INFORMATION:

Christine M.H. Wellons, Legislative Attorney

APPLICATION

WITHIN

**MUNICIPALITIES:** 

PENALTIES:

N/A

N/A

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# 3315 SAFE ACCOMMODATION FOR PEDESTRIANS AND BICYCLISTS

- A public right-of-way occupancy permit that authorizes blockage of a sidewalk, bicycle lane, or other public bicycle path shall require the permittee to provide a safe accommodation for pedestrians and bicyclists.
- The blockage of a sidewalk, bicycle lane, or other public bicycle path shall be treated in the same manner as the closure of a lane of motor vehicle traffic by applying similar temporary traffic control practices as would be applied to the closure of a lane of motor vehicle traffic for each permit issued. The design and placement of the temporary traffic control signs, devices and roadway markings shall be in compliance with the most recent edition of the Manual on Uniform Traffic Control Devices (MUTCD).
- The term "safe accommodation" means a safe and convenient route for pedestrians and bicyclists that ensures an accommodation through or around a work zone that is equal to the accommodation that was provided to pedestrians and bicyclists before the blockage of the sidewalk, bicycle lane, or other public bicycle path.
- 3315.4 (a) The safe accommodation for pedestrians shall meet or exceed the current DDOT standards, "Pedestrian Safety and Work Zone Standards Covered and Open Walkways" including the following:
  - (1) Routing priority; provided that closing a sidewalk and routing pedestrians to the sidewalk on the opposite side of the street shall only be approved as a last resort for the duration of time needed to assure pedestrian safety in the absence of other practicable routing options;
  - (2) Compliance with the Americans with Disabilities Act of 1990, approved July 26, 1990 (Pub. L. 101-336, 42 U.S.C. §§ 12101 et seq.);
  - (3) Protecting pedestrians from adjacent construction activities;
  - (4) Covering the pedestrian walkway when overhead danger is present;
  - (5) Physically separating pedestrians from vehicular traffic;
  - (6) Covered walkway structural specifications; and
  - (7) Modification requests.

- (b) The permittee shall maintain the pedestrian route free of obstructions and surface hazards, such as construction equipment, construction materials, debris, mud and loose gravel at all times.
- (c) The routing for a safe accommodation for bicyclists shall replicate the safety level of the existing bicycle route, such as by providing:
  - (1) A route that is physically separated from motor vehicle traffic if a protected bicycle lane is blocked or providing a route that is for the exclusive use by bicyclists if a bicycle lane is blocked whenever feasible;
  - (2) A route which is free of obstructions and surface hazards, such as construction equipment, construction materials, debris, holes, mud, loose gravel, milled surfaces and uneven pavement; and
  - (3) A route that does not share a covered or open walkway with pedestrians.
- (d) The method for providing the safe accommodation for bicyclists shall be prioritized as follows:
  - (1) Closing a parking lane and keeping the adjacent bicycle lane open;
  - (2) Shifting the bicycle lane to a location on the same roadway to bypass the work zone, and if necessary, shifting and narrowing the adjacent motor vehicle traffic lanes; provided the adjacent motor vehicle travel lanes shall be maintained at no less than ten feet (10 ft.) wide;
  - (3) Closing the adjacent motor vehicle travel lane to provide space for a bicycle lane; provided that a minimum of one (1) motor vehicle travel lane shall remain in the same direction of travel;
  - (4) Merging the bicycle lane and the adjacent motor vehicle travel lane into a shared travel lane adjacent to the work zone, installing sharrow lane markings in the shared travel lane and installing work zone signage directing bicyclists to merge into the shared travel lane; provided the shared travel lane shall be maintained at no less than thirteen feet (13 ft.) wide; and
  - (5) As a last resort, detouring bicyclists onto an adjacent roadway, in which case the detour route shall replicate, as closely as practicable, the level of safety found on the bicycle route being blocked.

- Each applicant submitting a permit application to the Director which will result in the blockage of a sidewalk, bicycle lane, or other public bicycle path, shall submit for approval by the Director a traffic management plan that addresses safe accommodation for pedestrians and bicyclists before the issuance of a permit by the Director.
- The traffic management plan submitted to the Director pursuant to Subsection 3315.5 shall require MUTCD-complaint work zone signage, devices and roadway markings that adequately warn right-of-way users of upcoming changes and marks the alternate route as follows:
  - (a) Signage intended only for pedestrians shall display the word "pedestrians" or the pedestrian symbol and shall adequately warn of any route change and clearly mark the alternate route;
  - (b) Signage intended only for bicyclists shall display the word "bicycles," the word "bicyclists," or the bicycle symbol and clearly mark the alternate route;
  - (c) Signage shall adequately warn bicyclists and motorists alike of any lane shift or shared lane condition; and
  - (d) Any additional signage or roadway markings, such as signage or roadway markings for a lane shift, a sharrow lane, or a detour route, shall be provided and maintained for the length of the altered route.
- If a safe accommodation for pedestrians or bicyclists must be closed intermittently during off-peak hours due to conflicts with construction activities or construction vehicles, the traffic management plan submitted to the Director pursuant to Subsection 3315.5 shall require that:
  - (a) Flaggers be posted at each end of the closed pedestrian or bicycle route for the entire duration of time the intermittent closure is in place; and
  - (b) The safe and reasonable flow of pedestrian and bicycle traffic be maintained in preference to construction activities and the flow of construction vehicles.
- The Director may revoke a public right-of-way occupancy permit authorizing the blockage of a sidewalk, bicycle lane, or other pedestrian or bicycle path for any of the following reasons:
  - (a) The permittee fails to comply with a provision of Subsections 3315.1 through 3315.7 above;

## District of Columbia Municipal Regulations

- (b) The permittee does not comply with the traffic management plan approved by the Director;
- (c) To protect the public safety and welfare; or
- (d) Any other reason authorized by law.

SOURCE: Final Rulemaking published at 61 DCR 10577 (October 10, 2014).

# **Attachment C**

# City of Alexandria, Virginia

#### **MEMORANDUM**

#### MEMORANDUM TO INDUSTRY NO. 04-18

DATE: APRIL 4, 2018

TO: DEVELOPERS, ARCHITECTS, SURVEYORS, & ENGINEERS

FROM: HILLARY ORR, DEPUTY DIRECTOR, DEPARTMENT OF TRANSPORTATION

AND ENVIRONMENTAL SERVICES ARO

SUBJECT: MAINTENANCE OF TRAFFIC PLANS – MAINTAINING ACCESS FOR

PEDESTRIANS AND BICYCLISTS DURING CONSTRUCTION

In December 2017, the City approved the Vision Zero Action Plan which outlines several action items to help achieve the City's goal of eliminating deaths and serious injuries for people using Alexandria's transportation network. One of the action items calls for staff to "Evaluate Maintenance of Traffic (MOT) Plan requirements and revise to prioritize safe, accessible, and convenient routes for bicyclists and pedestrians." (Action Item 2B.5 – Page 48). In support of this Plan and action item, the City will be requiring MOT plans to better accommodate pedestrians and people using bikes without diversions that might encourage them to make an unsafe decision.

Specifically, unless approved by the Director of T&ES (see Exemptions and Applicability section below), staff will no longer approve MOT plans that:

- (1) divert pedestrians to sidewalks across from or beyond construction sites; or
- (2) divert people using bikes to alternate routes beyond the site.

#### **Pedestrian Access**

Effectively immediately, protected access within the public right-of-way must be maintained to support pedestrian mobility adjacent to construction sites. Applicants must consider and propose options in which pedestrians do not have to cross the street to maintain their paths of travel. Applicants are encouraged to consider solutions that accommodate accessible routes without impacting existing onstreet parking or travel lanes such as minimizing the construction area or providing covered walkways. In cases where sufficient right-of-way width is not available to accommodate both pedestrian travel and parking, applicants will be required to apply for the closure of on-street parking.

Applicants will be expected to consider implementation tools such as longitudinal channelizers/jersey barriers, temporary flexposts, and other raised traffic control devices to protect these temporary pedestrian facilities. Applicants must supply temporary ramps to support accessibility across changes in elevation (i.e. pedestrian movements from the curb to the parking lane and back onto the curb). Applicants are also responsible for the procurement, implementation, and removal of all necessary signage, control devices, and pedestrian elements. All proposals are subject to review and acceptance by the Department of Transportation and Environmental Services Development and Right-of-Way Division.

#### **Bicycle Access**

Effectively immediately, adequate access within the public right-of-way must be maintained for people using bikes where existing bicycle facilities (e.g. bike lane, trail) fall adjacent to construction sites. Temporary barriers, striping, or other pavement marking may be used to delineate temporary travel paths where existing bike lanes are impacted by construction. The minimum width of a temporary bike lane shall be 5 feet. Temporary off-road bike trails may also be allowed and shall be constructed of asphalt or another solid material if approved by the Director of T&ES. If there is not adequate space for a temporary bike lane or trail, people using bikes may be diverted into general travel lanes through supporting signage and/or temporary striping that communicates the change clearly to both bicyclists and drivers.

Applicants are responsible for the procurement, implementation, and removal of all signage and control devices. All proposals are subject to review and acceptance by the Department of Transportation and Environmental Services Development and Right-of-Way Division.

#### **Exemption and Applicability**

The requirements of this memo shall not apply in cases which the applicant demonstrates that the provisions of accessible pedestrian and bike routes present either: 1) undue hardship, such as the cost or scale of improvements is not commensurate with the cost or scale of the project or 2) direct and demonstrable safety conflicts, such as an unstable building façade, or the location of a construction entrance or crane. Exemption from these requirements may be provided at the discretion of the Department of Transportation and Environmental Services Development and Right-of-Way Division. In these cases, both the duration and extent of the closure of pedestrian or bicycle facilities must be minimized to the extent possible. In addition, MOT plans shall be designed to prevent or minimize the need for an exemption by locating construction entrances and other construction related facilities or activities in locations with the least impact to or conflict with pedestrian and bicycle preferred routes.

These requirements shall not apply to construction activity for which a sidewalk or bicycle facility closure is needed for seven (7) calendar days or less. In these cases, applicants are encouraged to minimize diversions, but staff will accept MOT plans that include appropriate signage related to sidewalk or bicycle facility closures.

MOT plans will continue to be reviewed by the T&ES Development and Right-of-Way Division staff as part of the normal right of way permitting process. Applicants are encouraged to meet with staff prior to submitting a plan to discuss specific circumstances about the project and site. To minimize closures, an MOT plan shall include phases of implementation to accommodate needs at different stages of construction.

#### **Next Steps**

Within one year, staff will review this policy internally to identify how effective it has been in accomplishing the Vision Zero goal of maintaining and improving convenient pedestrian and bicycle access around construction sites. Staff will also discuss if this has caused any difficulties or delays with the permitting process. If needed, additional clarification and guidance will be developed to address these issues.

As part of the Fiscal Year 2020 budget development, staff will also review the permit fees for sidewalk and parking closures and recommend changes to these fees to incentivize maintaining open or accessible

sidewalks during construction. Details about potential changes to permit fees will be presented to the development community as part of this review.

#### **Additional Guidance**

Attachment 1 provides updated and new construction notes and standards conditions that will be required to be included in future development plans, site plans, grading plans, park (PRK) plans, or similar plans as well as construction management plans and MOT plans.

Attachment 2 provides examples of potentially acceptable accommodations to maintain pedestrian and bicycle access under different construction situations. These examples have been modified from the Virginia Department of Transportation's *Virginia Department of Transportation Work Zone Pedestrian and Bicycle Guidance* (2016). The full document may be accessed on VDOT's website at <a href="http://www.virginiadot.org/business/resources/wztc/2016\_WZ\_Ped\_BikeGuide.pdf">http://www.virginiadot.org/business/resources/wztc/2016\_WZ\_Ped\_BikeGuide.pdf</a>.

