# Work Zone Traffic Management JSP-02-06N

**DRAFTERS NOTES: THE CORE TEAM SHOULD REFER TO** [WORK ZONE QUESTIONS FOR THE CORE TEAM](http://epg.modot.mo.gov/files/6/63/616.14_WZ_Questions_2015.docx)  **FOUND IN EPG 616.14. PRIOR TO COMPLETING THIS JSP**

**1.0 Description.** Work zone traffic management shall be in accordance with applicable portions of Division 100 and Division 600 of the Standard Specifications, and specifically as follows.

**1.1 Maintaining Work Zones and Work Zone Reviews.** The Work Zone Specialist (WZS) shall maintain work zones in accordance with Sec 616.3.3 and as further stated herein. The WZS shall coordinate and implement any changes approved by the engineer. The WZS shall ensure all traffic control devices are maintained in accordance with Sec 616, the work zone is operated within the hours specified by the engineer, and will not deviate from the specified hours without prior approval of the engineer. The WZS is responsible to manage work zone delay in accordance with these project provisions. When requested by the engineer, the WZS shall submit a weekly report that includes a review of work zone operations for the week. The report shall identify any problems encountered and corrective actions taken. Work zones are subject to unannounced inspections by the engineer and other departmental staff to corroborate the validity of the WZS’s review and may require immediate corrective measures and/or additional work zone monitoring.

**1.2 Work Zone Deficiencies.** Failure to make corrections on time may result in the engineer suspending work. The suspension will be non-excusable and non-compensable regardless if road user costs are being charged for closures.

**2.0 Traffic Management Schedule.**

**2.1** Traffic management schedules shall be submitted to the engineer for review prior to the start of work and prior to any revisions to the traffic management schedule. The traffic management schedule shall include the proposed traffic control measures, the hours traffic control will be in place, and work hours.

**2.2** The traffic management schedule shall conform to the limitations specified in Sec 616 regarding lane closures, traffic shifts, road closures and other width, height and weight restrictions.

**2.3** The engineer shall be notified as soon as practical of any postponement due to weather, material or other circumstances.

**2.4** In order to ensure minimal traffic interference, the contractor shall schedule lane closures for the absolute minimum amount of time required to complete the work. Lanes shall not be closed until material is available for continuous construction and the contractor is prepared to diligently pursue the work until the closed lane is opened to traffic.

**SECTION 2.5 BELOW WILL BE USED FOR INTERSTATES, FREEWAYS AND NON-SIGNALIZED MULTI-LANE ROADWAYS. IT CAN BE INCLUDED ON ANY TYPE OF ROAD. THE DESIGN TEAM WILL USE THE** [WORK ZONE IMPACT ANALYSIS SPREADSHEET](http://epg.modot.mo.gov/files/4/49/616.13_WZ_Impact.xlsx) **WITH ANY ADJUSTMENT WHICH MIGHT BE NEEDED CONSIDERING LOCAL DETOURS TO DETERMINE THE DELAY TIME THRESHOLD AND PUT THE DELAY TIME VALUE IN THIS JSP SHOWN BELOW AS XX. THE WORK ZONE IMPACT ANALYSIS SPREADSHEET WILL BE INCLUDED IN THE ELECTRONIC DELIVERABLES AND SUBMITTED WITH YOUR PS&E.**

**2.5 Traffic Congestion.** The contractor shall, upon approval of the engineer, take proactive measures to reduce traffic congestion in the work zone. The contractor shall immediately implement appropriate mitigation strategies whenever traffic congestion reaches an excess of **XX minutes** to prevent congestion from escalating beyond this delay threshold. If disruption of the traffic flow occurs and traffic is backed up in queues equal to or greater than the delay time threshold listed above, then the contractor shall immediately review the construction operations which contributed directly to disruption of the traffic flow and make adjustments to the operations to prevent the queues from reoccurring. Traffic delays may be monitored by physical presence on site or by utilizing real-time travel data through the work zone that generate text and/or email notifications where available. The engineer monitoring the work zone may also notify the contractor of delays that require prompt mitigation. The contractor may work with the engineer to determine what other alternative solutions or time periods would be acceptable. When a Work Zone Analysis Spreadsheet is provided, the contractor will find it in the electronic deliverables on MoDOT’s Online Plans Room. The contractor may refer to the Work Zone Analysis Spreadsheet for detailed information on traffic delays.

