

# ATTACHMENT O

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## DESIGN AND CONSTRUCTION REQUIREMENTS: MAINTENANCE OF TRAFFIC

Maintenance of Traffic (MOT) Special Provisions in addition to the Governing Regulations listed in Section 8.1 of this document:

The following requirements apply to both PART 1 and PART 2 of this Project

### 1 GENERAL

All temporary MOT devices shall comply with the American Association of Highway and Transportation Officials (AASHTO) Manual for Assessing Safety Hardware (MASH).

### 2 MOT RESTRICTIONS

#### 2.1 IR-76 / IR-77 / IR-277 / SR-8 MAINLINE

1. Duration of lane closures and restrictions shall be as per the Permitted Lane Closure Chart or Table 1 - Lane/Ramp Closure Matrix. The Permitted Lane Closure Chart used for this project shall be the most current chart available on the date this project was advertised for sale.
2. Should the Contractor fail to meet any of the requirements of the Permitted Lane Closure Chart or Table 1 - Lane/Ramp Closure Matrix, the Contractor shall be assessed disincentives in the amount of \$3,000.00 per hour or portion thereof that the lane reduction remains beyond the specified limit.
3. The Permitted Lane Closure Chart can be found at <http://plcm.dot.state.oh.us/>
4. No further deviations to the PLCC, other than those listed in this scope, will be permitted without approval of the MOTEC committee.

#### 2.2 INTERCHANGE RAMPS

The DBT shall keep the existing interchange ramps open to traffic. Allowable ramp closures are listed below, but the entrance and exit ramps at adjacent interchanges are not to be closed concurrently (refer to exceptions at end of section). The DBT shall refer to Table 1 - Lane/Ramp Closure Matrix for ramp closure durations, exceptions, and impermissible concurrent ramp closures. A disincentive shall be assessed in the amount of \$3,000.00 per hour or portion thereof that the ramp closure remains beyond the specified limit.

1. IR-76, IR-277 and US 224 Interchange
  - a. Ramp A: EB 76 to EB 76 - closure of ramp allowed with detour
  - b. Ramp B: WB 76 to EB 277 - maintain ramp traffic
  - c. Ramp C: WB 76 to WB 76 - maintain ramp traffic
  - d. Ramp D: WB 277 to EB 76 - traffic may be detoured
2. IR-76, Kenmore Blvd and Battles Ave
  - a. Ramp E: 22<sup>nd</sup> St to WB 76 - closure of ramp allowed
  - b. Ramp F: WB 76 to Battles Ave - closure of ramp allowed
  - c. Ramp G: EB 76 to Kenmore Blvd - closure of ramp allowed
  - d. Ramp H: Kenmore Blvd to EB 76 - closure of ramp allowed
3. IR-76 and IR-77 Interchange (West Interchange)
  - a. Ramp T: SB 77 to WB 76 - closure of ramp allowed with detour
  - b. Ramp U: EB 76 to EB 76/SB 77 - closure of ramp allowed with detour
  - c. Ramp V: WB 76/NB 77 to WB 76 - closure of ramp allowed
  - d. Ramp W: EB 76 to NB 77 - closure of ramp allowed with detour

