

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION
SPECIAL PROVISIONS FOR
PROJECT NO. 46-26-03

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**OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION
SPECIAL PROVISIONS FOR
PROJECT NO. 46-26-03**

SP 1 **GENERAL - INCLUDING MODIFICATIONS TO OHIO TURNPIKE
GENERAL CONDITIONS**

SP 101 **PLANS AND DESCRIPTION OF THE WORK**

The Work included in this Project, together with other pertinent information is shown and described in the Plans, which consist of a title sheet and other drawings, as tabulated on the index of sheets, covering details of the Work.

The title sheet for Project(s) No. 46-26-03 bears the general title as follows:

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION
THE JAMES W. SHOCKNESSY OHIO TURNPIKE

PROJECT NO. 46-26-03
OVERHEAD DYNAMIC MESSAGE
SIGNS (DMS) & VARIABLE SPEED
LIMIT (VSL) SIGNS INSTALLATION
WILLIAMS, FULTON, LUCAS, WOOD,
OTTAWA, SANDUSKY, ERIE, LORAIN,
CUYAHOGA, SUMMIT, PORTAGE,
TRUMBULL AND MAHONING COUNTIES

The title sheet bears the approval of the Chief Engineer.

The Work to be performed consists of the following:

Installation of overhead dynamic message signs and variable speed limit signs and their associated appurtenances such as overhead gantries, CCTV cameras, and RWIS systems at various locations throughout the Ohio Turnpike.

Details of this Work and other incidental Work are shown on the Plans and/or described in the Specifications and these Special Provisions.

Pre-bid Questions should be submitted in accordance with Sections 1.3.3 and 1.3.4 of Article 1 of the Instruction to Bidders.

No verbal Questions will be considered.

SP 102 **SPECIFICATIONS**

All Work under this Project is to be constructed under the applicable sections of the Construction and Material Specifications ("CMS") of the State of Ohio Department of Transportation ("ODOT"), dated January 1, 2023 and Supplemental Specifications unless an earlier edition is specified on an Ohio Turnpike Standard drawing, excepting Section 100 thereof - General Provisions, and in accordance with the General Conditions of the Commission, these Special Provisions, the payment items listed on the Bid Form, and the terms and conditions of the Contract Documents. If there is reference to Section 100 of the ODOT CMS in other sections of the CMS, the appropriate provision of Section 100 shall apply and be operative, unless there is a specific statement to the contrary in the General Conditions, Special Provisions, and terms and conditions of the Contract

Documents of the Commission. Whenever the word "Director" appears in the ODOT CMS, it shall be construed to mean the "Commission" or the "Chief Engineer" of the Commission, as set forth in the definitions of the Standard Conditions.

SP 103

CONSTRUCTION PHASING AND TIME OF COMPLETION
(12-8-2017)

The Work shall be performed and completed in its entirety in strict accordance with the Plans, Specifications, Special Provisions and other Contract Documents as follows:

2026 CONSTRUCTION SEASON

- A. Notice to Proceed (NTP):** The Commission will issue the Contractor the Notice to Proceed (NTP) by the Chief Engineer after the Contract is fully executed. Upon receipt of the NTP, the Contractor shall begin performance of preliminary investigations and survey layout work, as approved by the Chief Engineer, and preparation of the Construction Schedule, Shop Drawings and submittals for this Project.
- B. Baseline Construction Schedule:** The Baseline Construction Schedule for the 2026 Construction Season of this Project shall be submitted and acceptable prior to the Contractor performing the Work in accordance with General Condition Articles 4.2 and 4.3 and SP 120A or SP 120B to the extent made applicable through incorporation in the Contract Documents. Liquidated damages for failure to submit an acceptable Construction Schedule shall commence on the day the Contractor begins to perform the Work described in General Conditions Article 4.2.4.2. The 2026 Construction Access Date shall signify the **beginning of the Work**.
- C. 2026 Construction Access:** The Commission anticipates providing the Contractor access to the Turnpike on **July 6, 2026** at which time the Contractor may begin the Work for this Project.
- D. 2026 Substantial Completion Interim Milestone:** The 2026 Substantial Completion Interim Milestone shall be defined as having all traffic lanes and all shoulders open to Turnpike traffic in both directions including all traffic control and safety devices in place and approved by the Chief Engineer by **November 20, 2026**. Liquidated Damages for failure to complete this Interim Milestone as described above shall commence on **November 21, 2026**.
- E. Winter Temporary Shutdown Period:** The Contractor shall anticipate a Temporary Shutdown period commencing on **November 21, 2026** and continuing through **February 28, 2027** at which time no access should be anticipated for the Work for any Phase unless approved by the Chief Engineer.

2027 CONSTRUCTION SEASON

- F. 2027 Construction Recommencement:** The 2027 Construction Recommencement Milestone shall be defined as, **March 1, 2027**, when the Contractor has discontinued the Winter Temporary Shutdown Period and may recommence project operations. At this time, prior to the 2027 Construction Access

Milestone, the Contractor may only perform the required preliminary investigations and survey layout work, as approved by the Chief Engineer, and preparation of the Construction Schedule, Shop Drawings and submittals for this Project.

- G. 2027 Construction Access:** The 2027 Construction Access shall be defined as the time when the Contractor is provided access, which shall be **March 30, 2027**.

~~**H. Substantial Completion:** Substantial Completion shall be defined as all Work for this Contract shall be completed and all traffic lanes and shoulders shall be open to Turnpike traffic including all traffic control and safety devices in place and approved by the Chief Engineer by **November 19, 2027**. Liquidated Damages for failure to complete the Work shall commence on **November 20, 2027**.~~

- H. Winter Temporary Shutdown Period:** The Contractor shall anticipate a Temporary Shutdown period commencing on **November 20, 2027** and continuing through **March 5, 2028** at which time no access should be anticipated for the Work for any Phase unless approved by the Chief Engineer.

~~**I. Final Completion:** Final Completion shall be defined as all Work for this Contract, including all punch list items, shall be completed in strict accordance with the Plans, Specifications, Special Provisions, and other Contract Documents by **December 19, 2027**. Liquidated Damages for failure to complete the Work shall commence on **December 20, 2027**.~~

2028 CONSTRUCTION SEASON

- I. 2028 Construction Recommencement:** The 2028 Construction Recommencement Milestone shall be defined as, **March 6, 2028**, when the Contractor has discontinued the Winter Temporary Shutdown Period and may recommence project operations. At this time, prior to the 2028 Construction Access Milestone, the Contractor may only perform the required preliminary investigations and survey layout work, as approved by the Chief Engineer, and preparation of the Construction Schedule, Shop Drawings and submittals for this Project.

- J. 2028 Construction Access:** The 2028 Construction Access shall be defined as the time when the Contractor is provided access, which shall be **April 3, 2028**.

- K. Substantial Completion:** Substantial Completion shall be defined as all Work for this Contract shall be completed and all traffic lanes and shoulders shall be open to Turnpike traffic including all traffic control and safety devices in place and approved by the Chief Engineer by **August 30, 2028**. Liquidated Damages for failure to complete the Work shall commence on **August 31, 2028**.

- L. Final Completion:** Final Completion shall be defined as all Work for this Contract, including all punch list items, shall be completed in strict accordance with the Plans, Specifications, Special Provisions, and other Contract Documents by **September 29, 2028**. Liquidated Damages for failure to complete the Work shall commence on **September 30, 2028**.

It shall be noted that in order to meet the above referenced dates, the Contractor may be required to Work additional shifts and/or extended hours as well as periodic holidays and weekends. These additional forces shall be included in their Bid and there shall be no additional cost to the Commission.

SP 104

ACCESS TO TURNPIKE AND RESTRICTIONS
(1/15/2025)

The Contractor will be provided access and use of Turnpike roadways during the progress of the Work under this Project as follows:

- A. Toll-free access for the Contractor's equipment and vehicles may be granted. A limited number of construction transponders will be issued for the Contractor's motor vehicles. A detailed request outlining the quantity and need for toll-free transponders must be submitted to and approved by the Chief Engineer.
- B. It shall be the Contractor's responsibility to manage the issuance and use of all construction transponders for performing the Work under the Project. The Contractor shall be liable for any misuse of said transponders whether it is by the Contractor's forces or those of a subcontractor. Use of these transponders for personal travel or other travel not associated with this Project is strictly forbidden. The Contractor shall be advised that any personal or company transponders issued for use other than on this Project, must be removed from Project vehicles or properly stored in protective mylar bags provided. It is the responsibility of the Contractor to advise all subcontractors of the same requirements. The Commission will not be responsible for providing credit to accounts that are billed due to improper storage of personal or company transponders. Upon the completion of the Project, ALL transponders shall be returned to the Commission. Should the Contractor return less than the number issued to them, the Commission shall withhold the sum of one hundred (\$100.00) dollars per transponder not returned from any monies due the Contractor.
- C. The toll-free access, if granted, will be limited to a specified range of gates on each side of the Project limits. The Contractor will be charged a toll for all Turnpike travel outside the limits authorized by the toll-free access. Any method of operation involving such travel will be subject to such requirements and restrictions as the Commission may impose to facilitate proper collection of tolls and avoid undue inconvenience or hazard to the traveling public.
- D. If the Contractor elects to have its vehicles or equipment use any Interchange other than those authorized, such use will be subject to such restrictions as the Commission may determine to be necessary to avoid undue inconvenience or hazard to the traveling public.
- E. Upon request from the Contractor and approval of the Chief Engineer, toll-free access will be provided for the Contractor's administrative and supervisory personnel and/or special equipment or material deliveries, exclusive of asphalt and concrete that may require Turnpike travel outside the toll-free zone.