Attachment 3 provides the lane width information from the Complete Streets Guidelines to assist in determining appropriate widths for temporary travel and parking lanes. The complete document can be found at: <a href="https://www.alexandriava.gov/CompleteStreets">https://www.alexandriava.gov/CompleteStreets</a>.

Applicants can also refer to ADA Guidelines for more details related to accessibility requirements.

#### **ATTACHMENT:**

- 1) Updated Construction Notes and Standard Conditions
- 2) Options to Maintain Pedestrian and Bicycle Access during Construction
- 3) Complete Streets Guidelines Minimum and Preferred Lane Widths

#### ATTACHMENT 1: Updated Construction Notes and Standard Conditions.

# <u>Standard Construction Management Plan Notes (to be included on all Construction Management Plans and Maintenance of Traffic (MOT) Plans as applicable)</u>

Per Memo to Industry #04-18, pedestrian access shall be maintained at all times and outside the work area for the duration of the project. If sidewalks are impacted, minimum access shall be maintained or protected pedestrian access must be provided. Pedestrians shall not be diverted across the street without the approval from the Director of Transportation and Environmental Services or his designee. Sidewalk closures are subject to separate approval from Transportation and Environmental Services (T&ES) at the time of permit application.

Per Memo to Industry #04-18, bicycle access shall be maintained at all times and outside the work area for the duration of the project. If bicycle facilities are impacted, access shall be maintained by shifting existing travel lanes to accommodate a temporary bike lane or through the creation of an off-street diversion directly adjacent to the travel path. If there is not adequate space for a temporary bike lane or trail, people using bikes may be diverted into general travel lanes through supporting signage and/or temporary striping that communicates the change clearly to both bicyclists and drivers. People using bikes shall not be diverted onto alternate routes without the approval from the Director of Transportation and Environmental Services or his designee.

### **Development Standard Conditions (in "Construction Management" section)**

#### **Revised Condition:**

Any—Bicycle facilities adjacent to the site shall remain open during construction. If a bicycle facility cannot be maintained on the street adjacent to the site must be closed, a detour for bicyclists shall be established and maintained bicycle access shall be maintained adjacent to the site per Memo to Industry #04-18, or to the satisfaction of the Director of T&ES throughout the construction of the project. The plan for maintenance of bicycle access shall be included in the Construction Management Plan for approval by T&ES. (T&ES) [Include for projects adjacent to existing bike lanes or trails]

#### New Condition:

Sidewalks adjacent to the site shall remain open during construction. If sidewalks must be closed, pedestrian access shall be maintained adjacent to the site per Memo to Industry #04-18, or to the satisfaction of the Director of T&ES throughout the construction of the project. The plan for maintenance of pedestrian access shall be included in the Construction Management Plan for approval by T&ES. (T&ES)

#### City Department Code Comments (in Transportation and Environmental Services section)

#### **Revised Findings:**

A Maintenance of Traffic Plan shall be provided within the Construction Management Plan and shall replicate the existing vehicular and pedestrian routes as nearly as practical, and the Pedestrian and bike access shall be maintained adjacent to the site per Memo to Industry #04-18 or to the satisfaction of the Director of T&ES. pathway shall not be severed or moved for non-construction

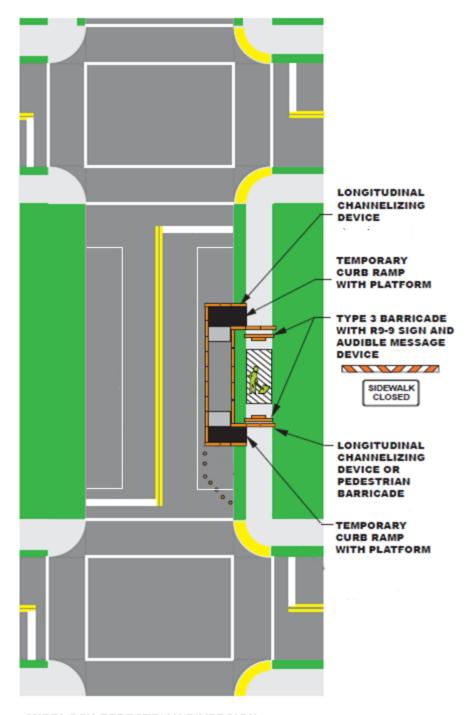
activities such as parking for vehicles or the storage of materials or equipment. Proposed traffic control plans shall provide continual, safe and accessible pedestrian pathways for the duration of the project. These sheets are to be provided as "Information Only." (T&ES)

The following notes shall be included on all Maintenance of Traffic Plan Sheets: (T&ES)

- a. The prepared drawings shall include a statement "FOR INFORMATION ONLY" on all MOT Sheets.
- b. Sidewalk closures will not be permitted for the duration of the project. Temporary sidewalk closures are subject to separate approval from Transportation and Environmental Services (T&ES) at the time of permit application. Sidewalk closures are subject to separate approval from Transportation and Environmental Services (T&ES) at the time of permit application. Pedestrian access must be maintained for the duration of the project. Per Memo to Industry #04-18, pedestrians shall not be diverted across the street without the approval from the Director of Transportation and Environmental Services or his designee.
- c. Contractor shall apply for all necessary permits for uses of the City Right of Way and shall submit MOT Plans with the T&ES Application for final approval at that time. \*

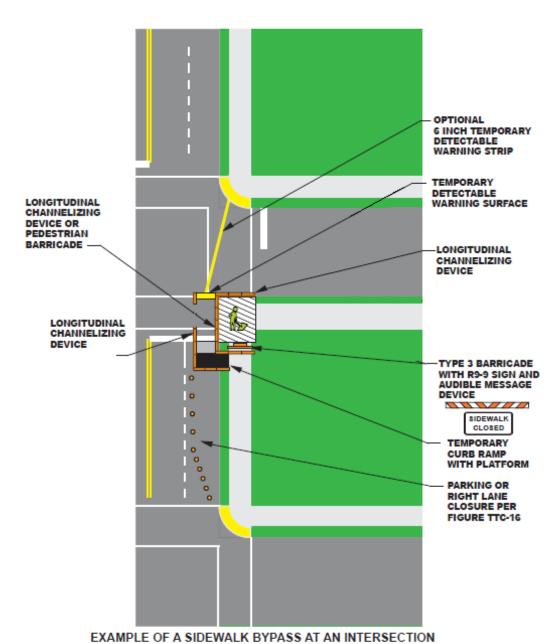
**ATTACHMENT 2: Options to Maintain Pedestrian and Bicycle Access during Construction** (images from or modified from *Virginia Department of Transportation Work Zone Pedestrian and Bicycle Guidance*)

Example 1 – Closure at Sidewalk: Pedestrians Access Maintained in Parking Lane

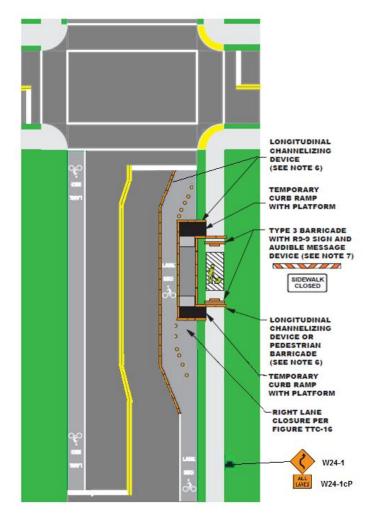


MIDBLOCK PEDESTRIAN DIVERSION

Example 2 – Closure at Sidewalk near Intersection – Pedestrian Access Maintained in Parking Lane

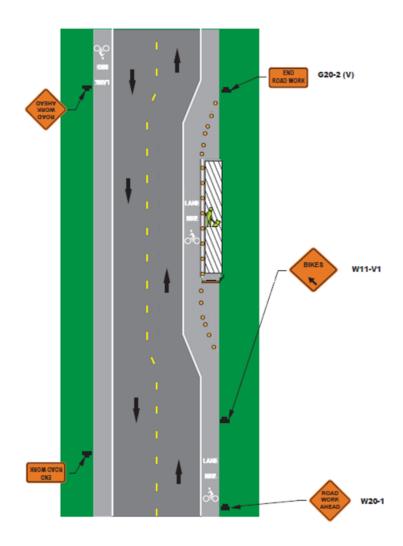


Example 3 – Midblock Sidewalk Closure with Bike Lane – Closure of Parking Lane and Restriping of Travel Lane



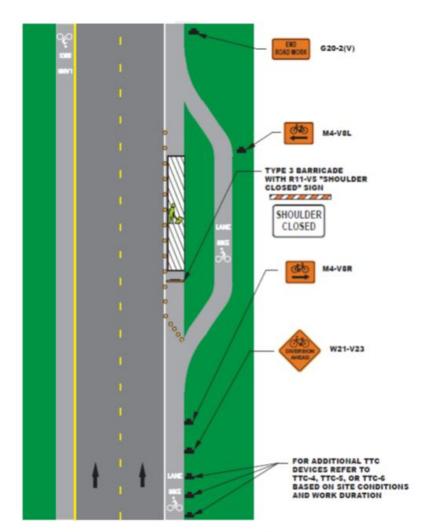
MID-BLOCK DIVERSION OF A SIDEWALK AND BIKE LANE

Example 4 – Closure with Bike Lane – Bicycle Lane/Travel Lane Shift



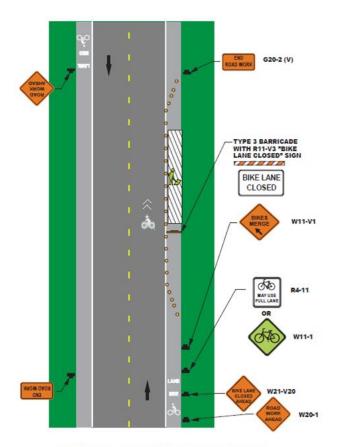
**Example of Travel Lane and Bike Lane Shift** 

Example 5 – Closure with Bike Lane – Temporary Off-Road Diversion



EXAMPLE OF SHOULDER CLOSURE WITH A BICYCLE DIVERSION PATH

Example 6 – Closure with Bike Lane – Bicycles Diverted into Travel Lane with Signage



EXAMPLE OF A BICYCLE LANE CLOSURE

#### **ATTACHMENT 3: Complete Streets Guidelines – Lane Widths**

#### Lane Widths

Minimizing travel lane widths is essential to creating additional roadway space for other users. Travel lane width also has an impact on motor vehicle speeds: motorists tend to drive faster in wide travel lanes and slower in narrower lanes. Traditionally, 12' has been the standard for motor vehicle travel lanes. The AASHTO "Green Book" allows 10' travel lanes in low speed environments (45 mph or less). Narrower lane widths have been avoided in the past due to concerns about vehicle occupant safety and congestion, especially on arterial roadways; however, research on suburban and urban arterials has shown that in most cases, travel lane widths between 10 feet and 11' on arterials and collectors do not negatively impact overall motor vehicle safety or operations, and also have no measurable effect on capacity.2 The study found one exception where 10' wide travel lanes should be used with caution- on four-lane, undivided arterial roadways.

The benefits of narrower lane widths include:

- · Lower speeds, improving the safety of all users
- · Fewer, less severe crashes for all users
- · Reduced crossing distance for pedestrians
- Reduced footprint of the roadway, resulting in better use of land and reduced run-off

The chart below summarizes guidelines for designating lane widths in the City of Alexandria. The values in this chart should be applied to major street reconstructions as well as resurfacing or other maintenance projects where lane reallocation or resizing may occur.

Many existing residential streets in Alexandria are "yield streets," which are two-way streets with parallel parking on both sides, where oncoming drivers must yield in order pass each other when parked cars are present. These streets are generally 25' in width (curb to curb dimension) and carry traffic volumes that do not exceed 1,500 vehicles per day.

