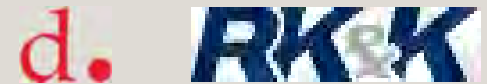


DEVELOPMENT OF A WORK ZONE MANAGEMENT MANUAL FOR THE DISTRICT OF COLUMBIA

*2016 MID-COLONIAL DISTRICT ANNUAL CONFERENCE
APRIL 18, 2016*

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CHALLENGES

DISTRICT OF COLUMBIA



Providing suitable notifications and accommodations for pedestrians



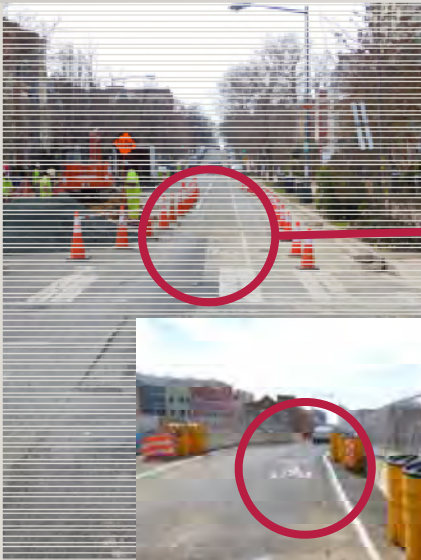
Maintaining ADA accessibility



Suitability and appropriate use of traffic control devices.

CHALLENGES

DISTRICT OF COLUMBIA



Maintaining bicycle facilities



Inconsistency of flagging operations



Block spacing (sign spacing)

CHALLENGES

DISTRICT OF COLUMBIA

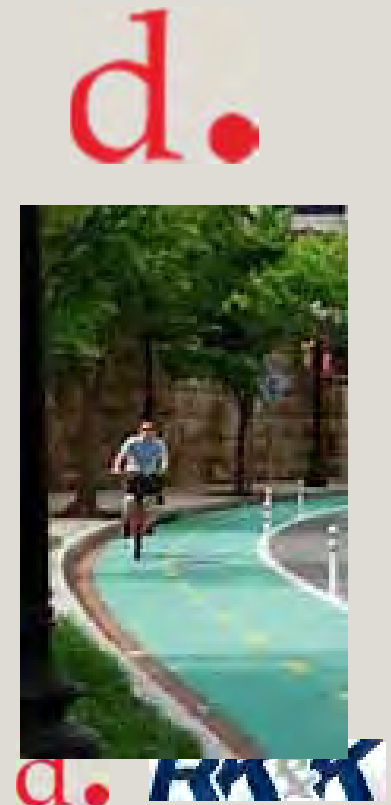


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WHY DEVELOP JURISDICTION-BASED WORK ZONE STANDARDS?

- Specifically & autonomously define the conditions & policies for closures based on jurisdictional characteristics
- Address specific agency challenges
- Allows for “breaking out” of facilities (i.e., pedestrian, bike) to define their policies
- Engage departmental staff in the work zone management policy development process



PROJECT GOALS

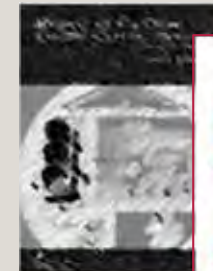
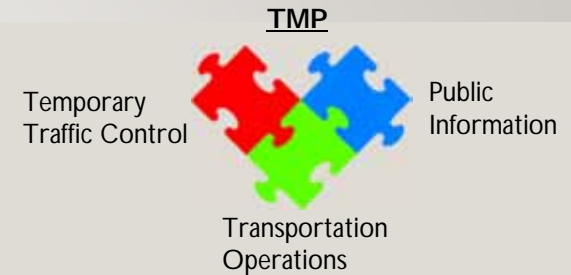
WORK ZONE MANAGEMENT MANUAL

- Update Primary Work Zone Documents
- Create a Comprehensive Documentation of all DDOT Work Zone Policies
- Improve Temporary Traffic Control Plan Quality
- Work Towards Minimizing Work Zone Impacts
- Improve Safety & Operations through Work Areas



PRIMARY WZMM ELEMENTS

- **1. Work Zone Safety & Mobility Policy** – How work zone management techniques are integrated
- **2. Transportation Facility Closure Policy** – What steps and considerations DDOT and contractors must consider when restricting access
- **3. DC Temporary Traffic Control Manual** - DC's version of the MUTCD Part 6



1. WORK ZONE SAFETY & MOBILITY POLICY

- **GOALS:**

- Update District of Columbia WZ S&MP (Published 2007)
- Ensure better consistency with federal standards
- Clarify the term “Significant Project”
- Provide guidance for various levels of TMP
 - Type A TMP – Basic
 - Type B TMP – Intermediate
 - Type C TMP – Major
- Identify specific work zone management tools for TMP levels (TC, TO, and PI)