- F. Private automobiles of workmen will not be permitted on the Ohio Turnpike roadways and may not be parked in the construction area. All parking must be at an approved staging area.
- G. Access for all material delivery and/or construction equipment shall be achieved through public Toll Plaza ramps only. No access drives, maintenance building facilities, service plazas or back-gate entrance locations will be permitted for use without prior written approval of the Chief Engineer. See Section I below for proposed fence cuts or alternate access locations. Limited access will be granted at the following locations for the delivery of the noted items only, for which no access credit or plans are required.

Access Location(s): None Delivery Item(s): None

- H. During all phases of construction, the following will apply:
1. During periods of high Turnpike traffic volume, crossing of the active lanes, shoulder closures and/or lane closures will not be permitted unless authorized by the Chief Engineer. The following times are known to have high Turnpike traffic volume:

2026 Construction

<i>Holiday</i>	<i>From</i>	<i>To</i>
New Year's Day	Sundown Tuesday, December 30, 2025	Sunrise Friday, January 2, 2026
Easter	Noon on Friday, April 3, 2026	Sunrise Tuesday, April 7, 2026
Memorial Day	Noon on Friday May 22, 2026	Sunrise Tuesday, May 26, 2026
Independence Day	Noon on Thursday, July 2, 2026	Sunrise Monday, July 6, 2026
Labor Day	Noon on Friday, September 4, 2026	Sunrise Tuesday, September 8, 2026
Thanksgiving Day	Sunset Monday, November 23, 2026	Sunrise Monday, November 30, 2026
Christmas Day	Noon Wednesday, December 23, 2026	Sunrise Monday, December 28, 2026
Summer Weekends	Noon on Friday beginning Friday, May 29, 2026	Sunrise on Monday September 7, 2026
Non-Summer Weekends	Fridays and Sundays 12:00PM through 10:00 PM	

2027 Construction

<i>Holiday</i>	<i>From</i>	<i>To</i>
New Year's Day	Sundown Wednesday, December 30, 2026	Sunrise Monday, January 4, 2027
Easter	Noon on Friday, March 26, 2027	Sunrise Tuesday, March 30, 2027

Memorial Day	Noon on Friday May 28, 2027	Sunrise Tuesday, June 1, 2027
Independence Day	Noon on Friday, July 2, 2027	Sunrise Tuesday, July 6, 2027
Labor Day	Noon on Friday, September 3, 2027	Sunrise Tuesday, September 7, 2027
Thanksgiving Day	Sunset Monday, November 22, 2027	Sunrise Monday, November 29, 2027
Christmas Day	Noon Thursday, December 23, 2027	Sunrise Monday, December 27, 2027
Summer Weekends	Noon on Friday beginning Friday, May 28, 2027	Sunrise on Monday September 6, 2027
Non-Summer Weekends	Fridays and Sundays 12:00PM through 10:00 PM	

2028 Construction		
Holiday	From	To
New Year's Day	Sundown Thursday, December 30, 2027	Sunrise Monday, January 3, 2028
Easter	Noon on Friday, April 14, 2028	Sunrise Tuesday, April 18, 2028
Memorial Day	Noon on Friday May 26, 2028	Sunrise Tuesday, May 30, 2028
Independence Day	Noon on Monday, July 3, 2028	Sunrise Thursday, July 6, 2028
Labor Day	Noon on Friday, September 1, 2028	Sunrise Tuesday, September 5, 2028
Thanksgiving Day	Sunset Monday, November 20, 2028	Sunrise Monday, November 27, 2028
Christmas Day	Noon Friday, December 22, 2028	Sunrise Wednesday, December 27, 2028
Summer Weekends	Noon on Friday beginning Friday, May 30, 2028	Sunrise on Monday September 4, 2028
Non-Summer Weekends	Fridays and Sundays 12:00PM through 10:00 PM	

2. Unforeseen circumstances may occur making it necessary to restrict lane closures, Work zones, and ingress/egress traffic, as deemed necessary by the Chief Engineer.
3. All lane closures shall be approved by the Chief Engineer. Written requests for lane closures shall be provided to the Chief Engineer at least forty-eight (48) hours in advance.
4. Traffic backups can be expected and should be anticipated by the Contractor. During all phases of construction, the Chief Engineer may restrict or suspend the Contractor's activities as per Article 13.1 - Suspension of the Work, of the General Conditions and/or require both Turnpike roadways to be open to traffic

if the weather or traffic conditions should so indicate. Delays caused by these restrictions or suspensions are not the responsibility of the Commission.

5. Shoulder drop-offs from the edge of the traveled lane shall be limited to three (3) inches maximum and all guardrail and terminal assemblies shall be reinstalled leaving no obstruction unprotected.
6. **Permitted Lane Closures:** In addition to the restrictions noted above, Lane Closures are only permitted at the times shown in APPENDIX B – PERMITTED LANE CLOSURES. Implementation of the lane closure (i.e. set-up operations) may not occur prior to the permitted lane closure time and lane closures must be removed (i.e. tear down operations) prior to the prohibited lane closure time.

Approval of any Lane Closure is conditional that the zone must be removed anytime traffic backups extend one half (1/2) mile beyond the first transitional arrow board. If this occurs, the Contractor is to make the work area safe and remove the lane closure as directed by the Chief Engineer, thereby making at least two (2) lanes available to traffic. At no time may the closed lane which is adjacent to traffic be used for the storage or parking of any equipment and/or vehicles, except as specified on Ohio Turnpike Standard Drawing TCR-1.

Written requests for any closures and or restrictions shall be provided to the Chief Engineer in a timely manner in order to meet the required time frames set forth in the SP 614 Notification Time Table. Approval, if granted, may be restricted at the Chief Engineer's discretion. Approval is conditional that the zone must be removed anytime traffic backups extend one half (1/2) mile beyond the first transitional arrow board. If this occurs, the Contractor is to make the work area safe and remove the lane closure as directed by the Chief Engineer.

7. In the event that any of the above mentioned requirements relative to lane closure(s) are not complied with and/or not authorized by the Chief Engineer, the Commission may impose upon the Contractor a Liquidated Damage in the amount of \$10,000 per hour for each hour or portion of an hour not in compliance.
 8. The Contractor may elect to perform culvert lining construction below the mainline in any construction phase, subject to the requirements of this Specification. Prior to performance of this Work, the Contractor shall submit an access plan to the Chief Engineer for approval. The Contractor's access plan shall include, but is not limited to, the following; the intended method of accessing the site, the extent of the material laydown and equipment area, and methods of maintaining proper drainage in the Work area. Existing guardrail lengths and locations shall be shown on the Contractor's access plan.
- I. Temporary Access Deduct Alternate proposals (all proposed Entrances or Exits to the Turnpike at locations other than public Toll Plaza ramps) may be submitted by the Contractor, if the Commission includes this item on the Bid Form. The Contractor shall enter a lump sum credit in the space provided in the Proposal, setting forth the amount of credit, which will apply in case its proposal for Temporary Access is granted (See Bid form). In addition, The Contractor shall

furnish the following information in the sealed envelope containing its signed original Bid Guaranty/Performance Bond, Power of Attorney, Bidder's Affidavit and completed Financial Statement submitted within twenty-four (24) hours of the Bid Opening in accordance with Articles 2.7.2, 2.7.4 and 6.1.1 of the Instructions to Bidders.

1. The exact location of such proposed entrances or exits.
2. A detailed plan of all construction necessary to provide such access, including any drainage and guardrail work necessary and such Work that will be performed to restore the area to its original condition or repair of any damage after construction.

If the Temporary Access is approved, the Work of constructing the temporary access and restoration of the area as proposed by the bidder, or repair of any damage resulting to an existing facility that may be used, shall be the Contractor's responsibility and shall be performed as directed by the Chief Engineer. The Contractor is solely responsible for obtaining any permits or permissions required for the use of properties not within the Turnpike Right-of-Way. The unit prices bid shall not reflect any costs which apply to such temporary construction, restoration, or repair Work, and such Work shall not be separately measured or paid for, but shall be performed without cost to the Commission.

If such temporary access is located within a Project construction zone, the bidder will not be permitted to use the temporary access during times that traffic is being maintained on the right lane of the adjacent roadway. Granting of this temporary access will not waive the Contractor's responsibility to haul only legal weights on the Turnpike roadways.

In the event that the construction of such temporary access is not approved, the Project shall proceed as if no request or bid had been made for the construction thereof.

SP 105 **DISPOSAL OF EXCESS MATERIALS**

Except as otherwise specifically provided in these Special Provisions, materials in excess of the requirements of the Work under this Project shall be disposed of by the Contractor **off** the Turnpike right-of-way. It shall be the Contractor's responsibility to select and maintain disposal areas and enter into appropriate waste disposal agreements to dispose of excess materials. All costs associated with disposing of excess materials shall be incidental to the Project. The Contractor shall supply a copy of the waste disposal agreement to the Commission at least forty-eight (48) hours prior to any disposal. The Commission will in no way be responsible for disposal areas.