STREET TYPOLOGY	MINIMUM 345	PREFERRED	MAXIMUM
Commercial Connector	10'	11'	12'
Main Street	10'	10'	12'
Neighborhood Residential	9'	10'	10'
Mixed Use Boulevard	10'	10'	12'
Neighborhood Connector	10'	10'	12'
Parkways	10'	10'	11'
Industrial	11'	12'	13'
Shared Streets	N/A	N/A	N/A
Overlays	Minimum	Preferred	Maximum
Bicycle Network Streets	N/A	N/A	N/A
Transit Streets <sup>6</sup>	11'	11'	12'
Historic Streets and Alleys	N/A	N/A	N/A
Other	Minimum	Preferred	Maximum
Parking Lane	7'	8'	N/A
Two-way left turn lane	10'	12'	12'
Right or left turn lane	9'	10'	11'
Alley (one-way)	N/A	15'	N/A
Alley (two-way)	N/A	18'	N/A

Notes: A design exception may be required for some widths on federal or state-funded projects.

<sup>2</sup> Potts, Ingrid B, Harwood, Douglas W and Richard, Karen R. Relationship of Lane width to Safety for Urban and Suburban Arterials. Washington, D.C.: Transporation Research Board, 2007.

<sup>3</sup> The width of the gutter is included as a part of the total width of the lane. When a travel lane is adjacent to the curb, add 1" to the preferred lane width. When the speed limit is 35 mph or greater, the width of the concrete gutter should not be counted towards the width of the travel lane adjacent to the curb. Additionally, when a travel lane is next to a raised median, a 1" shy distance should be added to the lane width. There should also be a stripe painted around the median.

<sup>4</sup> On streets with high volumes of heavy vehicles (>8%), one 11-foot wide travel lane should be provided in each direction (generally the curb-side lane).

<sup>5</sup> A street should not be designed using all minimums.

<sup>6</sup> For Complete Streets retrofit projects involving a constrained transit street, maintain the existing width of the transit lane.

## Attachment D

October 10, 2015

## MCDOT TTCP GUIDELINES & REQUIREMENTS

#### **Background**

The Department of Permitting Services (DPS) requires submission of Temporary Traffic Control Plans (TTCP), approved by Montgomery County Department of Transportation (MCDOT) before issuing a permit. The purpose of TTCP is to maintain an orderly and coordinated traffic flow within a construction zone that safely accommodates all modes of transportation, and provides for the safety of the construction workers. Following these guidelines (available online at <a href="http://www.montgomerycountymd.gov/dot-traffic/temp\_traffic\_ctrl.html">http://www.montgomerycountymd.gov/dot-traffic/temp\_traffic\_ctrl.html</a>) will help the permittee to develop acceptable TTCP, thus streamlining the TTCP approval process.

The MCDOT Division of Traffic Engineering & Operations (DTEO) reviews and approves all TTCPs. While the DTEO is available for consultation, actual preparation of the TTCP is the responsibility of the applicant. Developing acceptable TTCP requires thorough knowledge of the project as well as knowledge of traffic engineering and the governing standards and guidelines. The TTCP will be returned unapproved with only general comments if it's not prepared in conformance with the guidelines and requirements of this document.

#### TTCP GUIDELINES

The following should be considered when preparing TTCP:

- The vast majority of the projects do not require site specific TTCP instead, standard traffic control drawings, available online at <a href="http://www.montgomerycountymd.gov/dottraffic/temp\_traffic\_ctrl.html">http://www.montgomerycountymd.gov/dottraffic/temp\_traffic\_ctrl.html</a>), and/or figures 6H-1 through 6H-46 included in Section 6H.01 of the Maryland Manual on Uniform Traffic Control Devices (MdMUTCD), Typical Applications, available online at <a href="http://www.roads.maryland.gov/index.aspx?PageId=835">http://www.roads.maryland.gov/index.aspx?PageId=835</a>, are sufficient. The standard drawings must be completed by inserting the applicable dimensions, tapers, signs, devices, spacing, and pertinent project information.
- 2. Site specific TTCP are necessary for all projects within Bethesda, Silver Spring, and Wheaton Central Business Districts (CBD) as well as projects along Arterial Roadways (Typically, 80' of right-of-way or greater). The DTEO may consider waiving this requirement if they determine the roadway is under-utilized or the work activity would not seriously affect traffic. The waiver may be secured by verbal or written request to DTEO at 240-777-2190, or TrafficOps@montgomerycountymd.gov.
- 3. The safety and mobility of the roadway user and construction worker should be the primary consideration when preparing TTCP.
- 4. If the work zone includes a railroad grade crossing, early coordination with the railroad company is necessary.

- 5. It is imperative that TTCP be consistent with the sequence of construction (SOC). It is expected that a logical and practical SOC be planned based on realistic and up to date construction practices and methods. As indicated under TTCP Requirements below, all construction durations must be based on actual Construction Bar Chart (CBC) or Critical Path Method (CPM), which in turn must be based on the SOC outlined on the TTCP. The SOC must clearly describe scope of the work to be completed in each phase of construction and must specify the duration for each phase. Impacts of utility relocation, pedestrian movements, traffic delays, detours, roadway stability, capacity restrictions, minimum lane widths and safety must be considered.
- 6. Field visits of the construction site are essential to developing "quality" SOC.
- 7. Extended sidewalk closures (more than 15 days) and roadway/lane closures of <u>any duration</u> shall require "conceptual" approval by DTEO prior to the formal TTCP submission. For its conceptual approval, DTEO requires submission of the SOC along with detailed scope of work, CBC or CPM, and justification as to why work activity cannot occur without the closure. For extended sidewalk closures, the justification documents shall include a detailed analysis of alternatives and the proposed alternate pedestrian access (APA). Roadway/lane closures impacting traffic signals require close coordination with the County's Transportation Management Center (TMC) as described under TTCP Requirements.
- 8. For projects along Maryland State Highway Administration (MSHA) roadways, the permittee must directly contact MSHA's District 3 Traffic unit at 301-513-7465.

## SITE SPECIFIC TTCP PREPARATION AND IMPLEMENTATION REQUIREMENTS

Site specific TTCP shall be submitted to DTEO for review and approval for all projects within Bethesda, Silver Spring, and Wheaton Central Business Districts (CBD) as well as projects along Arterial Roadways (Typically, 80' of right-of-way or greater). For all other projects, the permittee may use the standard drawings as explained in item 1, under TTCP GUIDELINES above. Site specific TTCP are not required for emergency and/or maintenance work activities of short duration (not exceeding 4 hours) that do not include roadway excavation and do not occupy more than one travel lane. Work activities within the traveled portion of roadways shall be restricted to the hours of 9:00 AM to 3:00 PM, Monday through Friday. No work will be allowed the day before, the day of, and the day after a major holiday.

While preparing TTCP, the permittee shall meet the following specific requirements, unless deemed (DTEO's concurrence is necessary) not applicable:

- 1. The TTCP shall be prepared and stamped by a Professional Engineer.
- 2. The TTCP shall be prepared using specific scales to adequately depict the relative locations of advance construction signs, channelizing devices, and pavement markings. Acceptable scales are: 1"=20', 1"=30', 1"=40', and 1"=50'.

- 3. The TTCP shall include the name of the affected roadways, physical characteristics such as traffic lanes, pavement markings, parking lanes, medians, islands, posted speed limits as well as all intersecting streets and affected sidewalks within the proposed traffic control plans. Using standard and commonly used legend, the TTCP shall clearly show the location of the proposed work as well as the traffic control devices.
- 4. The TTCP shall conform to the guidelines of Section 6 of the MdMUTCD, latest edition.
- 5. With respect to pavement markings for all phases of construction and all traffic switches (including daily), the TTCP shall clearly show all existing markings (to remain or be removed) and all temporary/permanent to be installed. The plans shall be prepared with the following considerations in mind:
  - All temporary markings shall be project specific, detailed, and in conformance with the requirements of MdMUTCD;
  - o All detours must be approved by DTEO in advance;
  - o All necessary temporary markings shall be installed prior to the start of work;
  - All daily traffic switches shall include the required (per MdMUTCD) temporary markings installed/removed daily;
  - If temporary markings are to be removed rather than paved over, the use of "removable detour grade pavement marking tape" shall be specified on the plans;
  - Conflicting markings shall either be removed or masked using "3M Removable Black Lane Mask" or an approved equal. On road sections that are to be overlaid, temporary markings can be either tape or paint, but the tape has to be removed prior to overlay;
  - The permittee shall be responsible for all marking removal and installation. The
    permittee shall be responsible for replacing all pavement markings that have been
    obliterated by the work activity; and
  - Any work anticipated to be performed by County forces must be requested and approved in writing in advance.
- 6. In case of Montgomery County Capital Improvement Program (CIP) projects, all traffic control related special provisions such as work/schedule and detour restrictions must be included on the TTCP.
- 7. The permittee shall have a "certified" traffic control manager on site during all phases of construction at all times.

- 8. All special traffic signs (non-standard MdMUTCD signs) must be designed and indicated as "MODIFIED". Special coding of signs (other than MdMUTCD numbers R1-1, etc.) will not be accepted.
- 9. Each phase of the construction, including the follow up restoration operations shall include appropriate work zone traffic controls shown on the plans.
- 10. The plans shall specify construction duration for each and all phases of the project. The construction durations shall be determined based on the CBC or CPM. The project CPM shall be submitted to the County at the time of TTCP submittal, or when requesting conceptual approval (item #7, under TTCP Guidelines). All factors impacting schedule such as weather, utility relocation, pedestrian presence, traffic delays, detours, capacity restrictions, work space restrictions, and safety concerns shall be considered when determining construction duration.
- 11. As explained in item 7 under TTCP GUIDELINES, roadway or lane closures of <u>any</u> duration shall require "conceptual" approval by DTEO prior to the formal TTCP submission. For its conceptual approval, DTEO requires submission of the SOC along with detailed scope of work, project CBC or CPM, and justification as to why work activity cannot occur without the closure. Roadway/lane closures impacting traffic signals require close coordination with the County's Transportation Management Center (TMC) at 240-777-2190. Road closures require additional temporary traffic controls including advance notification, approach, and detour signage, as approved by DTEO.
- 12. The cover sheet of the TTCP shall include a summary table showing all sidewalk/lane closures, their durations, and all construction phases, their durations, and description of scope of work for all phases.
- 13. The permittee shall contact the Transportation Systems Engineering Manager at 240-777-8778 at least two weeks in advance to coordinate any minor traffic signal work. Major traffic signal work shall be coordinated a minimum of thirty (30) days in advance of the project. The permittee shall contact TMC at 240-777-2190 a minimum of 72 hours prior to beginning work to have existing traffic signal equipment marked.
- 14. The Contractor shall provide an affidavit that a) he understands the requirement to minimize construction impacts upon the public and adjacent business uses of the right-of-way, b) he has reviewed the TTCP and the construction schedule, c) that the approved TTCP can and will be implemented and adhered to within the timeline specified in the plans, and d) a certified traffic control manager will be on-site at all times during lane and sidewalk closures.

- 15. The permittee shall coordinate and host a meeting at least two weeks in advance of any road closures, or lane closures/shifts. The following offices shall be notified in advance of the meeting, and again, 72 hours prior to the closure/shift:
  - o DTEO at 240-777-2190
  - Montgomery County Transportation System Engineering Team Manager at 240-777-8778
  - o TMC at 240-777-2190
  - o Montgomery County Transit at 240-777-5800
  - o Montgomery County Public Schools, Local Depot Manager
  - o Montgomery County Fire & Rescue, Local Fire Department Captain
  - Montgomery County Department of Permitting Services, Permit Inspection Section at 240-777-6300
  - Montgomery County Emergency Operations Center at 311
  - The Director of the appropriate Regional Service Center (RSC) and the Local Traffic Sergeant of the Montgomery County Police Department as follows:
    - Bethesda RSC at 301-986-4325, Bethesda urban Partnership at 301-215-6660, and MCPD at 301-657-9200
    - Upcounty RSC at 240-777-8000 and MCPD at 301-840-2650
    - Silver Spring RSC at 301-565-7300, MCPD at 301-565-7740
    - Wheaton RSC 240-777-8100 and MCPD at 301-217-4400
- 16. Sidewalk Closure Requirements as explained in item 7 under TTCP GUIDELINES above, extended sidewalk closures (more than 15 days) shall require "conceptual" approval by DTEO prior to the formal TTCP submission. For its conceptual approval, DTEO requires submission of the SOC along with detailed scope of work, and justification as to why work activity cannot occur without the closure. The justification documents shall include a detail analysis of alternatives and the proposed APA.