4. IR-76/77 and East Ave Interchange
  - a. Ramp J: East Ave to WB 76/NB 77 - closure of ramp allowed
  - b. Ramp L: East Ave to EB 76/SB 77 - closure of ramp allowed
5. IR-76/77 and SR-59 Interchange
  - a. Ramp G: EB 76/SB 77 to South St - maintain ramp traffic
  - b. Ramp EN from EB 76/SB 77 to NB 59 - maintain ramp traffic
  - c. Ramp from SB 59 to WB 76/NB 77 - closure of ramp allowed with detour
  - d. Ramp W-10: WB 76/NB 77 to Russell Ave - maintain ramp traffic
  - e. Ramp W-11: South St to EB 76/SB 77 - closure of ramp allowed
6. IR-76, IR-77 and SR-8 Interchange (Central Interchange)
  - a. Ramp D: WB 76 to NB 8 - maintain ramp traffic
  - b. Ramp E-2: WB 76 to Inman St - permanently close ramp
  - c. Ramp M: EB 76/SB 77 to SB 77 - closure of ramp allowed with detour
  - d. Ramp N: WB 76 to SB 77 - closure of ramp allowed with detour
  - e. Ramp O: NB 77 to WB 76/NB 77 - closure of ramp allowed with detour
  - f. Ramp P: SB 8 to WB 76/NB 77 - closure of ramp allowed with detour
  - g. Ramp R: EB 76 to NB 8 - closure ramp allowed with detour
  - h. Ramp S-2: SB 77 to Lover's Lane - permanently close ramp
  - i. Ramp S: SB 8 to EB 76 - closure of ramp allowed with detour
  - j. Ramp T: NB 77 to EB 76 - closure of ramp allowed with detour
7. IR-77, IR-277, US-224 and Waterloo Rd Interchange
  - a. Ramp A: EB 277 to SB 77 - maintain ramp traffic
  - b. Ramp B: SB 77 to WB 277 - closure of ramp allowed with detour
  - c. Ramp B-1: WB 224 to SB 77 - maintain ramp traffic
  - d. Ramp B-2: NB 77 to WB 277 - maintain ramp traffic
  - e. Ramp C: NB 77 to EB 224 - maintain ramp traffic
  - f. Ramp C-1: EB 224 to NB 77 - maintain ramp traffic
  - g. Ramp C-2: SB 77 to EB 224 - maintain ramp traffic
  - h. Ramp D: WB 224 to NB 77 - closure of ramp allowed
  - i. Ramp S-11: Allendale Ave to NB 77 - closure of ramp allowed
  - j. Ramp S-12: SB 77 to Waterloo Rd - maintain ramp traffic
8. IR-77 and Wilbeth Road (SR-764) Interchange
  - a. Ramp S-7: Wilbeth Rd to NB 77 - closure of ramp allowed
  - b. Ramp S-8: SB 77 to Wilbeth Rd - maintain ramp traffic
  - c. Ramp S-9: NB 77 to Wilbeth Rd - maintain ramp traffic
  - d. Ramp S-10: Wilbeth Rd to SB 77 - closure of ramp allowed
9. IR-77 and Archwood Ave Interchange
  - a. Ramp S-5: Archwood Ave to NB 77 - closure of ramp allowed
  - b. Ramp S-6: SB 77 to Archwood Ave - maintain ramp traffic
10. IR-77 and SR-261 (Vernon Odom Blvd) Interchange
  - a. Ramp L: SB 77 to 261 - maintain ramp traffic
  - b. Ramp M: Frederick Blvd to NB 77 - maintain ramp traffic
  - c. Ramp N: NB 77 to Frederick Blvd - maintain ramp traffic
  - d. Ramp P: 261 to SB 77 - closure of ramp allowed
11. SR-8 and Perkins St Interchange
  - a. Ramp I: SB 8 to Perkin St - maintain ramp traffic
  - b. Ramp J: Perkins St to NB 8 - maintain ramp traffic
  - c. Ramp K-1: Perkins St/Goodkirk St to SB 8 - maintain ramp traffic
  - d. Ramp L-1: NB 8 to Perkins St/Fountain St - maintain ramp traffic
12. SR-8, Buchtel Ave and Carroll St Interchange
  - a. Ramp P-1: SB 8 to Buchtel Ave - maintain ramp traffic
  - b. Ramp Q: Buchtel Ave to NB 8 - maintain ramp traffic
  - c. Ramp S: NB 8 to Carroll St/Fountain St - maintain ramp traffic
  - d. Ramp T-1: Carroll St/Goodkirk St to SB 8 - maintain ramp traffic

There is an exception to the prohibition of ramp closures of adjacent interchanges. During construction activities where directional traffic along IR-77 is reduced to 2 lanes, the entrance ramps of the three local interchanges along the IR-77 (Waterloo Road, Wilbeth Road and Archwood Avenue) can close simultaneously but only in the direction matching the mainline lane reduction.

### **2.3 CONSTRUCTION SEQUENCING RESTRICTIONS**

The DBT shall sequence the construction to safely and efficiently implement the proposed improvements while maintaining construction schedules and minimizing impacts to the public. The following sequencing restrictions shall be imposed on the project:

1. The following work shall be completed as described in the Scope of Services, Section 6.3
  - a. SUM-8 resurfacing north of Beacon Street
  - b. SUM-76/77 NW Quadrant: Reconstruct failing rigid concrete pavement portions in both directions. North limit of existing rigid pavement is approximately 280 feet north of Ramp P gore. South limit of existing rigid pavement is approximately 220 feet east of Ramp U gore.
2. Complete and bring into service the new pedestrian bridge south of Lafollette Street prior to the closure and removal of the Lafollette Street bridge.
3. The DBT shall refer to Table 1 - Lane/Ramp Closure Matrix when preparing the Conceptual Maintenance of Traffic Plan.

### **2.4 MOT REFERENCE DOCUMENTS**

1. Scope of Services Attachment D contains the -Conceptual MOT Reference document. This reference document is a high-level identification of potential phases and possible sequencing of the major work that will impact traffic operations. This is a reference document and is not contractual.
2. Scope of Services Attachment V contains the Central Interchange MOTAA (SUM-76-77 CI MOTAA Report) document. This reference document was finalized in January 2018 prior to initiation of this project and was not updated to account for the expanded roadway widening, reconstruction, and additional design changes related to the Central Interchange improvements. This is a reference document and is not contractual.