SP 106 **HOURS OF WORK**

The Commission will consider extended hours of Work for construction operations for the duration of this Project. However, when overtime, multiple shift or nighttime Work is contemplated, the Contractor shall give the Chief Engineer a minimum of forty-eight (48) hours in advance notice of its overtime, multiple shift or nighttime Work schedule so that inspection may also be scheduled. If other nighttime operations are contemplated, the Contractor shall give the Chief Engineer a minimum forty-eight (48) hours advance notice and the Contractor shall furnish the Chief Engineer its proposed construction operations

and proposed scheme for lighting the Work area. Nighttime Work shall not begin without written approval of the lighting plan.

A proposed night work plan shall be submitted for review and approval by the Chief Engineer. The submittal shall clearly describe the type of Work to be done, the duration of the Work, location of the intended Work, and the Contractor's proposed lighting plan. Temporary lighting of the Work site for operations conducted during nighttime periods shall be positioned so the lights do not cause glare to the drivers on the highway. If glare is detected, the light placement and shielding shall be adjusted to the satisfaction of the Chief Engineer before Work proceeds.

SP 107

TIME OF THE ESSENCE - LIQUIDATED DAMAGES

Time is of the essence under the Project. The operation of the Turnpike roadway is of prime importance to the Commission and the traveling public. Completion of the Work at the scheduled time and, if possible, prior to the scheduled completion date, is vitally important.

Article 3 of the Contract Form provides for the assessment of liquidated damages on the Contractor's failure to complete the Work within the time set forth in these Special Provisions, or as modified by the Chief Engineer. For each calendar day that any Work required shall remain uncompleted beyond the specified time of completion, Liquidated Damages shall be deducted from the funds due the Contractor, in accordance with the provisions of Article 3 of the Contract Form.

SP 108

CONCRETE PLANT CERTIFICATION

The Contractor must submit either a current Certificate of Conformance issued by the National Ready Mixed Concrete Association or maintain a certification from a Sealer of Weights and Measures, or a scale servicing company attesting to the accuracy of the weighing and metering devices, within a twelve (12) month period before use of the plant for the supply of concrete to this Project. Failure to comply with this requirement will result in rejection of all concrete supplied from the non-complying producer unless the certification is otherwise waived by the Chief Engineer.

SP 109

HAULING OVER LOCAL ROADS

A. General

All deliveries, waste removal loads, and heavy traffic in general shall use the Ohio Turnpike mainline as the only ingress/egress route. Local roads shall only be used for and in connection with the Project as routes for cars and small trucks. Any deviation from this requirement must have prior approval from the Chief Engineer and all applicable local authorities. The Contractor shall determine the existence of and comply with any local laws and/or ordinances governing locally maintained roads including, but not limited to, bonds for road damage and weight/load size restrictions.

B. Surveys

The Contractor shall conduct a video and written pre-construction local roads conditions survey. This survey shall be conducted by the Contractor, the Chief Engineer and the local governing body responsible for the roads. Copies of the survey shall be approved and maintained by both the local government and the Chief Engineer.

A post-construction survey shall similarly be conducted, approved and distributed.

C. Repair Responsibility

The Contractor and local governing body shall determine the damage to roads and appurtenant structures due to extra construction traffic from this Project.

The Contractor shall either repair, have repaired, or pay agreed repair costs as determined with the local governing body.

The Commission shall be held harmless for any damage to local roads and appurtenant structures due to construction of this Project.

The Commission will withhold final payment of monies due the Contractor until all such local road repairs are satisfactorily completed and/or negotiated costs paid and a copy of the signed release from the local governing body is provided to the Commission.

No extra payment for this item will be made to the Contractor. All Work required under this Special Provision shall be considered incidental to the Project and shall be completed at no cost to the Commission.

SP 110

PROJECT SAFETY
(02-16-18)

A. General

It is the intention of this program that safety not be sacrificed for production but should be an integral part of the planning process. The Commission promotes a ZERO Accident Culture and expects contractors to adopt this same culture.

The Contractor is charged with the responsibility for supervising Project safety and providing a workplace free of recognized hazard for all employees. The Contractor is responsible for enforcing its safety program and shall describe its enforcement procedures that are to be used, to ensure the program is followed.

The Contractor is solely responsible for the safety and health of its employees and for the protection of property and the general public. The Contractor shall comply with and ensure that all subcontractors comply with all Commission, OSHA, Federal, State, County and Local safety and health laws, regulations and Specifications, and enforce all applicable jobsite safety and health regulations and requirements through daily inspections and other measures deemed appropriate to ensure compliance by employees and subcontractor employees.

The jobsite will be subject to safety inspection by OSHA, the Commission, and the Chief Engineer, but this provision does not in any way affect the responsibility of the Contractor to be solely responsible for safety. Upon written notice of any safety violation, the Contractor will provide a written response within twenty-four (24) hours stating corrective actions and date of such corrections within twenty-four (24) hours.

Upon failure to immediately correct any safety violation after written notice of the violation from the Commission, the Chief Engineer, any insurance carrier or other authorized representative, the Chief Engineer has the right to stop the Work

affected by the violation until the condition is corrected to the satisfaction of the Chief Engineer. No extension of time or additional compensation will be granted as a result of any stop order so issued. The Chief Engineer also reserves the right to withhold the processing of Contractor pay estimates until unresolved safety issues are corrected to the satisfaction of the Chief Engineer.

The Contractor will ensure that personal protective equipment is readily available, issued, properly fitted, maintained and worn. Hard hats and Hi-Viz shirts or retro-reflective traffic safety vests will be worn by all jobsite personnel. The vests shall meet the latest requirements of ANSI/ISEA, Class 3, or as approved by the Commission. Proper clothing will be worn by all jobsite personnel to include: shirts covering shoulders, long pants, and Work type shoes or boots (shorts, muscle shirts, cut-a-way shirts, and sport type shoes are not permitted).

The Contractor will assure that proper material and equipment storage and housekeeping are maintained daily. Access is not to be obstructed, which would prevent the assistance of emergency personnel and equipment.

The Contractor will establish means to inform subcontractors, vendors and visitors of site rules and regulations.

B. Safety Program

Fourteen (14) days prior to the commencement of the Work, the Contractor shall submit two (2) copies of the Contractor's written safety program, including night operations, and the past three (3) years of the Contractor's OSHA Log of Work-Related Injuries and Illnesses (Form 300) for review by the Chief Engineer. Upon receipt of the Chief Engineer's comments, any revisions required must be submitted within seven (7) days. At a minimum, this written safety program is to address the following:

1. Compliance with all applicable OSHA, Federal, State, County and Local laws, rules, regulations and Commission's Specifications.
2. Designation of the Contractor's Safety Representative. (Submit resume for review).
3. Safety training requirements; all employees are encouraged to have completed the **Safety Training Passport Program** and other OSHA training. (Record keeping required, copy of the training record shall be readily available upon request).
4. New employee safety orientation (record keeping required, copy maintained on site).
5. Weekly tool box safety meetings (record keeping required, copy maintained on site).
6. Hazard Communication (Right to Know Training Program, inclusive of safety data sheet ("SDS") storage procedures).
7. Procedure to enforce safety policy, to include disciplinary measures where appropriate.
8. Procedure to enforce safety policy on Subcontractors.

9. Housekeeping.
10. Safety inspections of equipment, i.e., cranes, dozers, trucks (rock) hoes and loaders; daily, weekly inspection log required: To include inspection of equipment prior to being allowed on jobsite (record keeping required, maintain logs on site during the duration of the Project).
11. Incorporation of safety topics, i.e., safety concerns into Project progress meetings.
12. Use of personal protective equipment.
13. Program for jobsite medical service, to include emergency phone numbers.
14. Accident record keeping procedures (copies of all recordable accidents will be provided to the Chief Engineer within twenty-four (24) hours of occurrence). This should be revised or an exception added to consider a fatal accident. Fatal accidents must be reported to OSHA within 8 hours.
15. Provisions for required OSHA bulletin board notices. (Submit samples, i.e., OSHA, state posters).
16. Provisions for a safety awareness program.
17. Provision for evacuation/emergency plans.
18. Provision for training of Zone and Flagger personnel (submit training program). All Flaggers and Zone personnel shall wear Hi- Viz yellow/green safety vests and hard hats. The vests shall meet the latest requirements of ANSI/ISEA, Class 3. During night work operations, all Flagger personnel shall wear a Class 3 vest and Class E Leggings. Illumination shall be provided at the location where the flagger is stationed based on the National Cooperative Highway Research Program (Report 498).
19. Provide an updated copy of your company's Silica Protection Plan in order to comply with OSHA's new Crystalline Silica Rule.
20. Substance Abuse Program that includes as a minimum the following elements:
 - (a) A written program that complies with Ohio Revised Code Sections 153.03 and 153.031.
 - (b) The Contractor is required to be enrolled and in good standing in the Drug-Free Safety Program of the Ohio Bureau of Workers' Compensation ("Bureau") or a comparable program approved by the Bureau that requires an employer to do all of the following:
 - (1) Develop, implement, and provide to all employees a written substance use policy that conveys full and fair disclosure of the employer's expectations that no employee be at work with alcohol or drugs in the employee's system, and specifies the consequences for violating the policy.