The permitte shall note that the County will enforce the following sidewalk and lane closure requirements under law as provided in Section 49-11 of County Code, titled "Permit to Obstruct Public R/W:

- i) All sidewalk closures require approval of DTEO.
- ii) All sidewalk closures planned during the construction of any project shall be clearly depicted on the TTCP and submitted to DTEO for approval. With the exception of an authorized (by MCDOT) total road closure, an Alternative Pedestrian Access (APA) on the same street shall be provided anytime a sidewalk is closed for any duration. The only acceptable types of APA are other Sidewalks, Covered walkways, and shared use paths.
- iii) Permittee(s) shall not close both sidewalks on the same stretch of the same street simultaneously, unless at least one safe APA is provided on the same street.
- iv) If a shared use path is used, it shall be protected using portable barriers (concrete or water filled). Covered walkways shall be used under the following conditions:
  - (a) Within CBD
  - (b) At metro stations
  - (c) Within 20' of a bus stop
  - (d) Along major/arterial highways
  - (e) Along 4 or more lane facilities
- v) The duration of all sidewalk closures shall be noted on the TTCP. All sidewalk closure durations shall be determined and certified by a Professional Engineer, and shall be based on the actual project CBC or CPM. The project CPM shall be submitted to the County at the time of TTCP submittal, or when requesting conceptual approval. All sidewalk closure durations provided in the TTCP must be inclusive of projected downtimes due to factors such as inclement weather, holidays, equipment breakdowns, material deliveries, and utility delays. In case of any actual sidewalk closure durations exceeding those provided in the approved TTCP, the DPS inspector will order the permittee to stop work and vacate the public right-of-way.
- vi) The permittee shall immediately give notice to DOT, DPS and the Regional Services Center of any change to the construction and critical path schedule that affects the approved TTCP or duration of any approved sidewalk closures.

- vii) When a sidewalk is closed, the requirements for the provision of an APA are as follows:
  - (a) The permittee shall post a sign as part of any sidewalk closure along a County road that states "This sidewalk to be re-opened no later than (date based on closure duration specified on the approved TTCP). Call (number to be determined) if not opened by this date".
  - (b) Sidewalk closures will not be permitted for staging, delivery of materials, or construction parking without express pre-approved field authorization following coordination with DTEO, DPS, and the Regional Service Center. Any sidewalk closure for this purpose shall not exceed 8 hours.
  - (c) Daily sidewalk closures shall be limited to the time of actual work activities (9:00 AM 3:00 PM), and shall be restored before the end of the workday. During daily sidewalk closure, the sidewalk on the opposite side of the street may be used as the APA.
  - (d) Sidewalk closures not exceeding 15 days for utility work or construction of an adjacent building the sidewalk on the opposite side of the street may be used as the APA. For closure exceeding 15 days, an APA shall be provided on the same side of the street.
  - (e) Sidewalk closures not exceeding 6 months for the purpose of sidewalk reconstruction/repairmen the sidewalk on the opposite side of the street may be used as the APA. For closures exceeding 6 months, an APA shall be provided on the same side of the street.
  - (f) Same side APA requirement may be waived if the applicant can demonstrate and provide certification signed by a Professional Engineer that it is not physically possible to provide same side APA due to insufficient space and/or it would create an endangerment that even a covered walkway would not protect against.
  - (g) The open sidewalk or APA shall remain American with Disability Act (ADA) compliant, shall not be blocked by any construction signs, and shall remain free of any obstructions or debris causing safety issues.
- viii) Sidewalk closures shall be limited to occur only during the actual work activity, unless the applicant demonstrates and obtains written concurrence from DTEO that it is not feasible to safely restore the sidewalk at the end of each workday.
- ix) While closed, sidewalks shall be barricaded to physically prevent pedestrian passage and appropriate pedestrian detours shall be posted.

- x) Sidewalks shall be promptly restored by the date specified on the posted sign as explained under vii (a) above. All sidewalk closures extending beyond the specified duration require approval of the DPS inspector in writing.
- Although a sidewalk closure may have been authorized as part of an approved TTCP, it shall not be implemented in the field under any circumstances when the sidewalk on the opposite side of the same street is already closed due to the same or other projects. In the case of multiple concurrent projects on the same street, permittees are required to work together to schedule sidewalk closures to ensure that either a) at least one sidewalk remains open and can be used safely, or b) otherwise, there is an APA provided on the same street. If the permittees cannot coordinate a resolution amongst themselves to meet this requirement, the County will not allow the second sidewalk closure while the first sidewalk closure is still in effect.
- 17. All work within the traveled portion of roadways shall be restricted to the hours of 9:00 AM to 3:00 PM, Monday through Friday. Work on holidays and weekends shall not occur unless an exception is granted in writing by the County's DPS Inspector.
- 18. Once approved by DTEO, the TTCP requirements shall be implemented in the field exactly as approved. Any deviation from the approved TTCP deemed necessary in the field must be authorized by the County before it's implemented. Deviations due to emergencies and/or conflict with other previously approved TTCP may be authorized at the Inspector's discretion. Deviations that change the duration of any sidewalk/lane closure or alter the pedestrian accommodation require revising and resubmitting the TTCP for re-approval. The DPS Inspector has the authority to order the permittee to stop work and vacate the public right-of-way if the workzone traffic control is not in compliance with the requirements of the approved TTCP.
- 19. Construction activity, deliveries, or loading/unloading of equipment shall not block any traffic lane other than those approved by DTEO as part of approved TTCP.
- 20. Exclusive of emergency work, the permittee shall contact owners of all adjoining businesses and properties at least 72 hours in advance to inform them of the scope and schedule of the construction operation.
- 21. Access to all driveways shall be maintained for vehicles traveling in both directions unless permission for closure is granted by the property owner/manager. However, accessibility for emergency vehicles shall be maintained at all times.
- 22. With the exception of total roadway closures, pavement excavation shall be limited to a maximum of one travel lane at any time unless otherwise specified on the approved TTCP.

- 23. For projects along MSHA roadways, or projects along County roadways but requiring installation of temporary traffic control signs/devices along MSHA roadways, the permittee shall directly contact MSHA's District 3 Traffic unit at 301-513-7465.
- 24. No hazardous materials shall be stored within public right-of-way.
- 25. Unless specifically authorized by the County, no materials or equipment shall be stored on the roadway surfaces or sidewalk during non-working hours.
- 26. All existing traffic control devices (i.e. signs, marking, etc.) that must be removed shall be replaced in their proper location prior to the completion of the project. Cost for the replacement and/or repair of devices damaged as a result of the project shall be solely borne by the permittee.
- 27. All temporary traffic control devices shall conform to the most recent edition of the MdMUTCD available online at <a href="http://www.roads.maryland.gov/index.aspx?PageId=835">http://www.roads.maryland.gov/index.aspx?PageId=835</a>.
- 28. All signs, traffic drums and cones shall be fully reflectorized with high intensity, reflective sheeting as per MdMUTCD.
- 29. At least one 10-foot travel lane in each direction shall be available for vehicular traffic at all times, unless physically not feasible and there are flaggers present to direct traffic. Flaggers shall be Maryland State Highway Administration or AATSA approved flaggers and shall be used at the direction of the County Inspector. Flaggers shall use STOP/SLOW paddles to direct traffic. Radio communication shall be required between flaggers at the discretion of the County Inspector or under the following conditions:
  - o Flaggers cannot see each other
  - o Flaggers are more than 200 feet apart
- 30. Signage, traffic drums, traffic cones, and arrow panels shall be placed in conformance with MdMUTCD. Work Area Ahead (W20-1 modified) signs must be installed at the end of each workday when temporary aggregate ramping is implemented. Channelizing devices shall be placed along excavations at ten (10) foot intervals. Arrow Panels (flashing mode only) shall be used at the beginning of any lane closure on a multi-lane roadway.
- 31. Appropriate distances for sign legends are "AHEAD", "500 FT", "1000 FT", "1500 FT", or "1/2 MILE". For distances less than 500 feet, "AHEAD" shall be used.
- 32. All warning signs, unless otherwise specified, shall be a minimum of 48" X 48", black symbol or legend on orange background and diamond shaped. All warning signs not applicable to the actual situation shall be removed or covered during non-applicable periods. All portable signs shall be mounted a minimum of one (1) foot above the level of the roadway, with higher mounting heights desirable.

- 33. During nighttime operations traffic drums shall be used. However, for emergency work activities where traffic drums are not readily available, reflectorized traffic cones that are a minimum of twenty eight (28) inches in height and having six (6) inch and four (4) inch reflective collars within the top sixteen (16) inches of the cone may be used. All work areas left unattended at night shall be delineated with traffic drums.
- 34. Use of portable concrete barrier shall include end treatment attenuators, reflectorized markers as per TTCP 109.02, and a 12" X 36" object marker (vertical panel as per TTCP 109.01). Water filled triton barriers may be used in work zones with limited spaces with low speed and traffic volumes.
- 35. All required signs shall be installed prior to the start of construction or placing any equipment or materials on site.
- 36. All roadway/sidewalk excavations shall be backfilled (paved) to level grade or plated and the roadway/sidewalk shall be reopened to its full cross-section prior to the end of the workday, except when extended lane/sidewalk closure is permitted. "STEEL PLATES" (W95-5(1)) signs shall be placed approximately 250 feet in advance of any steel plate in the roadway.
- 37. Traffic shall not be permitted within ten (10) feet of any excavation that results in a vertical drop-off of more than five (5) inches in the level of pavement during non-working hours unless protected by temporary concrete barriers or ramped with aggregate material at a 3:1 or flatter slope from the edge of pavement. When ramping is utilized, Temporary Traffic Control drums shall be positioned adjacent to the edge of the work area on the traffic side of the slope.
- 38. Traffic shall not be permitted within two (2) feet of any excavation that results in a vertical drop-off of more than two (2) inches but no more than five (5) inches in the level of pavement during non-working hours unless either ramped with aggregate material at a 3:1 or flatter slope, provided with an abutting wedge of bituminous material at a 3:1 or flatter slope or protected by traffic drums.
- 39. For longitudinal drop-off of two (2) inches or less, warning signs shall be posted indicating "UNEVEN LANES" (W8-11). The signs should be placed 250 feet in advance of the start of the drop-off and be spaced at appropriate intervals throughout the area of the uneven joint.
- 40. For lateral drop-off or rise-up of two (2) inches or less, a "BUMP" (W8-1) sign shall be posted 100 feet in advance of the joint.
- 41. When milled pavement is left exposed to traffic a "ROUGH ROAD"(W8-8) or "GROOVED PAVEMENT" (W8-8a) sign shall be placed 250 feet in advance of the milled area.