Table 1 - Lane / Ramp Closure Matrix

| Roadway/<br>Ramp   | Approximate<br>Workzone<br>Limits                       | Exist #<br>Mainline<br>Thru<br>Lanes | Min. #<br>MOT<br>Mainline<br>Thru<br>Lanes | Required System Ramp<br>Closure   | Required<br>Concurrent<br>Local Ramp Closure                                     | Maximum Ramp<br>Closure Duration(s)                           | Concurrent 2-lane<br>Operation Not<br>Permissible                        | Concurrent Ramp<br>Closure Not<br>Permissible  | Required Temporary<br>Improvements   |
|--|---|--------------------------------------|--|---|--|---|--|--|--|
| 8NB/SB   | Beacon St to Perkins St                                 | 3                                    | PLCC                                       | N/A   | N/A  | N/A   | N/A  | N/A  | N/A  |
| 77NB/77SB<br>(construct outside<br>improvements)             | Vernon Odom Blvd to<br>west of East Ave                 | 6                                    | 4  | 76EB to 77NB<br>76EB to 76EB (at 77)<br>77SB to 76WB<br>277WB to 76EB<br>76EB to 76EB (at 277)<br>76WB/77NB to 76WB (permissible) | Kenmore Blvd to 76EB<br>22 <sup>nd</sup> St to 76WB<br>(on ramps)<br>261 to 77SB | 150-Day   | 77NB from Waterloo Rd<br>to 8<br>77SB from Waterloo Rd<br>to 8           | 77NB to 76WB<br>76EB to 77SB   | Restripe 77SB to maintain 4<br>lanes south of Cole Ave to<br>277 (also applies to inside<br>improvements)  |
| 77NB/77SB<br>(construct inside<br>improvements)              | Vernon Odom Blvd to<br>west of East Ave                 | 6                                    | 0  | 8SB to 76WB/77NB<br>77NB to 76WB/77NB   | N/A  |   | 77NB from Waterloo Rd<br>to 8<br>77SB from Waterloo Rd<br>to 8           | 77NB to 76EB<br>76EB to 77SB   | Restripe 76WB Ramp (at 77)<br>to create 2 lane exit<br>(merge to 1 lane on ramp):<br>Reduce 76EB-77NB ramp to<br>1 lane  |
| 8SB to 76EB  | Length of Ramps   | N/A                                  | N/A  | Lane S  | N/A  | Lane S: 45-Day  | N/A  | N/A  | N/A  |
| Ramp R<br>(76EB to 8NB)                                      | Ramp  | 1                                    | 1  | Yes   | N/A  | Ramp R: 60-Day  | 77NB from Waterloo Rd<br>to 8  | N/A  | N/A  |
| Ramp N<br>(76WB to 77SB)                                     | Ramp  | 1                                    | 1  | Yes   | N/A  | Ramp N: 60-Day  | 76WB west of East Ave<br>to Princeton St                                 | N/A  | N/A  |
| 76EB   | west of East Ave<br>to Princeton St                     | 3                                    | 2  | 76EB to 76EB (at 77)<br>76EB to 76EB (at 277)<br>76EB to 77SB   | East Ave On-ramp (EB)<br>South St On-ramp  | 640-Day   | 77NB from Waterloo Rd<br>to 8<br>76 WB from East Ave to<br>Princeton St. | 77NB to 76WB<br>77NB to 76EB   | N/A  |
|  | east of Structure<br>SUM-76-1154R to<br>Inman St bridge | 2                                    | 1  |   |  |   |  |  |  |
| 77SB<br>Ramp M (76EB to<br>77SB)                             | Waterloo Rd to 8  | 3                                    | 2  | 76EB to 77SB<br>77SB to 277WB<br>76EB to 76EB (at 77)<br>76EB to 76EB (at 277)  | Wilbeth Rd On-ramp<br>(SB)<br>East Ave On-ramp (EB)                              | 640-Day<br>Wilbeth (210-Day)<br>77SB-277WB (210-<br>Day*)     | 77NB from Waterloo Rd<br>to 8  | 8SB to 76WB  | (*) 76WB/77NB: Restripe to<br>maintain 4 lanes from Main St<br>to 76WB Off-ramp; Exit 2 lanes<br>at 76WB Off-ramp (inside<br>merge vicinity of Morse St<br>overpass); Reduce 76EB-77NB<br>ramp to 1 lane |
| 76EB   | Allyn St to Ramp M                                      | 4                                    |  |   |  |   |  |  |  |
| 76WB   | west of East Ave to<br>Princeton St                     | 3                                    | 2  | 77NB to 76WB<br>8SB to 76WB (inside work area)<br>59SB to 76WB (outside work<br>area)   | East Ave Off-ramp<br>(outside work area)   | 640-Day<br>59SB to 76WB: 320-Day                              | 76EB from East Ave to<br>Princeton St                                    | 76EB to 77NB<br>77SB to 277WB  | N/A  |
| 77NB<br>Ramp T (77NB to<br>76EB)<br>Lane O (77NB to<br>76WB) | Waterloo Rd to 8  | 3                                    | 2  | 77NB to 76EB<br>77NB to 76WB  | Waterloo Rd, Wilbeth<br>Rd<br>& Archwood Ave<br>On-ramps (NB)                    | 640-Day<br>77NB-76EB (210-Day)<br>Service Ramps (210-<br>Day) | 77SB from Waterloo Rd<br>to 8  | 76EB to 77NB<br>76EB to 76EB (at 77)   | N/A  |
| 76WB   | Brown St to Sumner St                                   | 4                                    |  |   |  |   |  |  |  |
| 76WB   | west of 8 to Inman St                                   | 2                                    | 1  | N/A   | N/A  | N/A   | 77SB from Waterloo Rd<br>to 8  | 76WB to 77SB<br>(new flyover shall be open<br>before lane reduction is<br>permitted) | N/A  |

### 3 MAINTENANCE OF TRAFFIC:

This item shall consist of maintenance of traffic on existing roadways and ramps in accordance with the Ohio Manual of Uniform Traffic Control Devices for Streets and Highways (OMUTCD), and the following:

The Contractor shall inform the District Office (330) 786-2208, eighteen (18) days prior to the beginning of construction work.