- (c) Drug and alcohol tests on employees are required as listed and must use the Federal testing model that the Bureau's Administrator has incorporated into the Bureau's Drug-Free Safety Program.
 - (1) Prior to an individual's employment or during an employee's probationary period, which shall not exceed 128 days after the probationary period begins;
 - (2) At random intervals, while an employee provides labor or onsite supervision of labor. A neutral selection procedure required by the United States Department of Transportation to determine which employees to test and when to test those employees. All employees must have a negative substance test result for the Ohio Turnpike Project prior to starting Work on the Project. Substance testing must be performed on the substance specified in the employer's company substance abuse program;
 - (3) After an accident at the site where labor is being performed pursuant to the Project;
 - (4) When the employer or a construction manager has reasonable suspicion that prior to an accident an employee may be in violation of the employer's written substance use policy;
 - (5) The Contractor shall submit a notarized letter each month that there is complete compliance with the substance abuse program.
- (d) Require all employees to receive at least one (1) hour of training that increases awareness of and attempts to deter substance abuse and supplies information about employee assistance to deal with substance abuse problems, and require all supervisors to receive one (1) additional hour of training in skill building to teach a supervisor how to observe and document employee behavior and intervene when reasonable suspicion exists of substance use. This training must be received before Work begins on the Project.
- (e) Contractors must ensure that all employees are subjected to testing for at least five (5) drugs; Amphetamines, Cannabinoids ("THC"), cocaine, opiates, and phencyclidine ("PCP"/angel dust); and alcohol.
- (f) The laboratories used must be certified by the Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. No other laboratories are considered compliant. A breath/saliva preliminary test for alcohol shall be used with a confirmatory breath test conducted by a certified breath alcohol technician.
- (g) Employees tested under this criterion who are found to have a blood alcohol level of 0.04 or greater will be immediately relieved from performing Work under this Project.
- (h) The Contractor shall require all subcontractors to be enrolled and be in good standing in the Ohio Bureau of Workers'

Compensation's Drug-Free Safety Program or comparable program.

- (i) Each subcontractor shall require all lower-tier subcontractors be enrolled in and be in good standing in the Ohio Bureau of Workers' Compensation's Drug-Free Safety Program or a comparable program.
- (j) Failure of a Contractor to require a subcontractor to be enrolled and be in good standing in the Ohio Bureau of Workers' Compensation's Drug-Free Safety Program or a comparable program prior to the time the subcontractor provides labor at the Project site will result in the Contractor being found in breach of the Contract and that breach shall be used in the responsibility analysis of that Contractor or subcontractor who was not enrolled in a program for future contracts with the Commission for five (5) years after date of the breach.
- (k) Failure of a subcontractor to require a lower-tier subcontractor to be enrolled and in good standing in the Ohio Bureau of Workers' Compensation's Drug-Free Safety Program or a comparable program prior to the time the lower-tier subcontractor provides labor at the Project site will result in the subcontractor being found in breach of the Contract and that breach shall be used in the responsibility analysis of that subcontractor or the lower-tier subcontractor who was not enrolled in a program for future contracts with the Commission for five (5) years after date of the breach.

The Chief Engineer reserves the right to request any documentation to ensure the safety program is being conducted in accordance with the written program and applicable rules and regulations. The Contractor is to submit the documentation within twenty-four (24) hours of the Chief Engineer's request.

The Contractor will report the man-hours of all personnel employed on the Project as well as all recorded and lost time injuries on a monthly basis in conjunction with the monthly pay estimates.

C. Safety Representative

The Contractor shall have a safety representative for the Project on-site while Work is being performed. Superintendents are not to be designated as safety representatives.

The Contractor's safety representative must have completed the OSHA thirty (30) hour training or approved equivalent. Certification of training completion must be submitted to the Chief Engineer with the written safety program.

The safety representative's dedicated fulltime responsibility is to ensure that all Work is conducted in compliance with safety and health requirements and to develop and implement safety training programs and maintain safety records for all job personnel and in conjunction with the Contractor's management. The safety representative is to have specialized training and two (2) years experience in heavy highway and bridge construction safety and is subject to review by the Chief Engineer. The Chief Engineer has the authority to request removal of the Contractor's Safety Representative if that representative is judged to be improperly

or inadequately performing his or her duties; however, this authority in no way affects the Contractor's sole responsibility for performing its Work safely, nor does it impose any obligation upon the Commission or the Chief Engineer to ensure that the Contractor performs its Work safely.

D. Subcontractor Safety Representative

Ensure that all major subcontractors have an employee on-site designated as a safety representative. This employee may have responsibilities other than safety. This safety representative is to ensure that the subcontractor and its subcontractors and vendors meet all required safety rules and regulations. Superintendents are not to be designated safety representatives.

E. Special Safety Concerns

The following items are of special safety concern to the Commission and are to be given special attention. Detailed Plans to address these special safety concerns shall be submitted fourteen (14) days prior to starting Work:

1. Mandatory 100 percent fall protection for individuals performing Work above six (6) feet (all phases of Work including steel erection shall meet the requirements of 29 CFR 1926, Subpart M); Any Work performed in any aerial lift, and/or scissors lift will require 100% fall protection.
2. Excavation trenching cave-in protection (daily inspection documentation required);
3. Utility protection, including underground and overhead lines;
4. Electrical safety;
5. Crane safety; All cranes shall be equipped with anti-2 block switches (all cranes shall be required to have the boom down when not in use), OSHA 1926.550, OSHA 1910.180, ANSI B30.5 (1989), and PCSA No. 2 shall apply;
6. Any particularly hazardous operations (i.e., pile driving, caissons, cofferdams, etc.); and
7. Welding/cutting (all gas torches shall have anti-flashback valves).

F. Liability

Compliance with requirements for safety and/or Chief Engineer's review of the Contractor's safety program does not relieve or decrease the liability of the Contractor for safety.

No provision of these Contract Documents acts to make the Commission, the Construction Inspectors or any other party other than the Contractor solely responsible for safety. Article 16 of the General Conditions – Indemnification applies to protect, indemnify, defend and hold harmless all parties referred to therein from any and all actions, damages, fines, suits, losses and any other expenses arising from the Contractor's failure to meet all safety requirements and/or provide a safe Work site.

G. Basis of Payment

Safety and health equipment, operations, training, and dedicated personnel will not be measured or paid separately, but are considered incidental to the Contract requirements.

SP 111

NOT USED

SP 112

ENVIRONMENTAL POLLUTION CONTROL

A. General

The Contractor shall provide all equipment, materials, and labor necessary to prevent and/or clean up the spillover of construction operations onto adjacent property, roadways, and waterways. This shall include, but not be limited to, dust, mud, trash, night lighting, diesel fumes, petroleum products used to fuel/lubricate construction equipment, and any environmentally hazardous material.

The Contractor shall comply with all Federal, State and Local laws and regulations controlling pollution of the environment. It shall take appropriate or necessary precautions including, but not be limited to, those measures shown on the storm water pollution prevention plan (SWP3), to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, bitumens, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

The Contractor shall submit a written proposal on specific environmental pollution control methods and measures to be employed. Work shall not commence until methods have been submitted and accepted by the Commission.

B. Dust Control

Dust control shall apply to all construction operations and materials that may become airborne as particulate matter. Such operations shall include, but not be limited to, earthwork, drilling, blasting, and any vehicular traffic related to the Project.

In the event a dangerous or unacceptable dusting situation occurs, the Commission has the option to either:

1. Direct the Contractor to immediately remedy the situation to the Chief Engineer's acceptance; or
2. Shut down the Contractor's operations and have the remedial Work performed by others, at the Contractor's expense; or
3. Shut down the Contractor's operations until an acceptable condition exists.

No extension of time shall be allowed, nor shall additional compensation to be paid for shut down required under the terms of this provision.

C. Mud Control

The Contractor shall include in its environmental pollution control proposal and/or SWP3 a plan for removal of mud on vehicles leaving the construction site. This proposal shall also include an action plan for cleaning of public roads and/or storm drains should mud and/or dirt be deposited on the roads by vehicles, erosion, or any construction activity.

D. Trash Control

The Contractor shall include in its environmental pollution control proposal and/or SWP3 a plan for containing trash on site, trash disposal methods on site, if permitted by law, and off-site disposal hauling schedule.

E. Lighting Control

All lighting for night operations shall be in accordance with SP 106. Night lighting shall be shielded from direct illumination of adjacent residences and the traveling public. Should night operation be anticipated, illumination control measures shall be included in the environmental pollution control proposals.

F. Diesel Fume Control

The Contractor shall minimize generation of diesel fumes by using the highest-grade diesel fuel available and keeping equipment in good operating condition through a documented preventive maintenance program. Documents for diesel fuel purchases and maintenance program shall be made available within one (1) day of request to Inspectors to verify compliance.

Any piece of equipment generating excess visible exhaust after a half-hour warm-up period is subject to being shut down by Inspectors until condition is corrected. No extension of time nor additional compensation will be paid for such a shut down.

G. Measurement and Payment

Environmental pollution control measures will not be measured or paid for separately, but are considered incidental to the normal construction activity being performed.

SP 113 **NOT USED**

SP 114 **EXISTING AND PROPOSED GUARDRAIL**

In the event that guardrail elements have been damaged as a result of traffic impacts during the duration of this Project, or as directed by the Chief Engineer, the Contractor shall provide additional guardrail elements including installation and maintenance of traffic. Payment shall be in accordance with the appropriate guardrail items and Article 7 of the General Conditions. This shall include guardrail which is designated as rebuilt in the Plans and all other guardrail panels, posts, end sections and terminals located within the limits of the Project.