JURISDICTION-BASED CONSIDERATIONS

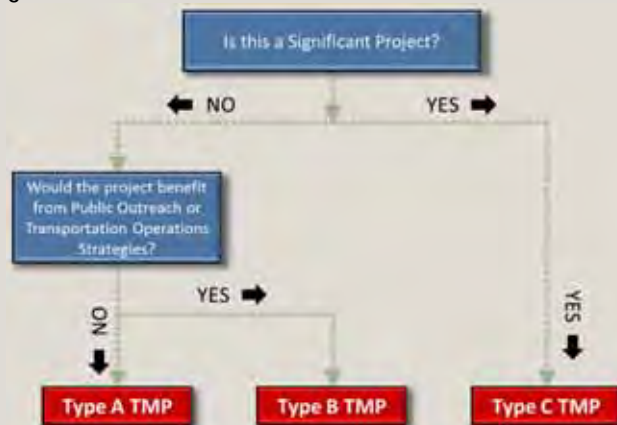
WORK ZONE SAFETY & MOBILITY POLICY

- Need to redefine roles within WZM for a constantly evolving agency
- Consistency in how transportation management is planned for projects of similar scale
- New standards and practices already in use
- Constant need for public outreach & engagement

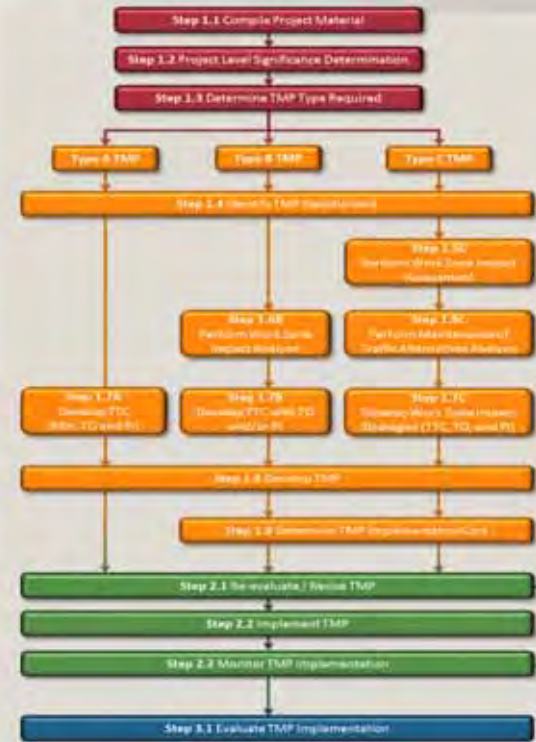


WORK ZONE SAFETY & MOBILITY POLICY TOOLS

Identifying TMP Type



Identifying TMP Development Process



Identifying Strategy Implementation Levels

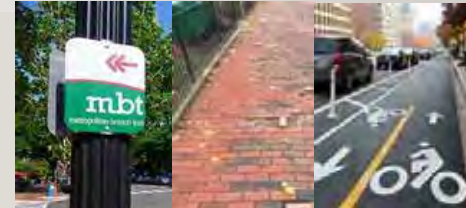
STRATEGY CATEGORIES	TMP Types		
	Type A	Type B	Type C
Temporary Traffic Control (TTC)	Full	Full	Full
Transportation Operations (TO)	Minimal	Partial	Full
Public Information (PI)	Minimal	Partial	Full

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2. DC TRANSPORTATION FACILITY CLOSURE POLICY

- **GOALS:**
 - How? When? To What Extent?
 - Detail the closure policies for all types of facilities
 - Define the transportation facility closure process (i.e., planned & unplanned)
 - Establish waiver process
 - Clarify roles & responsibilities for compliance



JURISDICTION-BASED CONSIDERATIONS

TRANSPORTATION FACILITY CLOSURE POLICY

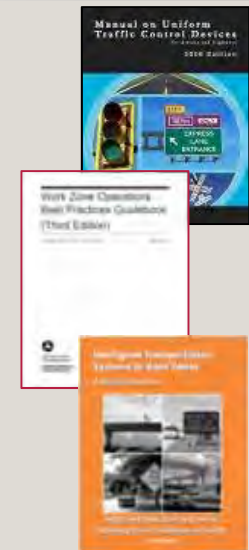
- Desire to integrate more stringent policies regarding pedestrians and bicycles
- Need to define closure policy for different of facilities (i.e., transitways, bike lanes, parking lanes, access)
- Consideration of parking as a valuable commodity
- More clarity needed for addressing special events, emergency repairs, etc.