Minimum lane width(s) during construction shall be eleven (11) feet.

The maximum time limit for running traffic on any section of intermediate course is 18 months. The surface course shall be placed prior to reaching this time limit.

A minimum clearance of two (2\*) foot shall be maintained between traffic and channelizing devices.

A minimum of two (2\*) feet shall be maintained between an edge line and the edge of the pavement.

\*The minimum barrier/curb offset may be reduced to 1 foot when necessary in spot locations. Spot locations include on bridge decks, on approach slabs, and between bridge piers only. Standard taper rates shall apply in the shoulder transition from 2 foot to 1 foot; and vice-versa.

A minimum of one (1) feet shall be maintained between work zone saw cuts/excavation and channelizing devices.

Truck Mounted Attenuators shall be used on this project as shown in the Standard Construction Drawings (SCD) and in the OMUTCD.

Any existing, temporary, or proposed edges of pavement shall be a minimum of two (2) feet away from the edge of a travel lane and shall not exceed allowable drop-off conditions set forth in the SCD MT-101.90.

The structural integrity of the roadway base shall be maintained at the edge of saw cuts/excavations that are adjacent to traffic and/or portable barrier. Portable barrier on bridge decks shall be installed as per the Bridge Design Data sheet PCB-DD.

Prior to moving traffic to the outside or inside shoulder for maintaining traffic, any portions of the Type E anchor assembly which are closer than three (3) feet to the proposed shifted edge line shall be relocated to a minimum of three (3) feet from the proposed edge line. Adjustments to the guardrail attached to the Type E anchor assemblies must be at a taper rate of 25:1 to a 15:1. The DBT shall be responsible for replacing any parts damaged as a result of the relocation operation.

Cones will not be acceptable traffic control devices for lane restrictions or lane reductions that are in operation one half hour after sunset or one-half hour before sunrise. All nighttime lane restrictions shall require drums or barricades at a maximum spacing of fifty-five (55) feet. Weighted channelizers may be used in accordance with the standard construction drawings and the OMUTCD.

The Contractor shall furnish, erect, maintain and subsequently remove all flags, barricades, signs, overlays, sign supports and furnish and maintain all flaggers, watchers and incidentals related thereto.

If traffic is crossed over, the reverse traffic flow will be exposed to obstacles which do not affect the normal traffic flow direction. Downstream bridge parapet ends, guardrail ends, etc. must be protected. All existing guardrail shall be relapped in the direction of travel prior to shifting traffic to contraflow direction. Temporary guardrail, anchor, barrier reflectors [white] and bridge end markers shall be installed by the Contractor as per SCD MT-95.82. Each temporary guardrail installation shall

have a minimum length of 125 feet and the anchor assemblies shall be Type E. Payment for this work shall be included in the Lump Sum bid for Item 614 Maintaining Traffic and shall include furnishing, erecting, maintaining and removing the guardrail, anchor and barrier reflectors.

Payment for all items required by the OMUTCD, the Standard Construction Drawings, the Construction and Material Specifications, the proposal and this scope of services shall be included in the Lump Sum payment for Item 614, Maintaining Traffic and shall include all labor, materials, equipment, and incidentals to perform the required work.

The Contractor shall provide and erect detour signs for all detours including all overhead sign overlays and "CLOSED" plaques required for the detour.

All road/ramp closures have limitation dates with disincentives. Refer to Sections 2.1 and 2.2.

Traffic shall be maintained at all times on all local overhead bridges.

When listing a law enforcement agency outside a municipality in the LEO note, use the closet OSP post (Summit County: Akron Patrol Post, 108 Fir Hill Street, Akron Ohio 44304, (330) 535-2783)

Any work (falsework, traffic protection, containment, etc.) over live traffic by the DBT that reduces the existing vertical clearance is prohibited unless 30 days advanced notice is provided with new proposed vertical clearances. The DBT shall provide field measurements before allowing traffic underneath. If any work is to occur below 14'-6", then signs on the structure and advance warning signs shall be installed a minimum of 2 weeks prior to performing such work. Signing shall be in accordance with the OMUTCD and the Ohio Traffic Engineering Manual (TEM). No work over traffic shall occur with a vertical clearance less than 14'-0". Lowering the vertical clearance during construction is considered the Contractor's Means and Methods of accomplishing the work, and therefore the State is not responsible for any damage from vehicular impacts that may result as per CMS 107.10.

## **4 EXISTING PAVEMENT:**

### **4.1 EXISTING SHOULDER PAVEMENT**

The DBT shall verify the existing pavement composition of any shoulder or gore area used to maintain traffic. Any existing pavement composition that does not meet or exceed the requirements of Item 615 Pavement for Maintaining Traffic Class A, shall be replaced with Item 615 Pavement for Maintaining Traffic Class A. Any existing pavement composition that meets or exceeds the requirements of Item 615 Pavement for Maintaining Traffic Class A, shall be milled the full width of the shoulder or gore at 1½" depth and paved with 1½" Item 442 Asphalt Concrete Surface Course, Type B (446), As per Plan, in order to remove existing pavement markings including edge lines and existing rumble strips as outlined below.