- 42. The permittee shall contact the MCDOT, Division of Parking Management at 240-777-8740 a minimum of 48 hours in advance to arrange for payment and the bagging of all parking meters within the work zone. Meter numbers and location must be specified.
- 43. Bagging agreement shall be kept available by the contractor/permittee for inspection by the DPS inspector at any time. Prohibiting the use of metered spaces by the contractor/permittee without receipt of 'bagging agreement' is subject to fines.
- 44. All existing Montgomery County "Parking" signs shall be covered or bagged by the permittee for the duration of work; and a temporary "No Parking Anytime" (R7-4) sign shall be installed in the affected parking space(s). Existing Montgomery County parking meter pipes/poles shall not be used for temporary installation.
- 45. When it is necessary to restrict parking in a non-metered area to facilitate work activity, the permittee shall contact the appropriate County Police Station for temporary "No Parking" signs.
- 46. The permittee shall restore all affected Montgomery County parking signage to their previous condition.
- 47. The permittee shall be solely responsible for all accidents and/or damage to persons and/or property damage resulting from his operations.
- 48. The permittee shall coordinate all temporary traffic control devices with ongoing construction in the vicinity of work to resolve any temporary traffic control issues that may be in conflict.
- 49. All stored materials and equipment shall be set back at least six (6) feet behind the curb along a closed section roadway and at least twelve (12) feet from the edge of an open section roadway.
- 50. All temporary traffic control devices shall be removed as soon as practical when they are no longer needed.
- 51. At the completion of work activities, conditions within the public space shall be fully restored to those that existed prior to the work activity.

Virginia Department Transportation Work Zone **Pedestrian** and **Bicycle** Guidance

May 1, 2016

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### **Preface**

The purpose of this guidance is to present basic guidelines for work zone traffic control for pedestrians and bicyclists. It is a supplement to the current edition of the 2011 Virginia Work Area Protection Manual. These recommendations and examples apply to temporary traffic control zones, as found in construction, maintenance, permit and utility work areas. This information is intended to illustrate the principles of proper work zone traffic control for pedestrians and bicyclists, but is **not a standard**. The Virginia Work Area Protection Manual contains the standards for temporary traffic control zones for roadways in Virginia and can be accessed at VirginiaDOT.org, Business Center.

### Introduction

The needs of pedestrians, including persons with disabilities, and bicyclists on all roads open to public travel must be considered in the design of any transportation facility. The Code of Virginia, Section 15.2-2021, specifies streets that incorporate accessible routes for pedestrian use be accessible for use by persons with mobility impairments. The consideration of pedestrians and bicyclists is very important at a work area. Work areas by their nature are inherently confusing due to changing conditions. Work zones affecting any pedestrian facility shall maintain existing accessible routes.

This guidance provides information to aid in developing Temporary Traffic Control (TTC) Plans for pedestrians, bicyclists, and persons with disabilities. This information will assist Designers and Engineers in identifying pedestrian and bicycling issues and providing approaches for safe and effective movement through a work zone. The information contained in this pamphlet is intended to illustrate treatments and devices consistent with current practice but is not a standard. The Americans with Disabilities Act (ADA), the US Access Board's Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG), the Manual on Uniform Traffic Control Devices (MUTCD), the Virginia Supplement to the MUTCD, and the Virginia Work Area Protection Manual contain specific requirements and standards for the safe and efficient movement of pedestrians and bicyclists in work zones.

### **ADA Requirements**

Per the Americans with Disabilities Act of 1990 (ADA), Title II, Paragraph 35.130, the needs and control of all road users (motorists, bicyclists and pedestrians) through a temporary traffic control zone shall be an essential part of any roadway construction, utility work, permit and maintenance operations. The Americans with Disabilities Act guidance applies elements for pedestrian circulation in temporary facilities within the right-of-way. Pedestrian circulation and pedestrian circulation routes must be accessible to and usable by pedestrians with disabilities. Pedestrian routes may include: sidewalks, overpasses and underpasses; street crossings and refuge islands with ramps and detectable warning surfaces; pedestrian signs, including for visible characters and alternative audible sign systems; pedestrian signals, including accessible pedestrian signals and push-buttons, and pedestrian activated signals at multi-lane crossings.

Alterations to the street/roadway should not decrease the accessibility of the existing (pre work zone) pedestrian route. Alternate pedestrian access routes must be provided when a pedestrian route is temporarily closed by construction, utility work, permitted or maintenance operations. The alternate pedestrian access route must comply with the Virginia Work Area Protection Manual and the MUTCD. The standards in both manuals require any alternate pedestrian route, at a minimum, meet the accessible and detectable features of the existing closed pedestrian route. The preferred means to warn pedestrians who are blind or have low vision about sidewalk closures is an audible warning device using proximity-actuated audible signs, as recommended by the US Access Board's Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG).

### **ADA Requirements (Con't.)**

Where existing physical constraints make it impractical to comply with the above ADA requirements, compliance is required to the maximum extent practicable. All physical constraints shall be documented and retained in the project's file. Existing physical constraints include, but are not limited to, underlying terrain, limited right-of-way availability, underground structures, adjacent facilities, intersection geometry, maintaining positive drainage, or the presence of notable natural or historic features.

### **Special Pedestrian Populations**

Special pedestrian populations include children, senior citizens and the physically disabled. Each of these populations has a unique set of characteristics that limit their ability to travel along and across streets and roadways. Children typically do not have the cognitive abilities to understand how to share the roadway with vehicles. Senior citizens are not as mobile as younger adults and may have limited hearing and vision. Individuals with physical disabilities include people with visual impairments, people with hearing impairments, and people who need to use mobility devices.

# Work Zones and Pedestrian Routes

### **Typical ADA Pedestrian Devices**

Typical ADA pedestrian devices can be separated into two groups:

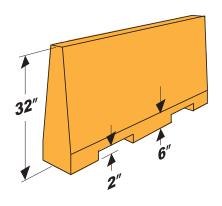
- Detectable systems such as longitudinal channelizers, railings, barricades and surface warnings;
- Curb ramps.

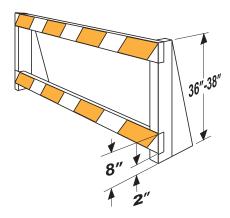
This section will provide general information and illustrations of detectable devices and curb ramps with the exception of detectable warning surfaces. Detectable warning surfaces are covered by Federal and state regulations per the Americans with Disabilities Act of 1990, 2010 ADA Standards for Accessible Design (http://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards/ada-standards), US Access Board's Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG), the Manual on Uniform Traffic Control Devices (MUTCD), Code of Virginia and the current Road and Bridge Standards. A listing of manufacturers of these devices may be accessed at VDOT's web site: http://www.virginiadot.org/business/trafficeng-WZS.asp. Products are listed on the web sites because of their potential usefulness to individuals and not because they have been verified to meet any requirements or standard. Additional suppliers can be found on the Internet and through various industry associations such as the American Traffic Safety Services Association at http://www.atssa.com/.

It is important to note that any device placed within the clear zone of the street or roadway shall meet crashworthiness requirements appropriate for the device's application.

Additional information and requirements on ADA pedestrian devices can be accessed at http://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards.

### **Detectable Edge Devices**

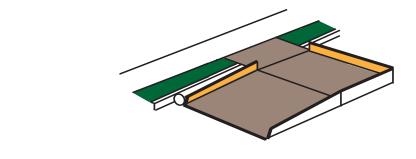




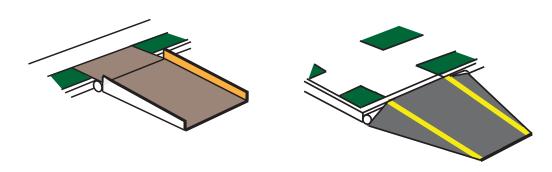
Longitudinal Channelizer Pedestrian Barricade

- 1. To prevent any tripping hazard to pedestrians, ballast shall be located behind or internal to the device.
- 2. Detectable edges for long canes shall be continuous, a minimum width of 6 inches, and be a contrasting color with the walkway surface.
- 3. Devices should not prevent the drainage of water from the walkway. An opening with a 2 inch maximum height above the walkway surface is allowed for drainage.
- 4. Longitudinal channelizing devices for pedestrians shall have a minimum height of 32 inches. Longitudinal channelizing devices shall not be installed with a handrail.
- 5. When hand guidance is required, the top surface of the device shall be in a vertical plane perpendicular to the walkway and above the detectable edge with a continuous height of 36-38 inches.
- 6. All devices should be free of sharp or rough edges with all fasteners installed below the surface and capped to prevent harm to hands, arms or clothing of pedestrians.
- 7. All devices used to provide guidance for pedestrians shall interlock to prevent gaps between devices.

### **Temporary Curb Ramps**



Parallel to Curb



Perpendicular to Curb

- 1. Curb ramps should be a minimum of 48 inches in width for perpendicular ramps and 60 inches in width for parallel ramps, with a firm, stable non-slip surface.
- 2. Detectable edges for long canes shall be continuous and a minimum of 6 inches above the walkway surface and be a contrasting color with the ramp and landing surface. For perpendicular ramps, the 6 inch detectable edge may be replaced with a 10:1 apron/flared side and a 2 inch wide marked walkway edge line.
- 3. Ramps shall have a slope not to exceed a maximum of an 12% (8:1).
- 4. Curb ramps and turning spaces should have a maximum of 2% (48:1) cross-slope.
- 5. A level clear space, 48 X 48 inch for perpendicular ramps and 60 X 60 inch for parallel ramps, should be provided above and below the ramp.
- 6. Curb ramps should be placed to have minimal restriction to water flow in the curb/gutter drainage system.
- 7. All joints and gaps between surfaces should be less than 0.5 inches.
- 8. Vertical changes between surface heights should not exceed 0.5 inches. Vertical edges can be vertical up to 0.25 inches. Vertical edges between 0.25 and 0.5 inches shall be beveled at 2:1.

# Selecting Appropriate Temporary Pedestrian Access for Work Zones

# General Notes for the Temporary Pedestrian Access Route

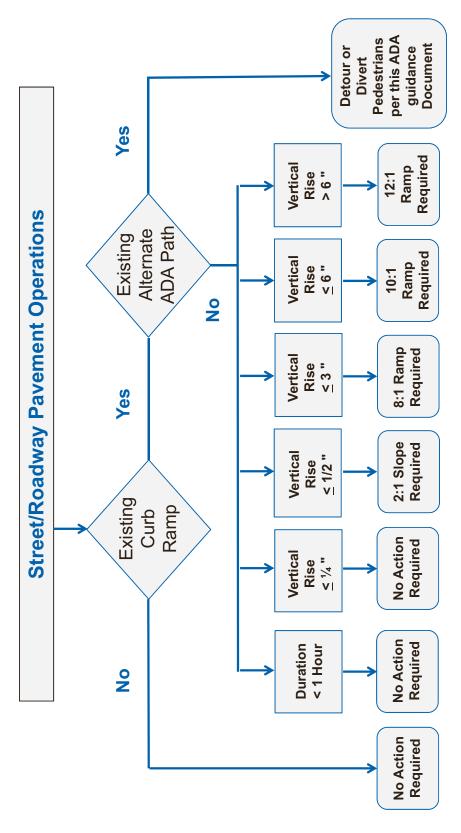
The pedestrian access route examples illustrated in this guidance are recommended practices and not standards. The examples should be applied only if an acceptable alternate route does not exist. In addition, any lane closures must follow the department's lane closure guidance.

### **Definition and clarification of terms for Temporary Pedestrian Access Routes**

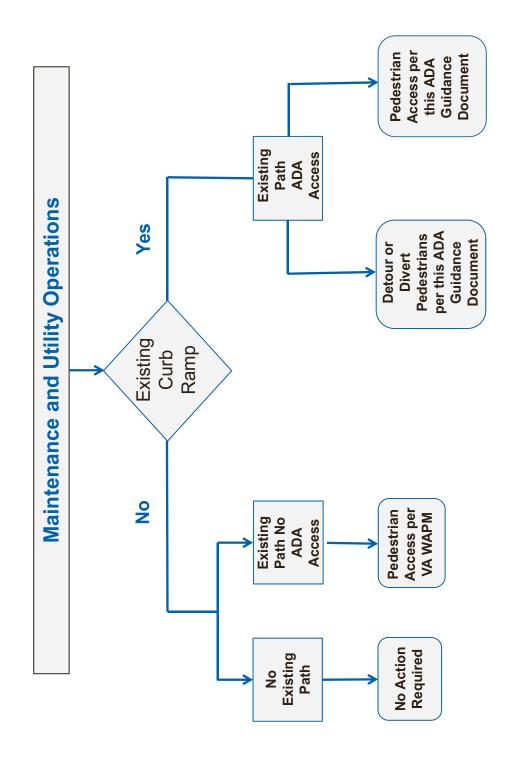
The following terms are to be used in conjunction with the three ADA/Pedestrian application charts illustrated on the following pages.