**SECTION 2.5 BELOW SHOULD BE USED FOR TWO LANE ROADWAYS. DELETE THE VERSION OF SECTION 2.5 THAT IS NOT USED.**

**2.5 Traffic Congestion.** The contractor shall, upon approval of the engineer, take proactive measures to reduce traffic congestion in the work zone. The contractor shall immediately implement appropriate mitigation strategies whenever traffic congestion reaches an excess of 10 minutes to prevent congestion from escalating to 15 minute or above threshold. If disruption of the traffic flow occurs and traffic is backed up in queues of 15 minute delays or longer, then the contractor shall immediately review the construction operations which contributed directly to disruption of the traffic flow and make adjustments to the operations to prevent the queues from reoccurring. Traffic delays may be monitored by physical presence on site or by utilizing real-time travel data through the work zone that generate text and/or email notifications where available. The engineer monitoring the work zone may also notify the contractor of delays that require prompt mitigation. The contractor may work with the engineer to determine what other alternative solutions or time periods would be acceptable.

**2.5.1 Traffic Safety.**

**2.5.1.1 Recurring Congestion.** Where traffic queues routinely extend to within 1000 feet of the ROAD WORK AHEAD, or similar, sign on a divided highway or to within 500 feet of the ROAD WORK AHEAD, or similar, sign on an undivided highway, the contractor shall extend the advance warning area, as approved by the engineer.

**2.5.1.2 Non-Recurring Congestion.** When traffic queues extend to within 1000 feet of the ROAD WORK AHEAD, or similar, sign on a divided highway or to within 500 feet of the ROAD WORK AHEAD, or similar, sign on an undivided highway infrequently, the contractor shall deploy a means of providing advance warning of the traffic congestion, as approved by the engineer. The warning location shall be no less than 1000 feet and no more than 0.5 mile in advance of the end of the traffic queue on divided highways and no less than 500 feet and no more than 0.5 mile in advance of the end of the traffic queue on undivided highways.

**SECTION 2.6 BELOW WILL BE USED FOR ALL PROJECTS THAT INCLUDE A TRANSPORTATION MANAGEMENT PLAN (TMP) IN ACCORDANCE WITH EPG 616.14.10. THE TMP WILL BE INCLUDED IN THE ELECTRONIC DELIVERABLES AND SUBMITTED WITH YOUR PS&E.**

**2.6 Transportation Management Plan.** The contractor Work Zone Specialist (WZS) shall review the Transportation Management Plan (TMP), found as an electronic deliverable on MoDOT’s Online Plans Room and discuss the TMP with the engineer during the preconstruction conference. Throughout the construction project, the WZS is responsible for updating any changes or modifications to the TMP and getting those changes approved by the engineer a minimum of two weeks in advance of implementation. The WZS shall participate in the post construction conference and provide recommendations on how future TMPs can be improved.

**SECTION 2.7 BELOW WILL BE USED FOR ALL INTERSTATES AND ANY OTHER ROUTES DEEMED AS CRITICAL WITHIN THE KANSAS CITY AND ST. LOUIS DISTRICTS. EITHER THE KANSAS CITY (KC SCOUT) OR THE ST. LOUIS (GATEWAY GUIDE) TRAFFIC MANAGEMENT CENTER (TMC) COVERS ALL INTERSTATE ROUTES 24 HOURS A DAY, 365 DAYS OF THE YEAR. EACH TMC IS FULLY STAFFED AND HAS CONTROL OF BOTH URBAN AND RURAL DYNAMIC MESSAGE SIGN BOARDS THAT ARE CRITICAL TO PUBLIC TRAVELER INFORMATION AND PUBLIC SAFETY. OZARKS TRAFFIC TRAFFIC MANAGEMENT CENTER IS AVALABLE AT CERTAIN HOURS IN THE SW DISTRICT AND SHOULD BE CONSIDERED WHEN WORKING IN THAT REGION.**

**2.7 Traffic Management Center (TMC) Coordination.** The Work Zone Specialist (WZS) or their designee shall contact by phone the MoDOT Traffic Management Center (KC Scout TMC at #816-347-2250 or Gateway Guide TMC at #314-275-1513) within five minutes of a lane or ramp closure beginning and within five minutes of a lane or ramp closure being removed. The WZS shall make this phone call 24 hours a day, 365 days of the year since the MoDOT Traffic Management Centers are always staffed.