1. Item 442 - Asphalt Concrete Surface Course, 12.5mm, Type B (446), As Per Plan (T=1.5") [Plan Note is in Attachment F]
2. Item 407 - Tack Coat
3. Item 254 - Pavement Planing, Asphalt Concrete (T= 1.5")
4. Treat pavement drop-offs with Item 617 - Compacted Aggregate, As Per Plan with Item 408, Prime Coat, As Per Plan applied to the surface of the 617 [Plan Note is in Attachment F]

### **4.2 PARTIAL DEPTH ASPHALT REPAIRS**

Item 251 - Partial Depth Pavement Repair (441) (T=3") shall be used as directed by the Project Engineer to repair areas of the existing pavement used for Maintaining Traffic. Use Item 615 Pavement for Maintaining Traffic, Class B, As Per Plan (Type 1, Type 2, Type 3, or Type 4) [Plan Note is in Attachment F] for pavement repairs. Use Type 1 Asphalt if traffic is run on the surface of the repair. Payment for this work will be made at a unit cost basis and an estimated quantity has been provided in the Proposal.

## 5 CONCEPTUAL MAINTENANCE OF TRAFFIC PLAN (CMOTP):

The DBT shall prepare and submit a Conceptual Maintenance of Traffic Plan (CMOTP) to the Department. The CMOTP shall be approved prior to beginning specific plans for individual MOT phases.

The CMOTP shall have a detailed narrative explaining the intent of the DBT's overall MOT plan, shall be sufficiently detailed to address all aspects of the interrelationships of individual MOT phases, shall show a planned and logical phasing needed to complete all project work and meet all interim completion dates, and it shall contain general MOT phasing plans and it shall comply with the requirements listed below:

1. Submit plans in accordance with Section 18 of the Scope of Services.
2. A schedule showing MOT phases and durations. All long-term (as defined in Traffic Engineering Manual Section 606-3) lane closures, ramp closures and lane restrictions shall be included and identified. All complete directional roadway closures shall also be identified. This schedule shall correspond to the Project Schedule.
3. Discussion of sequence of operations and MOT procedures.
4. Plans showing:
  - a. Detailed detour plans, incorporating detour routes provided in the Appendix
  - b. PCMS locations
  - c. Digital Speed Limit (DSL) sign assembly locations
  - d. Work Zone Queue Detection Warning System locations, if used
5. Typical sections showing lane widths, pavements markings, drums, portable barrier (PB), limiting stations, work area, drop-offs, etc.
6. Sign details for proposed signs and overlays/modifications of existing signs.
7. Haul routes for each phase.
8. Requests for reduced speed in the work zone are to be submitted with the CMOTP.

The Conceptual Maintenance of Traffic Plan shall be considered a Buildable Unit with respect to Department review.

## 6 COORDINATION WITH ADJACENT PROJECTS:

The DBT should be aware of the following projects adjacent to or within the project limits that are either under contract or planned to be under contract during this project. DBT is referred to CMS 105.08. See below for project name, estimated schedule, and brief description. This is not an all-inclusive list.

1. SUM-77/277/US 224 Various, PID 106002, Scheduled for sale in April 2021, Provide two lane ramps on identified ramps in the IR-77/IR-277/US 224 interchange, with additional lanes and pavement replacement and bridge work on SUM IR-77 from Arlington Road Interchange to the IR-77/IR-277/US 224 Interchange.
2. SUM-8-1.75, PID 91710, Scheduled for sale in July 2021, Replacement of the SR-8-1.75 Major Bridge structure with 2 new major bridge structures over the Cuyahoga river valley located between Glenwood and Perkins Avenues, in the City of Akron, Summit County, Ohio. Project will also include minor re-alignment of SR 8 with an added auxiliary lane in each direction between Glenwood and Perkins Avenues. The northern ramps at Perkins will be reconstructed as part of the project.
3. D04 ITS Maint FY2021, PID 113833, Scheduled for sale in April 2021, Replace the ITS cameras and lowering units at various locations throughout Portage, Summit and Stark Counties.