- Pedestrian Route: Any level (10:1 or flatter), firm, stable, and slip-resistant surface composed
  of soil, grass, pavers, asphalt or concrete that is a minimum of 4 feet in width within the right
  of way for use by pedestrians.
- Street/Roadway Operations: Pavement resurfacing such as Mill & Fill/Mill & Overlay work that closes or impedes pedestrian access at curb ramps after milling but prior to resurfacing for a period of more than 1 day (see application chart, Page 8).
- Maintenance and Utility Operations: Daytime or nighttime work that closes or impedes pedestrian access on a pedestrian route daily over a period of 3 or fewer days (see application chart, Page 9).
- **Construction Operations:** Work that closes a pedestrian access route for a period of more than 3 consecutive days (see application chart, Page 10).

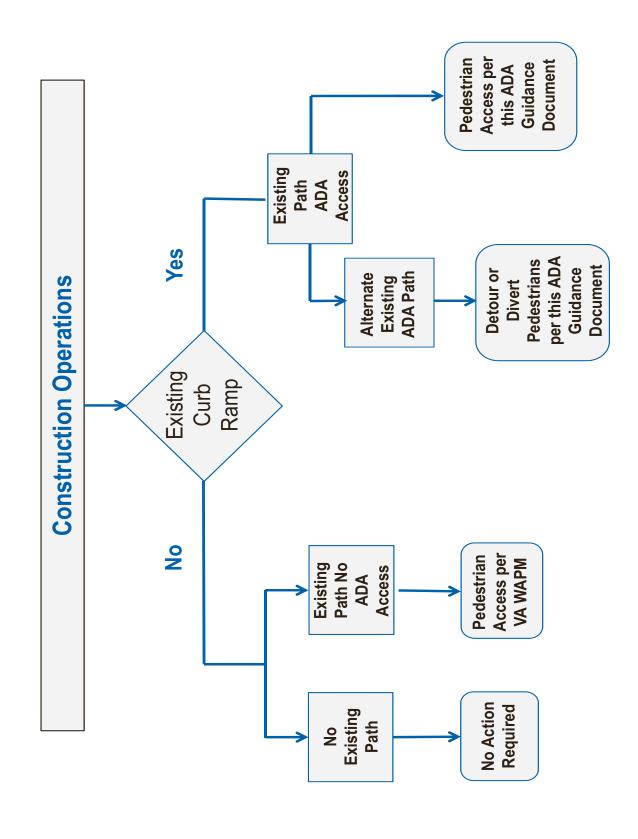
If a specific work task takes place at a curb ramp for longer than 1 hour an alternate pedestrian route must be provided.



ADA/Pedestrian Application Chart Street/Roadway Pavement Operation



ADA/Pedestrian Application Chart Maintenance/Utility Operations



ADA/Pedestrian Application Chart Construction Operations

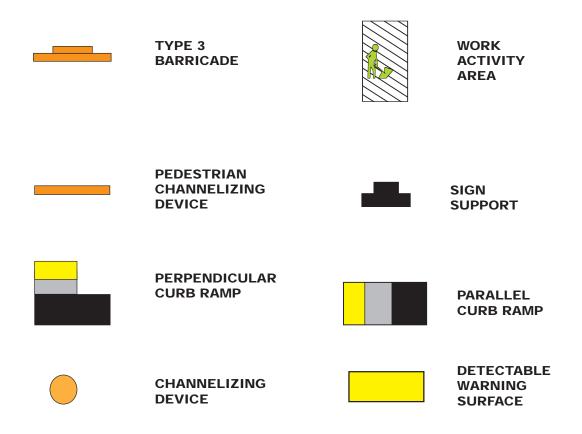
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# **Examples of ADA Compliant Work Zones**

The following pedestrian access route examples illustrated are recommended practices. Refer to the current edition of the Virginia Work Area Protection Manual or the Manual on Uniform Traffic Control Devices for specific pedestrian access standards. The examples should be applied only if an acceptable alternate route does not exist.

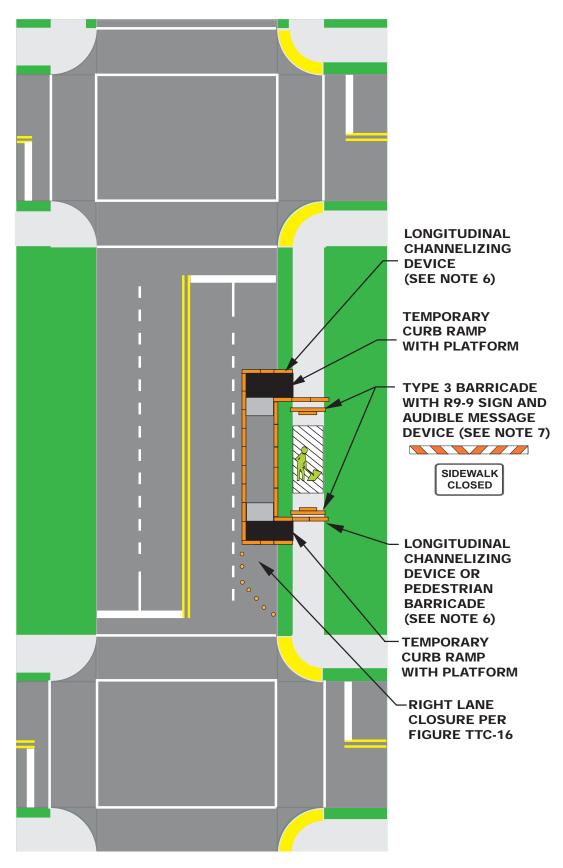
Pedestrian routes should not be blocked, severed or moved to provide space for parked vehicles, construction equipment or construction materials for up to 1 hour. Space for parked vehicles, construction equipment or construction materials should be provided within the work activity area for time periods greater than 1 hour. If vehicles, equipment or materials remain in the pedestrian route for a period longer than 1 hour an alternate pedestrian should be provided.

The legend below should be used to identify the symbols used in the following examples.



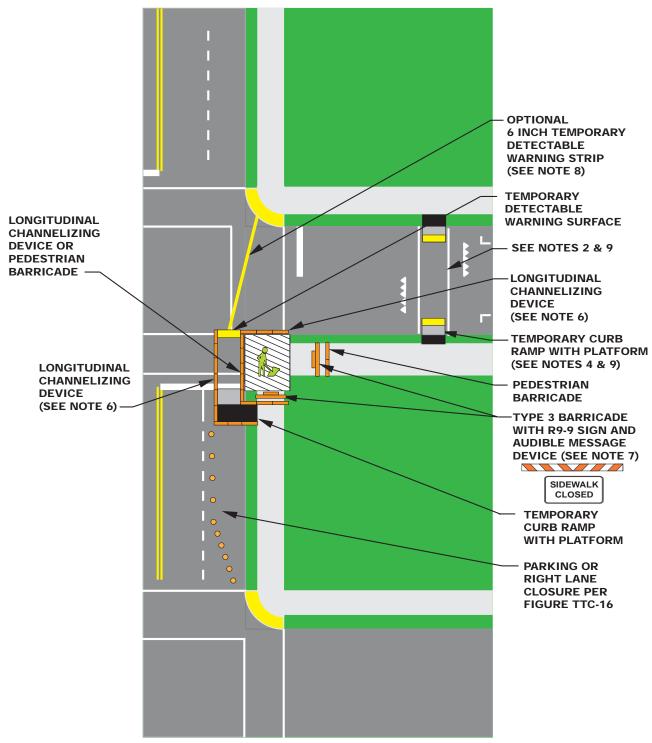
#### **Mid-block Diversion**

- 1. When sidewalks, crosswalks, shared-use paths, trails, or other pedestrian facilities are blocked, closed or relocated, temporary facilities shall meet, and if feasible exceed, accessibility features present in the existing facility.
- 2. The illustrated example only provides typical guidance. Refer to Figure TTC-35 in the Virginia Work Area Protection Manual for standards, guidance and options for blocking, closing or relocating pedestrian facilities.
- 3. When existing site conditions make it infeasible to meet the recommended standards these conditions shall be documented and retained in the project's file. Only traffic control devices controlling pedestrian movement are illustrated. Other traffic control devices, based on the work operation per the Virginia Work Area Protection Manual, may be needed to control vehicular and pedestrian traffic on the roadway.
- 5. When both sides of a temporary pedestrian facility require channelizing devices, the devices should be a similar type (longitudinal channelizing device or pedestrian barricade system), excluding traffic barrier, used to protect pedestrians from vehicular traffic.
- 6. Refer to Appendix A of the current Virginia Work Area Protection Manual for guidance on the application of barriers /channelizing devices in work zones.
- 7. A motion activated message device(s) may be provided for sight-impaired pedestrians. When used, the message device(s) should provide a complete physical description of the temporary pedestrian facility including duration, length of and/or distance to the facility, restriction or hazards as well as information present on the required signs. The message device(s) may also describe an alternate route.
- 8. A facility is non-compliant if it is missing key ADA elements such as curb ramps, truncated dome detectable warning, and detectable edging. Other restrictions may include insufficient width, traffic conflicts, steep grades, non-continuous channelizing devices, tripping hazards, uneven/rough/soft surfaces, etc. An alternate route should be provided and posted when a temporary facility is not ADA compliant and when the existing path to be closed has ADA access.



### Sidewalk Bypass at an Intersection

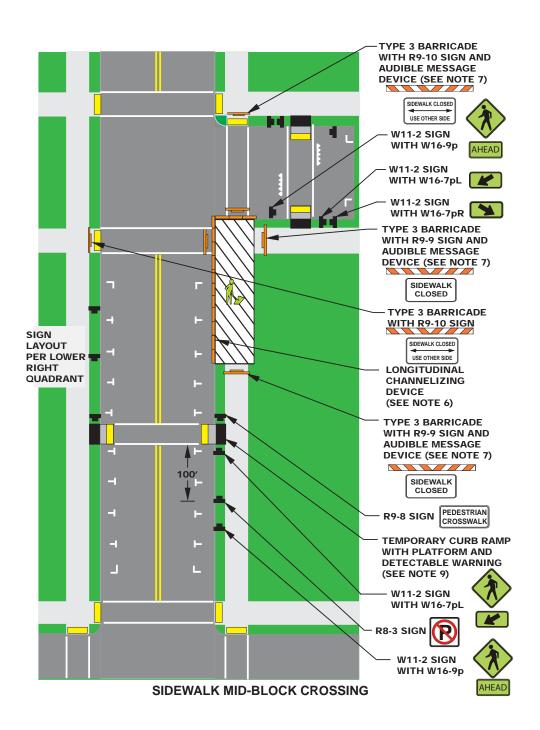
- 1. When sidewalks, crosswalks, shared-use paths, trails, or other pedestrian facilities are blocked, closed or relocated, temporary facilities shall meet, and if feasible exceed, accessibility features present in the existing facility.
- 2. The illustrated example only provides typical guidance. Refer to the Figure TTC-36 in the current Virginia Work Area Protection Manual for standards, guidance and options for blocking, closing or relocating pedestrian facilities for additional sign and crosswalk pavement marking requirements.
- 3. When existing site conditions make it infeasible to meet the recommended standards these conditions shall be documented. Conditions may include insufficient width, traffic conflicts, steep grades, non- continuous channelizing devices, tripping hazards, uneven/rough/soft surfaces, etc. An alternate route should be provided and posted when a temporary facility is not ADA compliant.
- 4. Only traffic control devices controlling pedestrian movement are illustrated. Other traffic control devices, based on the work operation per the Virginia Work Area Protection Manual, may be needed to control vehicular traffic on the roadway.
- 5. When both sides of a temporary pedestrian facility require channelizing devices, the devices should be a similar type (longitudinal channelizing device or pedestrian barricade system), excluding traffic barrier, used to protect pedestrians from vehicular traffic.
- 6. Refer to Appendix A of the current Virginia Work Area Protection Manual for guidance on the application of barriers /channelizing devices in work zones.
- 7. A motion activated message device(s) may be provided for sight-impaired pedestrians. When used, the message device(s) should provide a complete physical description of the temporary pedestrian facility including duration, length of and/or distance to the facility, restriction or hazards as well as information present on the required signs. The message device(s) may also describe an alternate route.
- 8. When the route between a temporary pedestrian facility and an existing sidewalk is skewed at a crosswalk, a temporary detectable warning strip may be used to provide guidance for sight-impaired pedestrians.
- 9. VDOT's "Guidelines for the Installation of Marked Crosswalks" should be used for information on the application of temporary marked crosswalks and the use of appropriate traffic control devices.



