

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 http://www.montgomerycountymd.gov/dot-traffic/temp_traffic_ctrl.html) 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:

1. The vast majority of the projects do not require site specific TTCP – instead, standard traffic control drawings, available online at http://www.montgomerycountymd.gov/dot-traffic/temp_traffic_ctrl.html), 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 <http://www.roads.maryland.gov/index.aspx?PageId=835>, 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 any 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, 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;
 - All detours must be approved by DTEO in advance;
 - 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 any 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:

- DTEO at 240-777-2190
- Montgomery County Transportation System Engineering Team Manager at 240-777-8778
- TMC at 240-777-2190
- Montgomery County Transit at 240-777-5800
- Montgomery County Public Schools, Local Depot Manager
- 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 permittee 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.
 - xi) 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 <http://www.roads.maryland.gov/index.aspx?PageId=835>.
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:
 - Flaggers cannot see each other
 - 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.