## 7 ADDITIONAL DESCRIPTION OF REQUIRED WORK AND SPECIAL PROVISIONS:

### 7.1 APPLICABLE PLAN NOTES FROM ODOT TRAFFIC ENGINEERING MANUAL

1. 642-3 (Item 614, Maintaining Traffic (At All Times))
2. 642-4 (Item 614, Maintaining Traffic (Time Limitation on a Detour))
3. 642-7 (Item 614, Maintaining Traffic (Lane Closure/Reduction Required))
4. 642-8 (Item 614, Maintaining Traffic (Notice of Closure Sign))
5. 642-12 (Item 614, Maintaining Traffic (Closing Paragraph for Note))
6. 642-16 (Concrete Median Barrier Replacement) [limited to 250 linear feet]
7. 642-17 (Drum Requirements)
8. 642-19 (Dust Control)
9. 642-21 (Item 622, Portable Barrier, 50", As Per Plan) [if crossovers are used]
10. 642-24 (Work Zone Speed Zones) [if speed limit reduction is approved/use DSL]
11. 642-27 (Work Zone Increased Penalties Sign (R11-H5a)) [if speed limit reduction is approved]
12. 642-28 (Earthwork for Maintaining Traffic)
13. 642-29 (Floodlighting)
14. 642-30 (Item 614, Work Zone Impact Attenuator for 24" Wide Hazards)
15. 642-31 (Item 614, Work Zone Impact Attenuator for Hazards Over 24" and Less than 36" Wide)
16. 642-32 (Approved Maintenance of Traffic (MOT) Policy Exceptions)
17. 642-33 (Extra Advance Warning Signs (Note A))
18. 642-35 (Item 614, Work Zone Crossover Lighting System) [if crossovers are used]
19. 642-41 (Item 614, Portable Changeable Message Sign, As Per Plan) [Class A PCMS]
20. 642-42 (Maintenance of Traffic Signal/Flasher Installation)
21. 642-43 (Advance Work Zone Information)
22. 642-44 (Worksite Traffic Supervisor)
23. 642-45 (Traffic Incident Management (TIM) During MOT)
24. 642-48 (Item 614, Work Zone Raised Pavement Marker, As Per Plan) [snow-plowing season October 15 through April 1]
25. 642-49 (Item 614, Work Zone Raised Pavement Markers on Concrete Surfaces) [snow-plowing season October 15 through April 1]
26. 642-51 (Delineation of Portable and Permanent Barrier) [triple stacked option]
27. 642-52 (Delineation of Temporary and Permanent Guardrail)
28. 642-55 (Item 614, Law Enforcement Officer (with Patrol Car) for Assistance During Construction Operations)
29. 642-57 (Work Zone Queue Detection Warning System) [(Class I) if WZQDWS is used]
30. 642-58 (Notification of Traffic Restrictions)
31. 642-59 (Work Zone Egress Warning System)

### 7.2 APPLICABLE PLAN NOTES FROM ATTACHMENT F

The following plan notes apply to this project

1. Item 615, Pavement for Maintaining Traffic, Class A, As Per Plan [if crossovers are used]
2. Detour Notification [ODOT/City/County]
3. Maintenance of Traffic
4. Advanced Notice to Pave
5. Item 614, Work Zone Pavement Markings, Spray Thermoplastic, As Per Plan
6. Item 614, Work Zone Pavement Markings, As Per Plan
7. Bridge Painting Equipment on Shoulders
8. Item 614, Maintaining Traffic, MISC.: Bridge Deck and Pavement Patching
9. Item 615, Pavement for Maintaining Traffic, Class B, As Per Plan, Type 1
- Item 615, Pavement for Maintaining Traffic, Class B, As Per Plan, Type 2
- Item 615, Pavement for Maintaining Traffic, Class B, As Per Plan, Type 3

- Item 615, Pavement for Maintaining Traffic, Class B, As Per Plan, Type 4
- 10. Item 622, Portable Barrier Placement
- 11. ITS Message Boards
- 12. Special - Work Zone Guardrail)
- 13. Cooperation Between Contractors

## **8 OTHER GENERAL MAINTENANCE OF TRAFFIC REQUIREMENTS**

### **8.1 SIGNAGE**

The DBT shall maintain the same number of guide signs as currently exist for each freeway exit/entrance which is to remain open during each phase of construction in order to allow motorists to find their destinations safely.

In instances where a temporary overlay is used atop an existing or proposed freeway guide sign, the entire sign shall be overlaid. Detour signing mounted on overhead signs shall be flat sheet.

In the event a contra flow traffic scheme is used, and the contra flow lane bypasses any freeway exit ramp, temporary guide signs shall follow standard construction drawing MT-95.73. All bypassed destinations (city and/or route) are to be included on the temporary KEEP RIGHT guide sign. All exit guide signs for bypassed destinations within the 3-mile advance warning area shall be modified; KEEP RIGHT is to replace the distance message.

Along with modifications to existing freeway signing, the DBT shall modify existing attractions signing to reroute traffic during closures of exit ramps. All existing freeway directional signs for attractions shall be modified to direct traffic to appropriate detour routes. Additional signage shall be erected to maintain proper routing to these attractions.

### **8.2 CONSTRUCTION EQUIPMENT & MATERIALS**

Construction vehicles used by the DBT and truck traffic required by the DBT shall comply with any and all load restrictions and vehicle delineation requirements. As per CMS 614.035, contractor equipment and materials shall always be stored in locations that do not pose a safety risk to the traveling public.

All vehicles crossing the at-grade bridges within the construction zone are to be under the legal weight limit.

Storage of equipment and/or materials shall not occur within the right of way. Portable barrier may be stored within the Right of Way, outside the clear zone, between April 1 and October 31.

### **8.3 HAUL ROADS**

The CMOTP shall identify haul roads for use during construction. Haul roads may include the State Route System and all streets being worked on within the project limits.