**EXAMPLE OF A SIDEWALK BYPASS AT AN INTERSECTION** 

### **Sidewalk Mid-block Crossing**

- 1. When sidewalks, crosswalks, shared-use paths, trails, or other pedestrian facilities are blocked, closed or relocated, temporary facilities shall meet, and if feasible exceed, accessibility features present in the existing facility.
- 2. The illustrated example only provides typical guidance and may be applied to street block lengths of more than 1000 feet. Refer to the current Virginia Work Area Protection Manual for standards, guidance and options for pedestrian facilities.
- 3. When existing site conditions make it infeasible to meet the recommended standards these conditions shall be documented. Conditions may include insufficient width, traffic conflicts, steep grades, non- continuous channelizing devices, tripping hazards, uneven/rough/soft surfaces, etc. An alternate route should be provided and posted when a temporary facility is not ADA compliant.
- 4. Only traffic control devices controlling pedestrian movement are illustrated. Other traffic control devices, based on the work operation per the Virginia Work Area Protection Manual, may be needed to control vehicular traffic on the roadway.
- 5. When both sides of a temporary pedestrian facility require channelizing devices, the devices should be a similar type (longitudinal channelizing device or pedestrian barricade system), excluding traffic barrier used to protect pedestrians from vehicular traffic.
- 6. Refer to Appendix A of the current Virginia Work Area Protection Manual for guidance on the application of barriers /channelizing devices in work zones.
- 7. A motion activated message device(s) may be provided for sight-impaired pedestrians. When used, the message device(s) should provide a complete physical description of the temporary pedestrian facility including duration, length of and/or distance to the facility, restriction or hazards as well as information present on the required signs. The message device(s) may also describe an alternate route.
- 8. When the route between a temporary pedestrian facility and an existing sidewalk is skewed at a crosswalk, a temporary detectable warning strip should be used to provide guidance for sight-impaired pedestrians.
- 9. VDOT's "Guidelines for the Installation of Marked Crosswalks" should be used for information on the application of temporary mid-block marked crosswalks and the use of appropriate traffic control devices.
- 10. W11-2 sign and W16-7 plaque shall be fluorescent yellow-green background.



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### **Bicycle Lane/Shared Lane/Shared-Use Paths**

### **Bicycle Guidance**

The construction of bicycle lanes, shared lanes and shared-use paths has increased in recent years due to renewed interest in cycling for travel and commuting. To provide for the safety of the users of these lanes and paths during street repair or construction, the following guidance has been developed to assist in creating Temporary Traffic Control (TTC) Plans for these facilities. The examples in this document will illustrate various examples of applications for accommodating these users under different site conditions.

Guidance through the work area must be provided for otaher shared-use path users such as pedesdrians, in-line skaters, joggers, etc. Refer to the pedestrian guidance section of this document as well as the Virginia Work Area Protection Manual for additional guidance information for these shared-use path users.

The continuity of a designated bikeway should be maintained through the work zone if possible. The continuity of the designated bikeway is especially important where bicyclists have been traveling on a shoulder, bike lane, or shared use path adjacent to a high speed (greater than 35 mph) motorized vehicle travel lane. There is a safety concern if bicyclists were to share the travel lane with motorized vehicles through the work zone on these high speed routes. If available, a reasonable detour route on a lower speed roadway should be provided.

On roadways with 4 or more travel lanes and bicycle lanes or bikeable shoulders, one or more travel lanes could be closed or lanes narrowed to maintain space for the bicycle lane through the work zone. Any lane closures must follow the department's lane closure guidance.

In low-speed (35 mph or less) urban areas where bicycles are sharing the travel lane with motorized vehicle traffic, the work zone for the motorized vehicles should be adequate for bicyclists as well.

On-road bicyclists should not be directed onto a path or sidewalk except where such a path or sidewalk is a shared-use path, or there is no practical alternative during a rehabilitation project.

If a bikeway detour is unavoidable it should be as short and direct as practical.

If a portion of a bikeway is to be closed due to construction activities and the detoured bikeway follows a complex path not in the original bikeway corridor, then a full detour plan should be developed and implemented. The TTC Plan for the detour of the bikeway should include all necessary advanced warning (W21 series) signs and detour (M4-9 series) signs, as well as any other temporary traffic control devices necessary to guide bicyclists along the detour route.

The BICYCLES MAY USE FULL LANE (R4-11) sign should be used when the following conditions exist:

- Roadways and streets with a maximum speed limit of 35 MPH, and
- Where the combined travel lane and usable shoulder width is less that 14 feet.

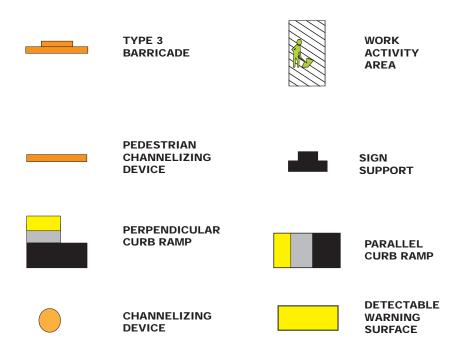
The BICYCLES MAY USE FULL LANE (R4-11) sign should not be used on undivided unmarked roadways.

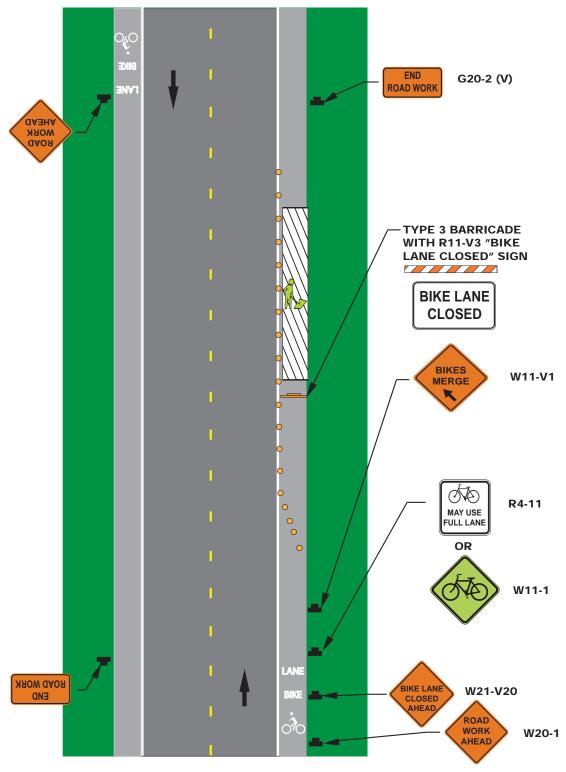
The Bicycle Warning (W11-1) symbol sign with the SHARE THE ROAD (W16-1p) supplemental plaque should be used when the following conditions exist:

- Where a bike lane or shared-use path end and users are detoured to the roadway,
- Where the posted speed limit is 40 MPH or greater, and
- Where the combined travel lane and usable shoulder width on the detour route is reduced to less than 14 feet.

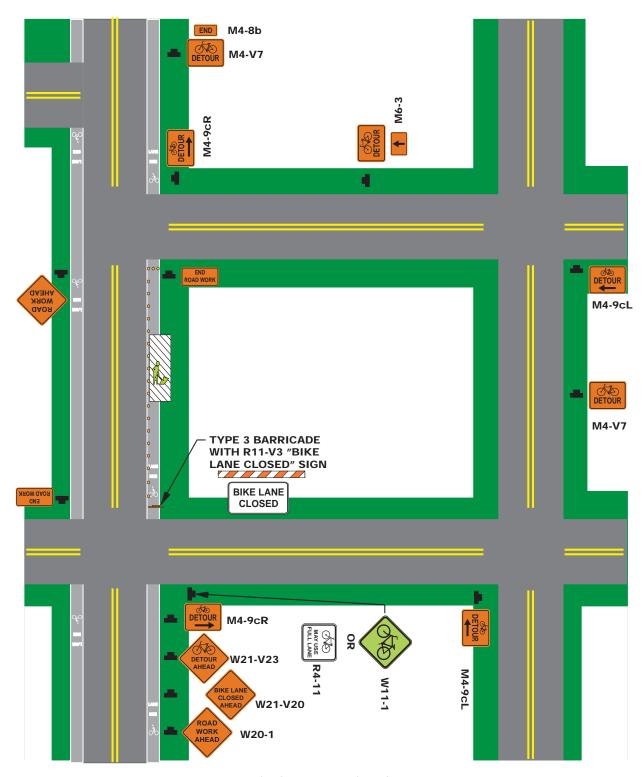
Refer to Part 9 of the current edition of the Virginia Supplement to the 2009 MUTCD for additional information on the application of the BICYCLES MAY USE FULL LANE (R4-11) sign and the Bicycle Warning (W11-1) symbol sign with the SHARE THE ROAD (W16-1p) supplemental plaque.

The following examples contain additional information on accommodating bicycles in work zones. Refer to the Work Area Protection Manual for specific information on the application, placement and spacing of temporary traffic control devices.