**3.0 Work Hour Restrictions.**

**3.1** Except for emergency work, as determined by the engineer, and long term lane closures required by project phasing, all lanes shall be scheduled to be open to traffic during the five major holiday periods shown below, from 12:00 noon on the last working day preceding the holiday until 6:00 a.m. on the first working day subsequent to the holiday unless otherwise approved by the engineer.

Memorial Day

Labor Day

Thanksgiving

Christmas

New Year’s Day

**3.1.1 Independence Day.** The lane restrictions specified in Section 3.1 shall also apply to Independence Day, except that the restricted periods shall be as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| **When Independence Day falls on:** | **The Holiday is Observed on:** | **Halt Lane Closures beginning at:** | **Allow Lane Closures to resume at:** |
| Sunday | Monday | Noon on Friday | 6:00 a.m. on Tuesday |
| Monday | Monday | Noon on Friday | 6:00 a.m. on Tuesday |
| Tuesday | Tuesday | Noon on Monday | 6:00 a.m. on Wednesday |
| Wednesday | Wednesday | Noon on Tuesday | 6:00 a.m. on Thursday |
| Thursday | Thursday | Noon on Wednesday | 6:00 a.m. on Friday |
| Friday | Friday | Noon on Thursday | 6:00 a.m. on Monday |
| Saturday | Friday | Noon on Thursday | 6:00 a.m. on Monday |

**SECTION 3.1.2 BELOW SHOULD BE INCLUDED IF THE WORK HOURS NEED TO BE RESTRICTED FOR SPECIAL EVENTS AND REMOVED IF NOT NEEDED.**

**3.1.2** Except for emergency work, as determined by the engineer, and long term lane closures required by project phasing, the contractor’s working hours will be restricted for the Special Events as shown below. All lanes shall be scheduled to be open to traffic during these Special Events.

 (**Insert special event and time here**)

**MODIFY THIS PARAGRAPH AS REQUIRED. PLEASE NOTE HOW SPEC 101 DEFINES ROADWAY AND ROADBED.**

**3.2** The contractor shall not perform any construction operation on the roadway, roadbed or active lanes, including the hauling of material within the project limits, during restricted periods, holiday periods or other special events specified in the contract documents.

**ADD THIS PARAGRAPH AND MODIFY AS REQUIRED, IF USING A PILOT CAR OPERATION, EVALUATE THE TRAFFIC DELAY AND MODIFY THE QUEUE TIME ACCORDINLY OR CONSIDER NOT USING THIS JSP.**

**3.3** The contractor shall be aware that traffic volume data indicates construction operations on the roadbed between the following hours will likely result in traffic queues greater than 15 minutes. Based on this, the contractor’s operations will be restricted accordingly unless it can be successfully demonstrated the operations can be performed without a 15 minute queue in traffic. It shall be the responsibility of the engineer to determine if the above work hours may be modified. Working hours for evenings, weekends and holidays will be determined by the engineer. The contractor may not work during the following listed hours:

Route XX Eastbound:

6:00 a.m. - 9:00 a.m. Monday through Friday

9:00 a.m. - 1:00 p.m. Saturday

Route XX Westbound:

3:00 p.m. - 6:00 p.m. Monday through Friday

5:00 p.m. - 9:00 p.m. Saturday

**ADD THIS PARAGRAPH IF DETERMINED THE CONTRACTOR SHOULD BE RESTRICTED TO NIGHTTIME WORK IN SECTION 2.5 OF THIS JSP. NIGHTTIME HOURS CAN BE CHANGED FOR PROJECT NEEDS.**

**3.4** Any work requiring a reduction in the number of through lanes of traffic shall be completed during nighttime hours. Nighttime hours shall be considered to be \_\_:00 p.m. to \_\_:00 a.m. for this project.