3. DC TEMPORARY TRAFFIC CONTROL MANUAL

- GOALS:

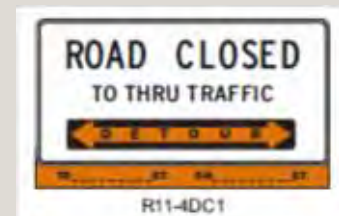
- Perform complete update of DC Temporary Traffic Control Manual (2006)
- Consolidate DDOT's Current Policies and Practices
- Integrate latest version of MUTCD Part 6
- Incorporate National Best Practices and State-of-the-Practice Strategies
- Tailor Content to the Urban Environment



JURISDICTION-BASED CONSIDERATIONS

TEMPORARY TRAFFIC CONTROL MANUAL

- Alternative modes ("streetcars, pedestrians, and cyclists")
- Need to specify ADA
- Daily, Weekly, Hourly Review of TTC in Work Zones
- Training Requirements (staff & supervisors)
- Roadway Layout (i.e., block lengths, parking)
- DC-specific traffic controls



DOCUMENT DEVELOPMENT PROCESS

DC TEMPORARY TRAFFIC CONTROL MANUAL

- Best Practices Review
 - Federal, Maryland, Virginia, California, Delaware, and yes... DC
- Led to Comparative Matrices
 - TTCM Narrative, Approved Signs, Typical Applications
- Stakeholder Meetings
 - Division / Discipline-based
 - IPMA, PTSA, PPSA, PSRA, TOA
 - By DC TTCM Section



RK&K



d. RK&K

DC TEMPORARY TRAFFIC CONTROL MANUAL

COMPARATIVE MATRICES

- Use of 5 States (including DC)
 - Every Chapter: 6A through 6I
 - Comparison of Every Paragraph
 - Cross-Comparison with Recent DDOT Policies
 - Used Federal MUTCD as a “baseline”
 - Documented “changes” and “justifications”

Section / Paragraph	DC	Feds	VA	CA	MD	DE
6D.02 / Paragraph 3	≡	≡	≡	≡	✓	≡

Option:
 a) When work occurs on a high-volume, highly congested facility, a vehicle storage or staging space may be provided for incident response and emergency vehicles (for example, tow trucks and fire apparatus) so that these vehicles can respond quickly to road user incidents.

Standard:
 (DDOT Revision) With the exception of the protection vehicle placed near the work area, no storage of equipment, vehicles, or material shall be permitted within the buffer space.

DC TEMPORARY TRAFFIC CONTROL MANUAL

"URBANIZING" FIGURES



d.



d.



d.

DC TEMPORARY TRAFFIC CONTROL MANUAL

"URBANIZING" FIGURES



DC TEMPORARY TRAFFIC CONTROL MANUAL

EXAMPLE: TABLE 6C-2A. LENGTH OF LONGITUDINAL BUFFER SPACE



Table 6C-2. Stopping Sight Distance as a Function of Speed

Speed*	Distance
20 mph	110 feet
25 mph	155 feet
30 mph	210 feet
35 mph	270 feet
40 mph	340 feet
45 mph	420 feet
50 mph	510 feet
55 mph	610 feet
60 mph	720 feet
65 mph	840 feet
70 mph	970 feet
75 mph	1110 feet

* Posted speed, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed



Table 6C-2a. Length of Longitudinal Buffer Space (Urban)

Speed*	Distance
20 mph	35 feet
25 mph	55 feet
30 mph	85 feet
35 mph	120 feet
40 mph	170 feet
45 mph	220 feet
50 mph	280 feet
55 mph	335 feet
60 mph	415 feet
65 mph	485 feet

* Posted speed, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed.

Table 6C-2b. Length of Longitudinal Buffer Space (Freeway/Expressway)

Speed*	Distance
40 mph	305 feet
45 mph	360 feet
50 mph	425 feet
55 mph	495 feet
60 mph	570 feet
65 mph	645 feet
70 mph	730 feet
75 mph	820 feet

* Posted speed, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed.

- FHWA – Based on Stopping Sight Distance
- Use of reduced spacing for “urban” and reversion to FHWA standards for “freeway/expressway”.

DC TEMPORARY TRAFFIC CONTROL MANUAL

EXAMPLE: SECTION 6D – PEDESTRIAN, BICYCLE, AND WORKER SAFETY

- Integration of Section 3314 (Safe Accommodation for Pedestrian and Bicyclists) of Title 24, Chapter 33.
 - Pedestrian and bicycle traffic controls required for all closures or disruptions.
 - Maintain access to businesses, residences, and crosswalks
 - Adherence required for public right-of-way occupancy permit
 - Blockage of sidewalk or bicycle facilities treated in the same manner as lane closure
 - Avoid staging or stopping alongside pedestrian and bicycle paths



MOVING FORWARD

- This is a constantly-evolving document
 - Intended to grow and change with the agency
 - Expand areas of focus
 - Next version of the MUTCD
- Integration of Smart Work Zone standards
- More Consideration for Transit
 - DC Streetcar
 - Alternatives for transit access
- Document delivery formats



THANK YOU!!