### **8.4 ENTERING & EXITING THE WORK ZONE**

All vehicles entering the work zone from the freeway or departing the work zone onto the freeway shall use designated locations which have been designed as per SCD MT-103.10 "Construction Access Points".

No construction vehicles are to enter active lanes of IR-76 / IR-77 or ramps without proper ingress and egress control.

The DBT is responsible for providing openings in the PB suitable for emergency vehicles to traverse. These locations may be coincident with the construction access points. The DBT shall provide an

opening for emergency vehicles no more than every 2 miles apart along the main line. The DBT is responsible for notifying the local emergency response agencies within 24 hours about the location of the openings and any changes during the life of the contract.

#### **8.5 PORTABLE CHANGEABLE MESSAGE SIGN**

The DBT shall provide, install, and maintain at least eight (8) Portable Changeable Message Signs (PCMS) on site for use during construction. Class A PCMS shall be used on freeways. The Class A signs shall be on the Department's approved list at:

[http://www.dot.state.oh.us/divisions/constructionmgt/materials/traffic information/portable-changeable.pdf](http://www.dot.state.oh.us/divisions/constructionmgt/materials/traffic%20information/portable-changeable.pdf)

All messages shall be approved by the Project Engineer prior to display on PCMS. Placement and relocation of the signs shall be in accordance with the TEM, OMUTCD, or as directed by the Project Engineer in the field. The Project Engineer has the authority to modify these locations as needed.

#### **8.6 PAVEMENT MARKING & DELINEATION**

Temporary work zone striping shall be Class I paint except on permanent new surfaces. Removable tape or Class III paint shall be used on new pavement surfaces. All pavement markings in place over the Winter or anticipated to be in place in excess of 120 days shall be spray thermoplastic pavement markings (Item 614, Work Zone Pavement Markings, Spray Thermoplastic, APP).

In addition to meeting the CMS 614 specifications for work zone pavement markings, work zone pavement markings shall be reapplied at least once per year. The DBT shall submit a pavement marking reapplication schedule to the Project Engineer for approval. The pavement marking reapplication schedule shall include, at a minimum, the roadway designation with marking limits, the affected travel direction, the proposed date for marking reapplication, and the last marking application date.

Permanent RPM's in accordance with CMS 621 are to be installed prior to each over-winter condition within work limits of project.

#### **8.7 PORTABLE BARRIER**

Barrier reflectors and object markers shall be installed on all portable barrier within the right-of-way in accordance with the alternative delineation method (triple-stacked) shown on Standard Construction Drawing MT-101.70. Barrier reflector and object marker materials and installation shall conform to CMS 626.02 and 626.04.

#### **8.8 USE OF WEIGHTED CHANNELIZERS**

The weighted channelizer may be used in accordance with this section. The weighted channelizer shall be predominantly orange in color and shall be made of lightweight, flexible, and deformable material. They shall be at least 42" in height with a weighted base. They shall have a handle or lifting device which extends above the 42 inches minimum height.

The markings on the weighted channelizer shall be horizontal, circumferential, alternating orange and white retroreflective stripes 6 inches wide. Each weighted channelizer shall have a minimum of two orange and two white stripes. Any non-retroreflective spaces between the horizontal orange and white stripes shall not exceed 2 inches wide. The weighted channelizer shall have a 4-inch minimum width, regardless of orientation.

Use of weighted channelizers on freeways shall be limited to short-term operations for either day or night. Upon completion of work, the weighted channelizers shall be removed. The weighted channelizers may again be placed on the highway when the work is to resume on the following day or night. Any lane closure using channelization devices expected to remain for more than twelve hours shall require the use of drums or portable barrier.

When used at night, weighted channelizers shall only be placed in the tangent area and at a maximum spacing of 40 feet. The tangent area is defined as the area after the transition taper where the work takes place. Drums shall be used in the transition tapers for night operations.

Steps shall be taken to ensure that the weighted channelizers shall not be blown over or displaced by wind or moving traffic. Ballasts shall not present a hazard if the weighted channelizers are inadvertently struck, nor shall they affect the visibility of the weighted channelizers. All ballasts used shall be in accordance with the manufacturer's specifications.

#### **8.9 SHORT DURATION CLOSURES ON FREEWAY**

Any short-term freeway closures shall be performed as per SCD MT-99.60 "Short-Term Closure of Multi-Lane Divided Highway" and only between 12AM and 5AM. If a short-term freeway closure is performed within an interchange, use exit and entrance ramps to maintain a single lane of freeway traffic. Provide a Law Enforcement Officer at the intersection to control the cross-street traffic.

#### **8.10 BUFFER ZONES**

Buffer Zones are required to be used in all phases that use merge and/or shift tapers.

#### **8.11 TRANSITION AREA RESURFACING**

The DBT shall resurface all transition areas at the time the surface course is being applied. In preparation for resurfacing, the existing pavement shall be removed to a depth necessary to reach the level of the intermediate course of the proposed pavement. The resurfacing of all transition areas shall also include the tangent area extending beyond the proposed work limits. The resurfacing shall include the entire width of the roadway, including shoulders no matter where the pavement impacts are located.