SP 115 **NOT USED**

SP 116 **FURNISHING RIGHT OF WAY/UTILITY RELOCATIONS**

The Commission will be responsible for the securing of all necessary rights of way in advance of construction. Any other exceptions will be indicated in the Contract.

Utility relocations are not expected to begin prior to the notice to proceed to be issued for this Project and are expected to occur on an as needed basis during the course of the Work. All utilities marked on the approved Plans, as relocated "By Others" will be relocated by the Utility Owner. All expense involved with relocating such utilities shall be borne by

the Utility Owner. All utility relocations required for the convenience of the Contractor will be coordinated and paid for by the Contractor. The Contractor and Utility Owners are requested to cooperate by arranging its Work in such a manner that inconvenience to either will be held to a minimum.

SP 117

FIBER OPTIC CABLES
(03-26-24)

A Lumen (previously CenturyLink, Qwest and LCI) fiber optic cable is generally buried in a plastic or steel conduit adjacent to the right-of-way fence of the westbound mainline roadway and is encased underground at mainline structures as shown on the Contract Plans or the as built plans. Extreme care must be taken by the Contractor to preserve and protect this cable during all phases of construction. Special care shall be exercised during improvements to drainage outlets and fence installation. Any excavation in this area for any reason is not to be performed without Lumen first locating the cable. After the cable has been located by Lumen, the Contractor shall excavate to within twelve inches (12") of the cable depth as provided. A Lumen representative will then hand dig to expose the cable.

A live Lumen fiber optic cable in a two-inch (2") diameter steel pipe may be attached to the existing mainline bridge parapets or fascia beam in the area of parapet modifications as noted on the Plans. A Lumen representative shall remove the conduit attachment clamp hardware from the existing parapet prior to any parapet removals. Extreme care shall be taken including supporting and maintaining conduit at its present location during all the Contractors operations as to not damage the fiber optic cable. After completion of the Work, the Lumen representative shall attach the cable to the reconstructed parapet.

The existing "as built" plans of the fiber optic cable installation may be inspected at the Ohio Turnpike and Infrastructure Commission Administration Office located at 682 Prospect Street, Berea, Ohio 44017, Telephone (440) 234-2081 if not included in the Plans for the Contractor's information.

Lumen shall be notified a minimum of two (2) days prior to any excavation over its lines and/or locating the cable or any Work in the vicinity of the cable.

The following Lumen representative shall be contacted for locating the cable:

Doug Holloway
doug.holloway@lumen.com
Office: (216) 426-6010
Mobile: (216) 906-6284

SP 118

NOT USED

SP 119

NOT USED

- A. **General.** The Construction Schedule required for this project is a Gantt Chart (bar chart) activity schedule prepared and accepted in accordance with GC Article 4.2. The intent of this specification is to provide the supplemental requirements elaborating on the specifications for the paper and electronic formats of the Construction Schedule pursuant to GC 4.3. These specifications also detail the applicable requirements to substantiate an extension of time request and the methodology for calculating the length of any time extensions that are approved by the Chief Engineer in accordance with GC 6.2.
- B. **Construction Schedule.** The Construction Schedule required under GC 4.2 will be in bar chart format and as described below.
1. **Schedule Requirements.** The Construction Schedule shall contain the material elements set forth in GC 4.3 to provide a Workday schedule that shows the various activities of Work in sufficient detail to demonstrate a reasonable and workable plan to complete the Work for all Interim Milestone, Substantial and Final Completion Dates (hereinafter "Completion Dates") established in SP 103. Workday shall be defined as a calendar day that the Contractor normally works. Show the order and interdependence of activities and the sequence for accomplishing the Work. Describe all activities in sufficient detail so that the Chief Engineer can readily identify the Work and measure the progress of each activity. The Construction Schedule must reflect the scope of work, required phasing and maintenance of traffic requirements to complete the Work for each Completion Date. Include activities for Shop Drawing and other submittal review and approval, fabrication review and review of mark-up Work, product review and procurement, fabrication, shop inspection and delivery including without limitation lead time, coordination drawing delivery, Punch List, Punch List correction, Project close-out requirements, Contract Completion and occupancy requirements.

The Contractor shall be responsible for assuring all Work, including all subcontractor Work, is included in the Construction Schedule. The Contractor shall be responsible for assuring that all Work sequences are logical and that the Construction Schedule indicates a coordinated plan.

Failure by the Contractor to include any element of Work required for performance of the Contract shall not excuse the Contractor from completing all Work within the required time. The Commission representative's review of the Construction Schedule will be for compliance with the specifications and contract requirements. Acceptance of the Construction Schedule by the Commission representative will not relieve the Contractor of any of its responsibilities for the accuracy or feasibility of the Construction Schedule. Omissions and errors will be corrected as described in Section C and will not affect contract time.

Each Construction Schedule shall also provide the following:

- a) **Administrative Identifier Information:**
 - i. Project Number
 - ii. County
 - iii. Contract Signed Date
 - iv. Completion Date
 - v. Contractor's Name

- vi. Contractor's Dated Signature
- vii. Commission's Dated Acceptance Signature

b) Project Activities:

- i. Activity Identification (ID). Assign each activity a unique identification number. Activity ID length shall not exceed 10 characters. Once accepted, the Activity ID shall be used for the duration of the project.
 - ii. Activity Description. Assign each activity an unambiguous descriptive word or phrase. For example, use "Excavate Area A," not "Start Excavation."
 - iii. Activity Original Duration. Indicate a planned duration in Workdays for each activity. Do not exceed a duration of 15 Workdays for any activity unless approved by the Engineer. Do not represent the maintenance of traffic, erosion control, and other similar items as single activities extending to the Completion Date. Break these Contract Items into component activities in order to meet the duration requirements of this paragraph.
 - iv. Activity Calendar. Each activity shall be assigned a calendar in the schedule that defines only those days as Workdays as those which the Contractor ordinarily anticipates performing the activity. This would include both the number of days worked per week and the specific days on which the Contractor anticipates working the activity. For example, if a Contractor anticipates working an activity four days per week, then the calendar in the schedule would show four Workdays. If the Contractor anticipates working on an activity only on the weekend, the Contractor would show only Saturday and Sunday as Workdays in the schedule. The Contractor shall provide a list of the calendars for each activity with its initial schedule submission and an explanation of each of the calendars Workdays.
2. Early Completion Schedule. An Early Completion Schedule is defined as a baseline schedule or update schedule which anticipates completion of all Work prior to the Completion Date established by the contract documents and the Contractor submits as an Early Completion Schedule. In the event that an Early Completion Schedule is accepted, the Engineer will initiate a change order amending the Completion Date to the finish date shown on the accepted Early Completion Schedule. The amended Completion Date will be effective upon execution of that Change Order and all contract provisions concerning the Completion Date such as incentives, disincentives, excusable delays, compensable delays, and liquidated damages will be measured against the amended Completion Date. The Contractor may elect not to execute the change order amending the Completion Date; however, in so doing, the Contractor waives its rights to delay damages in meeting the projected early Completion Date.
3. Monthly Update. Each month the progress shall be updated from the prior data date to the current data date in accordance with GC 4.3.7. Information in the monthly update must include a "% work completed" value for each activity.
4. Recovery Plan. When a Construction Schedule projects a finish date more than 5 calendar days later than a Completion Date, or upon receipt of notice under GC 4.3.6, the Contractor shall submit a time recovery plan described in GC 4.3.6 containing a revised schedule to achieve the Completion Date(s). The

Commission may withhold Estimates in accordance with GC 4.3.7.2 until the Chief Engineer accepts the time recovery plan making the revised schedule the updated Construction Schedule.

- C. **Revisions.** The Work may require and/or the Contractor may propose revisions to the Construction Schedule. All revisions must be proposed in narrative form and depicted in a Gantt Chart (bar chart) format accompanying the monthly update schedule. The Commission representative shall recommend that the Chief Engineer “accept” or “reject” proposed revisions within 10 days of receipt of appropriate report, schedules and narrative. All approved revisions will be incorporated into the updated Construction Schedule.
- D. **Time Extensions for Delays in Accordance with Article GC 6.** The Commission will only extend the Completion Date(s) if an excusable delay, as specified in GC Article 6.2, delays Work on the critical path shown on the accepted baseline Construction Schedule or updated Construction Schedule that impacts the Completion Date(s). The critical path is defined as the longest path of activities in the Project that determines the finish dates. The activities that make-up the critical path of activities are the “Critical Activities.” Any extension of the Completion Date(s) will be authorized through an executed Change Order.

Mitigation of any delay, whether caused by the Commission, Contractor, third-party or an intervening event, is a shared contract and legal requirement. Mitigation efforts include, but are not limited to, re-sequencing work activities, acceleration, and continuation of Work through an otherwise planned shutdown period. The Contractor and Chief Engineer must explore and discuss potential mitigation efforts in a timely manner in accordance with GC Articles 6, 7 and 8.

The Chief Engineer will evaluate the Contractor’s analysis and determine the time extension due, if any, to the Completion Dates. The Chief Engineer will measure all time extensions in Calendar Days. For delays measured in Workdays, the Chief Engineer will convert Workdays to Calendar Days by multiplying by 1.4 for a 5-day work week or less; 1.2 for a 6-day work week; and 1 for a 7-day work week; and extend the Completion Date by the resulting number of Calendar Days plus any holidays the Contractor does not normally work that occur in the extension period. When the conversion of Workdays to Calendar Days results in a decimal of 0.5 or greater, the Chief Engineer will round the number of Calendar Days to the next highest whole number. When the conversion results in a decimal less than 0.5, the Chief Engineer will delete the decimal portion of the Calendar Days.