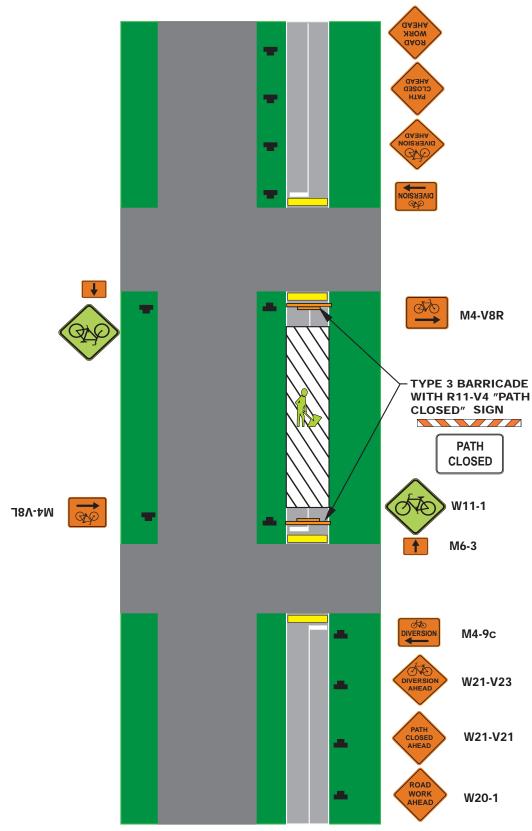




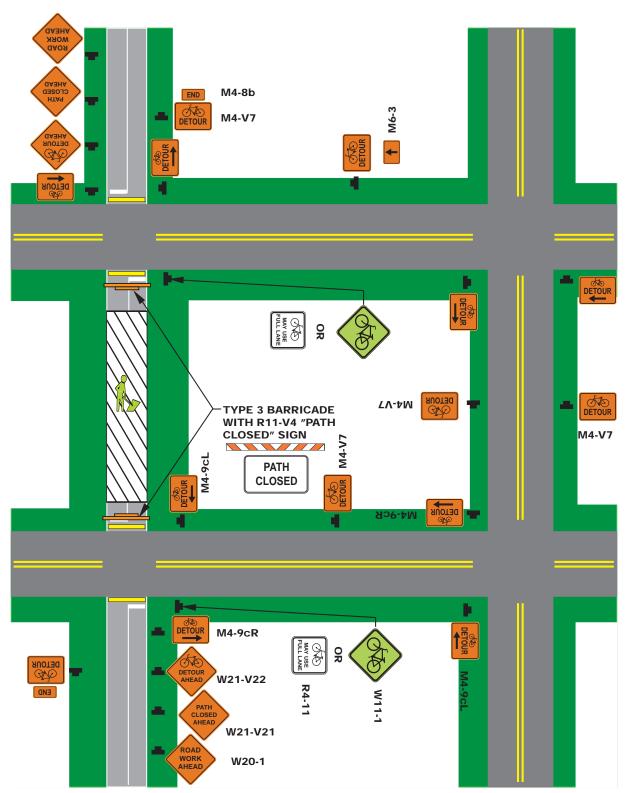
**EXAMPLE OF A BICYCLE LANE CLOSURE** 



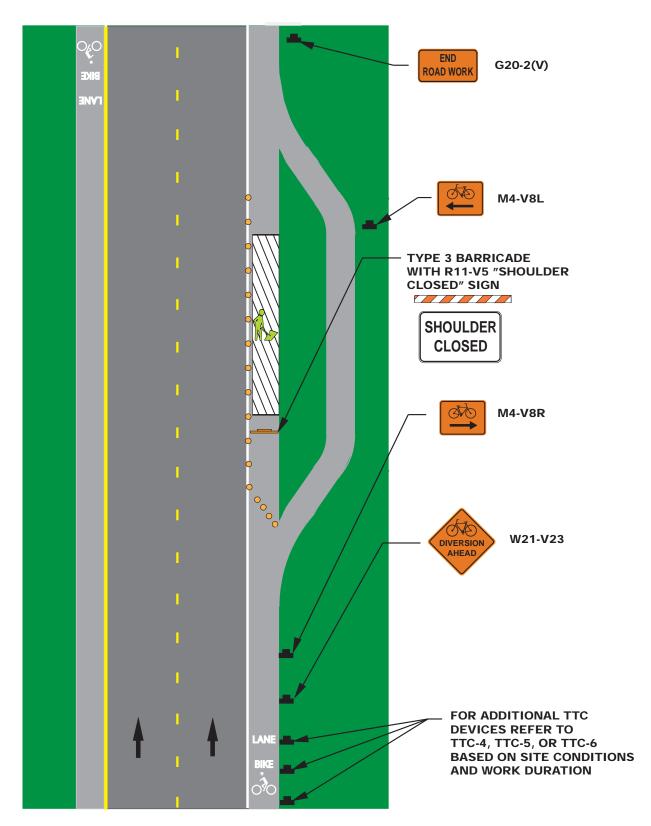
**EXAMPLE OF A BICYCLE LANE CLOSURE WITH DETOUR** 



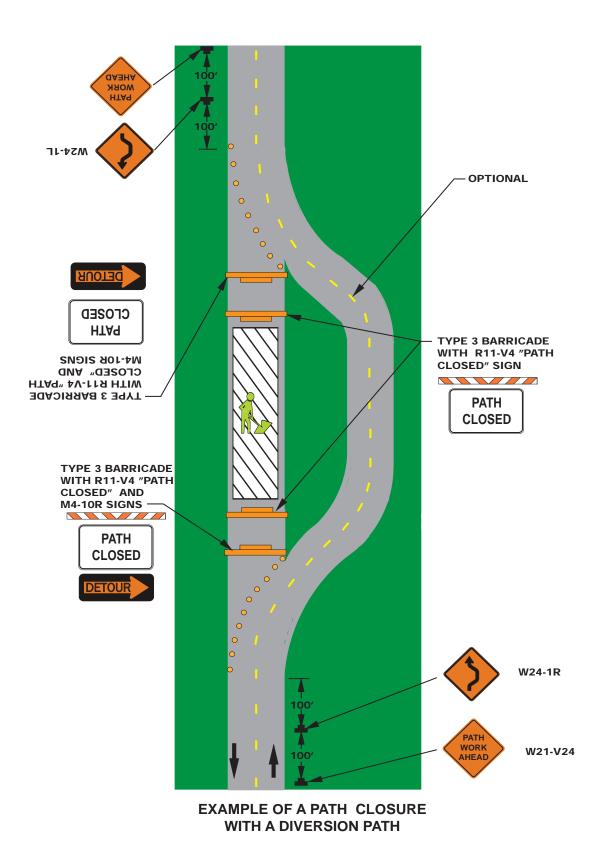
**EXAMPLE OF A SHARED-USE OR BICYCLE PATH CLOSURE WITH DIVERSION** 



**EXAMPLE OF A SHARED-USE OR BICYCLE PATH CLOSURE WITH DETOUR** 



EXAMPLE OF A SHOULDER CLOSURE WITH A BICYCLE DIVERSION PATH



# **ADA/Pedestrian/Bicycle Accessibility Checklist**

### **ADA/Pedestrian Checklist**

This project has been reviewed for the various temporary traffic control provisions for pedestrian accessibility considerations contained in the current MUTCD, the Virginia Work Area Protection Manual, and the guidance published in the Virginia Work Zone Pedestrian and Bicycle Guidance document. Considerations as listed below have been reviewed and where applicable, deviations and/or exceptions from the MUTCD, the Virginia Work Area Protection Manual, and the Virginia Work Zone Pedestrian and Bicycle Guidance document are documented.

IS IT REASONABLE TO EXPECT THAT PEDESTRIANS WILL BE PRESENT WITHIN THE VICINITY OF THE PROPOSED TEMPORARY TRAFFIC CONTROL ZONE?

YES - complete the following checklist

NO - document your conclusion

When existing pedestrian facilities (routes) are disrupted, closed, or relocated in a temporary traffic control zone, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility.

- A. Will a reasonably safe, convenient, and accessible route be provided that replicates as much as practical the characteristics of the existing pedestrian facility?
  - YES NO (partially) document your decision
- B. Will access be provided to current or temporary transit stops?
  - YES NO (partially) document your decision
- C. Will all pedestrian facilities near the work zones be separated from the work area by appropriate barriers that maintain the accessibility and detectability for pedestrians with disabilities?
  - YES NO (partially) document your decision
- D. Will a smooth, continuous hard surface that will not cause tripping or restrict wheelchair use be provided throughout the entire length of the temporary pedestrian facility?
  - YES NO (partially) document your decision

E. Will blocked routes, alternate crossings, sign and signal information be communicated to pedestrians with visual disabilities? Devices may include audible information devices and accessible pedestrian signals. Other ADA compliant pedestrian devices may include barriers/ channelizing devices that are detectable to the pedestrians traveling with the aid of a long cane or who have low vision. Where pedestrian traffic is detoured to a signal, engineering judgment should be used to determine if pedestrian signals or accessible pedestrian signals should be considered for crossings along an alternate route.

YES NO (partially) document your decision

F. Will sidewalk(s) be closed properly with advance notification to the public? Advance notification of sidewalk closures shall be provided to the public. When a sidewalk is closed, a barrier that is detectable by a person with a visual disability traveling with the aid of a long cane shall be placed across the full width of the closed sidewalk.

YES NO (partially) document your decision

G. Will channelization with continuous edging be used to delineate a pedestrian pathway throughout the length of the facility such that pedestrians using a long cane can follow it? (These detectable edgings should adhere to the provisions of Section 6F.68 of the Virginia Work Area Protection Manual.)

YES NO (partially) document your decision

H. Will the width of the existing pedestrian facility be provided for the temporary facility? Where it is not possible to maintain a width of 60 inches throughout the entire length of the pedestrian route, is a 48 inch wide path with a 60 x 60 inch passing space provided at least every 200 feet to allow individuals in wheelchairs to pass?

YES NO (partially) document your decision

I. Is the accessible route free of intrusions by traffic control devices and construction materials? Signs and other devices mounted lower than 7 feet above the temporary pedestrian pathway should not project more than 4 inches into accessible pedestrian facilities. Barricade rail supports should not project into pedestrian circulation routes more than 4 inches from the support between 27 inches and 80 inches from the surface. Ballast shall not extend into the accessible passage width of 60 inches. Refer to Section 6F.76 of the Virginia Work Area Protection Manual for more details.

YES NO (partially) document your decision

## **ADA/Pedestrian/Bicycle Accessibility Checklist**

### **Bicycle/Shared-Use Path Checklist**

This project has been reviewed for the various temporary traffic control provisions for bicycle considerations as well as other self-propelled devices contained in the current MUTCD, the Virginia Work Area Protection Manual, Virginia Work Area Protection Manual and the guidance published in the Virginia Work Zone Pedestrian and Bicycle Guidance document. Considerations as listed below have been reviewed and where applicable, deviations and/or exceptions from the MUTCD, the Virginia Work Area Protection Manual, and the Virginia Work Zone Pedestrian and Bicycle Guidance document are documented.

IS IT REASONABLE TO EXPECT THAT MIXED TRAFFIC (BICYCLISTS/ MOTORIZED VEHICLES) WILL BE PRESENT WITHIN THE VICINITY OF THE PROPOSED TEMPORARY TRAFFIC CONTROL ZONE?

YES - complete the following checklist

NO - document your conclusion

When existing bicycle facilities (routes) are disrupted, closed, or relocated in a temporary traffic control zone, the temporary facilities shall include features consistent with the features present in the existing bicycle facility.

- A. Will a reasonably safe, convenient, and accessible path be provided that replicates as much as practical the characteristics of the existing bicycle facility?
  - YES NO (partially) document your decision
- B. Will bicycle facilities near the work zones be separated from the work area by appropriate barriers?
  - YES NO (partially) document your decision
- C. Will blocked routes, alternate crossings, sign and signal information be communicated to bicyclists?
  - YES NO (partially) document your decision
- D. Will a bike lane or shared use path be closed properly with advance notification to the public?
  - YES NO (partially) document your decision

- E. Is the detour route used to guide bicyclists throughout the length of the detour properly signed such that bicyclists can follow the alternate route?
  - YES NO (partially) document your decision
- F. Does the temporary bicycle facility provide the same level of continuity as the existing bicycle facility?
  - YES NO (partially) document your decision

### Resources

United States Access Board's Proposed Right-of-Way Accessibility Guidelines:

http://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines

 United States Access Board's Public Right of Way Access Advisory Committee's Special Report on Accessible Public Rights-of-Way Planning and Designing for Alterations:

http://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/guidance-and-research/accessible-public-rights-of-way-planning-and-design-for-alterations

Applying the Americans with Disabilities Act in Work Zones: A Practitioner Guide:

https://www.workzonesafety.org/research/record/25221

• Pedestrian Safety and Accessibility in Work Zones:

http://www.workzonesafety.org/files/documents/training/fhwa\_wz\_grant/atssa\_pedestrian\_work\_zones.pdf

Guidance Sheet-Temporary Traffic Control Zone Pedestrian Access Considerations:

https://www.workzonesafety.org/node/10588

• FHWA's A Resident's Guide for Creating Safe and Walkable Communities:

http://safety.fhwa.dot.gov/ped\_bike/ped\_cmnity/

Manual on Uniform Traffic Control Devices (MUTCD):

http://mutcd.fhwa.dot.gov/kno\_2009.htm

2011 Virginia Supplement to the MUTCD:

http://www.virginiadot.org/business/virginia\_mutcd\_supplement.asp

2011 Virginia Work Area Protection Manual:

http://www.virginiadot.org/business/resources/Wrk zone/2011 WAPM Rev 1.pdf