**SECTION 3.5 AND 3.5.1 BELOW WILL BE USED ON ALL INTERSTATE AND DIVIDED HIGHWAY PROJECTS. THE VALUE FOR LIQUIDATED DAMAGES SHOULD NOT EXCEED $1,000 PER 15 MINUTES.**

**3.5** The contractor shall not alter the start time, ending time, or a reduction in the number of through lanes of traffic or ramp closures without advance notification and approval by the engineer. The only work zone operation approved to begin 30 minutes prior to a reduction in through traffic lanes or ramp closures is the installation of traffic control signs. Should lane closures be placed or remain in place, prior to the approved starting time or after the approved ending time, the Commission, the traveling public, and state and local police and governmental authorities will be damaged in various ways, including but not limited to, increased construction administration cost, potential liability, traffic and traffic flow regulation cost, traffic congestion and motorist delays, with a resulting cost to the traveling public. These damages are not easily computed or quantified. Therefore, the contractor will be charged with liquidated damages specified in the amount of **$XXXX per 15 minute increment** for each 15 minutes that the temporary lane closures are in place and not open to traffic in excess of the limitation as specified elsewhere in this special provision. It shall be the responsibility of the engineer to determine the quantity of unapproved closure time.

**3.5.1** The said liquidated damages specified will be assessed regardless if it would otherwise be charged as liquidated damages under the Missouri Standard Specification for Highway Construction, as amended elsewhere in this contract.

**4.0 Detours and Lane Closures.**

**ADD THIS PARAGRAPH AS REQUIRED WHEN CMS OR OTHER SIGNS ARE REQUIRED. IF CMS IS REQUIRED, SPECIFY IF A COMMUNICATION INTERFACE MODEM IS REQUIRED OR NOT AND INCLUDE THE APPROPRIATE PAY ITEM FOR THE CMS.**

**IF CMS WITH COMMUNICATION INTERFACE IS REQUIRED, PAY ITEM 616-10.99 MUST BE USED. A CMS WITH COMMUNICATION INTERFACE ALLOWS THE CONTRACTOR’S WORK ZONE SPECIALIST (WZS) TO MAKE CHANGES TO THE CMS REMOTELY EITHER FOR THEIR OWN TRAFFIC CONTROL WORK OR UNDER THE DIRECTION OF THE ENGINEER.**

**IF A CMS BOARD IS NEEDED ON THE PROJECT FOR USE BY A TRAFFIC MANAGEMENT CENTER (TMC), THEN A SPECIAL PROVISION WILL BE REQUIRED.**

**4.1** When a changeable message sign (CMS) is provided, the contractor shall use the CMS to notify motorists of future traffic disruption and possible traffic delays one week before traffic is shifted to a detour or prior to lane closures. The CMS shall be installed at a location as approved or directed by the engineer. If a CMS with Communication Interface is required, then the CMS shall be capable of communication prior to installation on right of way. All messages planned for use in the work zone shall be approved and authorized by the engineer or its designee prior to deployment. When permanent dynamic message signs (DMS) owned and operated by MoDOT are located near the project, they may also be used to provide warning and information for the work zone. Permanent DMS shall be operated by the TMC, and any messages planned for use on DMS shall be approved and authorized by the TMC at least 72 hours in advance of the work.

**ADD THIS PARAGRAPH AS REQUIRED**

**4.2** At least one lane of traffic in each direction shall be maintained at all times except for brief intervals of time required when the movement of the contractor’s equipment will seriously hinder the safe movement of traffic. Periods during which the contractor will be allowed to interrupt traffic will be designated by the engineer.

**5.0 Basis of Payment.** No direct payment will be made to the contractor to recover the cost of equipment, labor, materials, or time required to fulfill the above provisions, unless specified elsewhere in the contract document. All authorized changes in the traffic control plan shall be provided for as specified in Sec 616.