The Contractor’s plea that insufficient time was specified is not a valid reason for an extension of time.

1. **Time Extensions for Delays Due to Weather in Accordance with Subparagraph GC 6.2.1.3.** A weather day is defined as a Workday that weather or seasonal conditions reduced production by more than 50 percent on items of work on the critical path. Submit the dates and number of weather days that occurred during the preceding month in writing to the Chief Engineer within ten (10) days of the end of each calendar month.

In accordance with GC 6.1.1, the Contractor must anticipate delays caused by weather and seasonal conditions in its Construction Schedule. Weather or seasonal conditions will be considered as the basis for an extension of time when the Contractor’s updated Construction Schedule depicts Work on the critical path impacted by actual workdays lost exceeding the number of Workdays the Contractor should anticipate losing during the month as prescribed in Table 1. The

Section in Table 1 that is applicable to the Project and utilized when considering requests for extension of time due to weather or seasonal conditions is established by the Ohio Turnpike mileposts within which the majority of the Work takes place as follows:

West Section – Milepost 0.00 to Milepost 100.00
 Central Section – Milepost 100.00 to Milepost 190.00
 East Section – Milepost 190.00 to Milepost 241.26

Table 1 – Weather and Seasonal Conditions			
Month	Anticipated Workdays Lost		
	West Section	Central Section	East Section
January	6	10	9
February	6	8	8
March	6	8	7
April	5	7	6
May	5	6	6
June	4	5	5
July	4	5	5
August	4	4	4
September	4	5	5
October	4	5	5
November	5	7	6
December	6	9	9

The Chief Engineer will not consider weekends and holidays as lost Workdays unless the Contractor normally works those days or unless the Chief Engineer directs the Contractor to work those days.

- E. **Basis of Payment.** The Construction Schedule will not be measured or paid for separately, but is considered incidental to the Contract.

SPECIAL PROVISIONS

SP 606A

ANCHOR ASSEMBLY, TYPE E

(9/11/19)

A. Description

This Work shall consist of furnishing and installing guardrail end terminal as manufactured by Road Systems, Inc. The Type E end terminals shall be specified as "MSKT" for installation with MGS Guardrail. Installation shall be at the locations specified in the Plans, in accordance with the Manufactures Specifications.

The anchor assemblies shall be placed at the locations shown in the Plans and in accordance with the manufacturer's specifications. Installation shall be in accordance with ODOT Approved Shop Drawing MSKT-SP-MGS dated 6-22-15, found on the ODOT Office of Roadway Engineering Approved Products List. Install this assembly at a 25:1 maximum flare rate so that the inside edge of the impact head is no closer than 6 inches from the outer edge of the shoulder.

The Commission shall supply a Type G Reflective Sheeting per CMS 730.19 mounted on a piece of aluminum. The Contractor shall rivet the aluminum to the face of the Type E Impact Head.

B. Basis of Payment

Payment shall include all labor, tools, equipment and materials necessary to construct a complete and functional anchor assembly system, including all related transitions, posts, rail elements and all required hardware, grading, embankment and excavation not separately specified, as required by the Manufacturer.

The accepted quantity of Type E Anchor Assemblies shall be paid for at the Contract unit price per each, complete in place.

Payment shall be made under:

<u>Item</u>	<u>Unit</u>	<u>Description</u>
SP 606A	Each	Anchor Assembly, MGS Type E

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SPECIAL PROVISIONS

SP 614

MAINTAINING TRAFFIC

(01-23-2026)

A. Description

This item shall consist of maintaining and protecting the motoring public and the Work while the Contract is in force. All provisions of Ohio Department of Transportation Construction and Material Specification (CMS) Item 614 shall apply. In the case of conflicting requirements, the Ohio Turnpike and Infrastructure Commission (Commission) SP 614 will govern. Traffic control sign and support material shall conform to SP 730.

B. Requirements

1. Ohio Turnpike Traffic

(a) Traffic Control General

The Contractor's responsibility to the safety of both the motoring public and the construction workers and equipment while performing the requirements of the Contract, shall be in accordance with Contract Documents and the latest revision of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD).

The Contractor shall schedule its operations to maintain the maximum number of traffic lanes open to traffic at all times. No Work will be permitted that reduces the number of lanes, except as noted in the Plans, or as directed by the Chief Engineer.

The Contractor shall notify the Chief Engineer in writing of all traffic restrictions and upcoming maintenance of traffic (MOT) changes, as permitted by the Contract Documents. The Contractor shall ensure the written notification is submitted in a format approved by the Chief Engineer and in a timely manner in order to meet the required time frames set forth in the table below. This notification shall be received by the Chief Engineer prior to the physical setup of any applicable temporary traffic control devices.

Information should 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, number of lanes closed, detour routes, if applicable, and any other information requested by the Chief Engineer.

SPECIAL PROVISIONS

Notification Time Table		
Item	Duration of Closure / Restriction	Notice Due to Chief Engineer
Mainline	>= 2 weeks	14 calendar days prior to closure
	< 2 weeks	2 business days prior to closure
Non-Mainline Ramps, Bridges, and/or Roads	>= 2 weeks	21 calendar days prior to closure
	> 12hours & < 2 weeks	14 calendar days prior to closure
	< 12 hours	4 business days prior to closure
Start of Construction & Traffic Pattern Changes	N/A	14 calendar days prior to implementation

Any unforeseen conditions not specified in the plans requiring traffic restrictions shall also be reported to the Chief Engineer using the Notification Time Table.

The Commission will monitor the MOT set-up, including the placement and use of flaggers, and may order adjustments, additions and/or replacements as deemed necessary to ensure the safety of the motoring public. The Contractor is responsible at all times for proper MOT zones and for maintaining all operations in a safe and effective manner. If the Contractor is given notice that any temporary traffic control device (TTC) is set improperly, the Contractor shall correct the deficiencies **immediately**. If deficiencies are not immediately corrected by the Contractor, the Commission reserves the right to correct the deficiencies, remove the MOT zone and/or suspend the Work of the Contractor. Any costs incurred by the Commission for correcting these deficiencies shall be withheld from the funds due the Contractor as per GC-9.6 of the General Conditions.

An Incident Management Coordination Meeting shall be held by the contractor at least 7 days prior to the first MOT zone being implemented, unless waived by the Chief Engineer. Attendees shall include the Chief Engineer, OSHP, Commission's Safety Services Manager, Maintenance Forces and towing services and local first responders within the Project limits. The purpose of the meeting is to familiarize all attendees with all MOT phases, Work area access locations, communication platforms, and alternate route plans, and to identify potential hazards.

SPECIAL PROVISIONS

(b) Lane Closure - Mainline

- (1) The Contractor shall not perform Work over or adjacent to any open lanes of traffic without implementing the appropriate MOT zone. Conform to the requirements of the plan, Commission standard drawings, and the OMUTCD, for the installation, maintenance, and operation of all traffic controls and traffic control devices. When the plans or construction drawings do not cover a specific traffic control situation, place the necessary traffic control devices per the OMUTCD and use the procedures required by the OMUTCD.

In long term MOT zones, where construction warning signs are mounted on posts, the signs shall be furnished, installed, covered and removed by the Contractor. Sign covers **are to be provided by the Contractor** and installed where required, including but not limited to, all speed limit signs. Sign covers shall **consist of black vinyl coated polyester material having a minimum weight of 18 oz. per square yard and minimum thickness of 0.020 inch (20 mils).** All other materials, including but not limited to burlap or similar open mesh materials, other signs, and trash bags are unacceptable. The entire sign face, including any supplemental signs, shall be covered. The contractor shall stabilize and fasten this material to the sign with either plastic or wood to prevent any movement, and shall not apply fastening devices, tape, or covers directly to the reflective sheeting of any existing sign and instead include spacers that provide 2 inches of air space between the cover and existing sign face to protect the sheeting from damage. Company names, logos, or any other writing shall not be placed on the sign covers or front of signs that are visible to traffic. Post mounted signs shall be uncovered and covered by the Contractor as directed by the Chief Engineer and as needed to display the appropriate signs as shown on the Plans. Post mounted signs will be mounted at a height of five (5) to seven (7) feet as measured from the bottom of the sign to the nearest edge line. Damaged or missing sign covers shall be replaced by the Contractor.

For short term and intermediate zones, the Contractor shall supply, install, maintain, and remove signs and support material conforming to SP 730. All roll-up signs furnished to the Project shall be new. Velcro overlays on roll-up signs are not permitted. Safety and protective devices furnished by the Contractor will remain the property of the Contractor and shall be removed from the Project site upon completion of the Work, or as directed by the Chief Engineer. When not in use all temporary signage and support material shall be removed from the mainline pavement. They may be placed either 50 feet from the edge of pavement or 6 feet behind guardrail.

SPECIAL PROVISIONS

- (2) All Work that requires lane and/or shoulder closure(s) shall be accomplished in accordance with SP 104.
- (3) The length of the single lane traffic zone shall not extend more than 1/4 mile beyond the last active Work area.
- (4) The Contractor's use of night work zones shall comply with SP 104 – Access to Turnpike and Restrictions and SP 106 – Hours of Work.