#### **8.12 DRAINAGE DURING CONSTRUCTION**

The DBT shall adhere to the requirements found in "Location and Design Manual, Volume 2 – Drainage" for all temporary drainage.

## **9 NOTIFICATION AND COORDINATION:**

### **9.1 MOT PHASE CHANGES: NOTIFICATIONS & COORDINATION REQUIREMENTS**

At least fourteen (14) days prior to any construction activities, the DBT shall advise the District Office of Communications via email at [D04.PIO@dot.ohio.gov](mailto:D04.PIO@dot.ohio.gov) and the Project Engineer of the anticipated start date of any construction activities, including but not limited to the placing of work zone signs. The notification shall also include the project number, PID, name and phone number of the DBT, a point of contact and the anticipated impact on traffic. The DBT shall immediately inform the District Office of Communications and the Project Engineer of any and all delays and/or changes regarding the construction initiation date.

Throughout the duration of the project, the DBT shall notify the Project Engineer and the others listed in this section in writing of all traffic restrictions and upcoming maintenance of traffic changes. The DBT shall ensure the written notification is submitted in a timely manner to allow the Project Engineer to meet the required time frames set forth in the table below. This notification shall be received by the Project Engineer prior to the physical setup of any applicable signs or message boards.

Information shall include but is not limited to all construction activities that impact or interfere with traffic and shall list the specific location, type of work, road status, date and time of restriction, duration of restriction, number of lanes maintained, detour routes if applicable, and any other

information requested by the Project Engineer and the District 4 Communications Office. A summary of the notification time frame requirements for closures and restrictions is provided in the Notification Time Frame Table below.

| <i>Item</i>                | <i>Duration of Closure</i> | <i>Notification Time Frame</i>    |
|----------------------------|----------------------------|-----------------------------------|
| Ramp and Road Closures     | >= 2 weeks                 | 14 business days prior to closure |
|                            | > 12 hours and < 2 weeks   | 7 business days prior to closure  |
|                            | < 12 hours                 | 2 business days prior to closure  |
| Lane Closures/Restrictions | >= 2 weeks                 | 7 business days prior to closure  |
|                            | < 2 weeks                  | 2 business days prior to closure  |

Any unforeseen conditions not specified in the plans requiring traffic restrictions shall also be reported to the Project Engineer, the District 4 Communications Office using the Notification Time Frame Table.

Notification is required during closures. If an approved Work Zone Queue Detection Warning System is implemented on this project additional notification to ODOT is required. A designated on-site point of contact shall communicate with the Traffic Management Center (TMC) as the status of the closure changes. The on-site point of contact shall contact the TMC whenever a closure is postponed or cancelled, at the time the closure is implemented, at the time the closure is removed and all lanes restored, and if the closure will not be opening on time. Contact can be made with the TMC by phone (1-614-387-2438 or 1-800-884-4030), by email ([StatewideTMC@dot.ohio.gov](mailto:StatewideTMC@dot.ohio.gov)), and radio (XDOT Main).

If an approved Work Zone Queue Detection Warning System is implemented, the DBT shall implement an approved system from the Department’s approved list at: <http://www.dot.state.oh.us/Divisions/ConstructionMgt/Materials/Approved List/WZQDWS.pdf>

## 9.2 TOWPATH TRAIL DETOUR NOTIFICATION

The DBT shall coordinate with the City of Akron in the development of the Towpath Trail detour. The DBT shall receive approval of the final trail detour route from the city prior to implementation of the trail detour.

Access to the Towpath Trail shall be maintained via detour when construction activities occur. The duration of the temporary closures shall be less than the time needed for reconstruction of the overhead structure. Closures of the Towpath Trail shall be limited to four separate closures, each lasting up to 60 days. To protect the trail and the public, the DBT shall install and maintain temporary construction fencing along the known boundaries of the Towpath Trail within the construction limits prior to start of construction activities at the bridge. The detour plan shall include marked crosswalks with appropriate signage at the Russell Avenue and South Street crossings. Prior to the start of construction activities, the DBT shall install signage approved by the Project Engineer to alert trail users of construction activities and access restrictions or closures and to direct users to the detour. The DBT shall provide the construction schedule to the City of Akron Public Service Department and the Project Engineer 30 days prior to the start of construction activities. The DBT shall also notify the City of Akron Public Service Department and the Project Engineer 30 days prior to any closure of the Towpath Trail.

Coordinate with the City of Akron Public Service Department by contacting Christine Jonke ([CJonke@akronohio.gov](mailto:CJonke@akronohio.gov)) and Michelle DiFiore ([MDiFiore@akronohio.gov](mailto:MDiFiore@akronohio.gov)).

### **9.3 PUBLIC OUTREACH NOTIFICATION**

The DBT shall be responsible for notifying all local county, state, and federal emergency services, school districts and adjacent residents and businesses of upcoming road and ramp closures. Advance notification shall occur no later than fourteen (14) days prior to closing the road. If, subsequent to the advance notification, the start date is changed, then a new seven (7) day notification shall be required. The road/ramp cannot be closed unless prior notification has been accomplished. The same parties shall be notified when the closure has concluded, and the road is back open to traffic.