(c) Roadway Closure - Mainline (Rolling Roadblock or Traffic Switch)

The directional roadways may be closed for short periods of time for removal and/or placement of structural steel and overhead sign structures or for other activities as determined by the Chief Engineer. The roadway closure may be accomplished by implementing a Rolling Roadblock (RRB or sequenced lane closures) subject to the following controls and the approval of the Chief Engineer. A traffic switch may be used to establish a maintenance of traffic contraflow phase.

- (1) RRB may only be utilized between the hours of 12:00 a.m. and 5:00 a.m. or as otherwise approved by the Chief Engineer. Prior to approving an alternate time, the Chief Engineer will consult the OTIC Permitted Lane Closure charts. RRBs will only be allowed during hours when the chart has no shading at all.
- (2) The duration of RRB closures shall not exceed 20 minutes. If additional closures are necessary, traffic must be allowed to return to normal flow before the next closure begins. (Note: A twenty (20) minute RRB will provide approximately ten (10) minutes of work time at the Project site).
- (3) All travel lanes shall be available to traffic upon opening the RRB, unless otherwise approved by the Chief Engineer.
- (4) RRB or Traffic Switch Pre-Planning Meeting - Prior to scheduling the RRB or Traffic Switch Coordination Meeting with Commission Maintenance and Ohio State Highway Patrol (OSHP), the Contractor shall meet with the Chief Engineer to plan all activities which need to take place prior to the RRB or Traffic Switch, all activities that will need to occur during the RRB or Traffic Switch and plan the concluded MOT pattern once RRB or Traffic Switch is complete. All subcontractors of the Contractor directly involved with Temporary Traffic Control Operations are required to attend this Pre-Planning Meeting. This meeting shall occur at least 10 days prior to the anticipated RRB or Traffic Switch.

Seven days prior to the RRB or Traffic Switch, the contractor is required to provide an execution plan for review and approval. The plan shall contain all operations,

SPECIAL PROVISIONS

phases and sequences. The plan shall include specific details of all MOT changes including but not limited to pavement markings, pavement marking removal, signage, temporary barrier, impact attenuators, etc. The plan shall be color coded by operational phase and or sequence depicting final MOT alignment and signage. Resources of the prime contractor and all sub-contractors are to be included in the plan for labor and equipment detailing quantity, type and responsibility which will be committed to the operation.

- (5) RRB or Traffic Switch Coordination Meeting - All RRB or Traffic Switch shall be coordinated during a meeting attended by the Contractor, Chief Engineer, OSHP and Commission's Maintenance Forces a minimum of forty-eight (48) hours prior to performing the RRB or Traffic Switch. Decisions made at the meeting shall be documented on a form approved by the Chief Engineer.
- (6) Job Briefing Meeting - Three (3) hours prior the RRB or Traffic Switch Work, the Contractor will hold a job briefing meeting with all Contractor staff, subcontractor staff and inspection staff that will be involved in the work activities during the RRB or Traffic Switch implementation. The Job Briefing shall cover all roles and responsibilities of each individual person, specific details of work activities to be performed under the RRB or Traffic Switch work window, safety precautions, communications, time frame to perform the work and all equipment to be used at a minimum.
- (7) Contractor Provided Services - For RRB Operations, the Contractor will provide closure of all affected interchange ramps, service plaza ramps, mainline crossovers, maintenance access points and any other potential point of entry to mainline which will require closure during the RRB. At each Interchange and/or Service Plaza Ramp requiring closure, the Contractor will provide a Contractor vehicle with appropriate amber flashing safety lights, as specified for all construction vehicles, a light plant if required, radio or cell phone communication device and a competent staff member of the Contractor's firm in proper PPE (Flagger Attire). At each crossover and access point other than Interchanges or Service Plaza Ramps, the Contractor shall provide standard 42-inch traffic (grabber) cones or traffic drums spaced at 5-foot on center, across the access point / crossover width and just beyond, nested together with yellow caution tape.

Commission Maintenance and Highway Patrol personnel and vehicles used for the RRB will be provided by the Commission at no cost to the Contractor. However, the Contractor's zone person and zone vehicle will be utilized in all RRB. Additional Contractor personnel and vehicles may be required to assure control of all access points.

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(d) Worksite Traffic Supervisor

The Contractor shall employ a certified Worksite Traffic Supervisor (WTS) other than the Superintendent, subject to the approval of the Construction Engineer. See SP 614WTS – Worksite Traffic Supervisor for requirements.

All costs associated with the WTS shall be considered incidental to the performance of SP 614 Maintaining Traffic.

(e) Crossing Active Lanes with Construction Equipment

The following procedure shall be used when it is necessary to move construction equipment across an active lane of traffic. This procedure is limited to moves which can be completed in twenty (20) seconds or less.

- (1) The Contractor shall obtain prior approval from the Commission's Maintenance Department for all crossings.
- (2) The Contractor shall coordinate all movements with the Commission's Maintenance Department.
- (3) The Contractor shall station a flagger with a Commission radio at the point of crossing.
- (4) The Contractor shall set a single lane closure adjacent to the equipment, thus limiting the crossing to one (1) lane only.
- (5) A Commission's Maintenance vehicle (driven by the Commission's Maintenance foreman or assistant foreman) will drive into the zone with amber flashing light and hazard lights on. This vehicle shall proceed through single lane zone at fifty (50) mph (posted speed limit in construction zone) at a time when this will create a fifteen (15) to twenty (20) second gap in the flow of traffic.
- (6) The flagger with the Commission radio at the crossing point shall inform the Commission's Maintenance vehicle as soon as the crossing is completed.

This process is limited to rubber tired or smooth "street track" construction equipment that is capable of crossing the active traffic lane quickly (less than twenty (20) seconds).

Any rubber tired or smooth "street track" construction equipment that requires more than twenty (20) seconds to cross an active traffic lane, may cross provided the procedures for rolling roadblocks under Section B.1.(c) above are followed, subject to the approval of the Chief Engineer. If approval is not given, the equipment must be loaded onto a trailer, taken to the next interchange, turned and returned to the desired location.

Crossing active Turnpike lanes by construction equipment that requires protection of the pavement (such as laying down

SPECIAL PROVISIONS

plywood, etc.) shall not be permitted. Equipment of this type must be loaded onto a trailer and taken to the next interchange, turned around, and returned to the desired location.

Costs for any MOT requirements for equipment crossings shall be included in the lump sum price bid for Item SP 614 - Maintaining Traffic.

- (f) The Contractor's vehicles and equipment shall be operated in the direction of traffic. A qualified flagger shall be employed where the Contractor's equipment and vehicles, as well as material delivery and haul vehicles, merge into, exit from or cross Turnpike traffic as detailed in B.1.(h) above. The Contractor's equipment and vehicles, including material delivery and haul vehicles shall conform to CMS 614.03. Amber flashing safety light(s) shall be turned on during Work area ingress/egress, but not while travelling at posted speeds in active traffic lanes. The Contractor's equipment shall be stored at a storage area, the location of which shall have prior approval of the Chief Engineer. Pavers, rollers and other equipment may be parked in areas along the highway when paving operations are scheduled to continue within the next workday. When parking along the highway, the equipment shall be located either thirty (30) feet from the edge of pavement or 6 feet behind guardrail with a minimum of 125 feet of guardrail preceding the equipment. Adequate barricades and lights shall be placed on the pavement side of the equipment to identify the limits of the equipment. All other equipment, including private vehicles, shall be stored at the Contractor's approved storage area.
- (g) Prior to use, all cones, drums, sign supports, barricades, impact attenuators and other temporary traffic control (TTC) devices that are certified to meet National Cooperative Highway Research Program Report 350 (NCHRP-350) Test Level 3 or Manual for Assessing Safety Hardware (MASH) standards. Non-MASH compliant TTC devices will be allowed based on the American Association of State Highway and Transportation Officials (AASHTO) Manual for Assessing Safety Hardware (MASH) crash standards sunset dates. Do not use heavy non-yielding devices or supports that are not crashworthy.
- (h) Temporary traffic drums and cones shall be as shown on the Commission's Standard Drawing TCR-2 and shall be in LIKE NEW CONDITION. LIKE NEW shall meet the acceptable criteria as defined and illustrated in the American Traffic Safety Services Association ("ATSSA") publication "Quality Standard for Work Zone Traffic Control Devices." Reflectorization on drums shall be cleaned on a monthly basis or as directed by the Chief Engineer. Damaged drums shall be replaced as directed by the Chief Engineer. Replacement drums shall be provided by the Contractor and payment shall be included in the lump sum price bid for Item SP 614 – Maintaining Traffic.

2. Non-Turnpike Roadways

SPECIAL PROVISIONS

Any MOT required on non-Turnpike highways or roadways shall be performed per Ohio Department of Transportation (ODOT) MOT specifications and standards and the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) requirements and approved by the local ODOT District. The contractor is responsible for obtaining any necessary permits from the maintaining agency.

3. Weather Conditions

The Contractor shall be aware of and prepare for changing weather conditions. When conditions dictate, or as directed by the Chief Engineer, the Contractor shall provide and utilize necessary equipment and personnel to prevent water from ponding along the milled surface and flowing into and/or across active traffic lanes.

4. Alternate Temporary Traffic Control Plan

If the Contractor so elects, he may propose an alternate method or methods for MOT, provided the intent of the above provisions are followed and no additional inconvenience to the traveling public results there from. If the Contractor elects to propose an alternate MOT phase, scheme or plan from that included in the Contract Documents, the Contractor shall prepare to-scale plans, equivalent to the level of detail or more as provided in the Contract Documents, which illustrate all advanced warning area signage, transition area(s) for tapers and shifts, signage and/ or pavement markings, buffer space, activity or work areas where work is taking place, staging areas for workers / materials / equipment, and termination area showing trailing buffer space and transitions of traffic returning to normal alignment. Details of any variation from the Contract Documents, such as the placement of temporary concrete barrier, temporary sheeting, temporary barrier vehicles, temporary signals, temporary impact attenuators, covering of existing signage, removal of pavement markings, etc. should also be provided. Both mileposts and stations shall be provided to identify all locations of signs or devices. The proposed alternate plan is to address the entire Project and/ or adjacent project MOT plans and any required corrections to already existing MOT. Traffic flow arrows shall be shown on the plans to clearly indicate each lane of traffic maintained. Alternate MOT plans shall include a summary of the original plan quantities versus proposed quantities for any affected bid item(s). The alternate MOT plans shall be prepared, signed and sealed by a Professional Engineer Licensed and Registered in the State of Ohio who is knowledgeable about fundamental principles of TTC and work activities to be performed. Alternate MOT plans shall be submitted to the Chief Engineer for review and approval. The Chief Engineer will require a fourteen (14) day review period to evaluate the proposed alternate MOT plan. No alternate plans shall be placed into effect until approval has been granted in writing by the Chief Engineer. All work and traffic control devices shall be in accordance with SP 614 and all other applicable portions of the CMS, as well as the current version of the OMUTCD and Commission's Standards. All costs associated with the proposed alternate MOT plan will be the sole responsibility of the Contractor. No additional compensation will be provided.

5. Work Zone Pavement Markings

Unless otherwise approved by the Chief Engineer, SP 614B work zone pavement markings (WZPM) shall be used on all bridge decks where the

SPECIAL PROVISIONS

WZPM is not in line with existing/final markings. SP 614B should be used on bridge decks where a solid line (e.g., edge line, channelizing line, etc.) is being placed over top of a broken line (e.g., lane line, dotted line, etc.)

C. Measurement and Payment

Maintaining traffic shall be measured as a unit and shall be paid for at the Contract lump sum price bid. Unless separately itemized, the lump sum price bid for maintaining traffic shall include the cost of maintaining the roadways in a safe condition for public use, providing flaggers and its equipment, furnishing, cleaning, maintaining in an acceptable condition and subsequently removing temporary traffic control sign and support material, drums, cones, sign covers, arrow boards, message boards (when needed), temporary lighting, and other TTC items as required by the Contract Documents. The price shall be payment in full for all materials, equipment, labor and incidentals necessary to complete the Work as specified.

<u>Item</u>	<u>Unit</u>	<u>Description</u>
SP 614	Lump Sum	Maintaining Traffic

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SPECIAL PROVISIONS

SP 614C

REMOVAL OF PAVEMENT MARKING

(09-11-2017)

This Work shall consist of removal of existing pavement markings by either Grinding Method or Water-Blast Method as shown on the Plans and in accordance with these Special Provisions, except that grinding is not permitted on concrete pavement or bridges.

Pavement marking removal width shall be a maximum of line width plus one (1) inch each side of the line to be removed unless otherwise directed by the Chief Engineer. The removal depth shall be a maximum of five (5) mils or as otherwise directed by the Chief Engineer. Repair damage to the pavement that results from the removal of more than 5 mils of pavement thickness not directed by the Chief Engineer by approved methods. All associated costs of the repairs are solely borne by the Contractor.

Pavement markings shall be removed to the extent that ninety-five (95) percent of the existing marking is removed per linear foot of marking as determined by the Chief Engineer. Remove markings using the methods specified in the below table:

Type of Pavement		Removal Method	
		Grinder ^[1]	Sand, Shot, or Water Blast
Existing Asphalt	Temporary	Y	Y
	Permanent	N	Y
New Asphalt	Temporary	Y	Y
	Intermediate	Y	Y
	Permanent	N	Y
Existing Concrete	Temporary	Y	Y
	Permanent	N	Y
New Concrete	Temporary	Y	Y
	Permanent	N	Y
Y - Method is permitted to be used.			
N - Method is not permitted to be used.			
[1] - When a drum is mounted to a skid steer loader, the drum must be able to accommodate a minimum of 150 teeth.			

The line removal process shall be demonstrated to the Chief Engineer on a test section (100 foot test section) of existing line to be removed and approved by the Chief Engineer prior to the use. Excessive gouging, grooving, or roughness of pavement surface as determined by the Chief Engineer, will not be permitted.

Any damage to the pavement surface caused by the Contractor's operation shall be repaired at the Contractor's expense. The Chief Engineer, prior to performing the repair, shall approve repair methods and procedures.

GRINDING METHOD

A. Description

This Work shall consist of removal of existing pavement markings by grinding within the limits as shown on the Plans or as established by the Chief Engineer.

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B. Removal Process

The pavement markings shall be removed by grinding using carbide tipped or hardened steel grinding heads or other heads as approved by the Chief Engineer. The grinding heads shall be arranged in a floating head unit capable of adjustment during the removal process.

Debris generated by the removal process shall be contained and removed by vacuum type equipment, which minimizes airborne dust and debris, and disposed of in accordance with SP 105.

C. Equipment

Pavement marking removal equipment shall consist of a truck-mounted unit. The truck shall have a minimum of 20,000 pound gross vehicle weight (GVW). There shall be a minimum of three (3) independent grinding heads per side. The grinding heads shall utilize 2.5 inches to 3.5 inches diameter steel blades arranged to generate a grinding head width varying from 6.5 inches to 7.5 inches.

The grinding heads shall be hydraulically driven and shall be capable of adjustment in the vertical, horizontal and rotational planes. All adjustments must be able to be made to compensate for variations in crowning of pavement and changing line width while the machine is in operation.

A vacuum truck, vacuum sweeper or similar device capable of collecting the paint chips and other debris from the roadway shall follow removal of the paint markings to collect debris.

WATER-BLAST METHOD

A. Description

The Work consists of removal of existing pavement markings by high-pressure water blasting within the limits as shown on the Plans or as established by the Chief Engineer.

B. Removal Process

The pavement markings shall be removed from asphalt or concrete roadway surfaces by using high-pressure water jets at locations designated on the Plans or as established by the Chief Engineer.

Debris generated by the removal process shall be contained and removed by vacuum type equipment, which minimizes airborne dust and debris.

Do not perform Work unless the temperature is a minimum of forty (40) °F and rising and the pavement temperature is a minimum of thirty-five (35) °F and rising.

Paint removal may be performed during inclement weather provided the water, paint chips and the vacuum clean up system contains debris.

SPECIAL PROVISIONS

Water used shall be potable water obtained from a fire hydrant, municipal source or well. Lake or river water will not be allowed. The use of chemicals, abrasive materials, grinders, detergents or salt water will not be allowed.

Water collected by the vacuum system shall be separated from the paint chips and other debris. Water shall not be allowed to run in to any lake, river or stream. Paint chips and debris collected by the vacuum system shall be properly disposed per SP 105.

Any damage to the pavement surface caused by the Contractor's operation shall be repaired at the Contractor's expense. The Chief Engineer prior to performing the repair shall approve repair methods and procedures.

C. Equipment

The equipment used for the paint removal shall be a self-contained vehicle licensed to travel on the public roadway and capable of traveling at highway speeds. The vehicle shall contain an ultra-high pressure (UHP) water pump and water tank. The UHP pump shall be capable of delivering a minimum of sixteen (16) gpm while operating at 36,000 psi. The truck shall have a hydrostatic drive, independent of the truck transmission, capable of infinitely varying the forward speed of the truck during paint removal from zero (0) to seven (7) mph.

A vacuum truck, vacuum sweeper or similar device capable of collecting the paint chips, water and other debris from the roadway shall follow removal of the paint markings to collect debris.

The paint removal vehicle shall have a multi-jet spray head, which is capable of rotating at 2000 rpm. The spray head shall contain a minimum of 16 nozzles.

The equipment shall be capable of removing a minimum of 3000 linear feet per hour of stripping four inches (4) to six inches (6) inches in width.

The spray head shall be capable of removing paint from either side of the vehicle.

D. Basis of Payment

Removal of pavement markings shall be measured per mile or per foot, as noted in the Plans, measured along the centerline of the pavement marking. Payment for this Item shall be at Contract unit price, which shall include all labor, equipment, materials and incidentals necessary in the removal of pavement markings and cleaning of affected pavement surfaces and disposal of all waste materials as per SP 105.

Payment shall be made for all accepted quantity, complete and in place, at the Contract unit price bid for:

<u>Item</u>	<u>Unit</u>	<u>Description</u>
SP 614C	Foot	Removal of Pavement Marking
SP 614C	Mile	Removal of Pavement Marking

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SP 614WTS **WORKSITE TRAFFIC SUPERVISOR**
(09-10-2025)

Subject to approval of the Construction Engineer, the Contractor shall employ and identify (someone other than the Superintendent) a prequalified Worksite Traffic Supervisor (WTS) before starting work in the field. The WTS shall have successfully completed ODOT administered WTS testing (and re-testing when applicable) and be listed on the ODOT prequalified WTS roster. Prequalification expires every 5 years. Re-testing shall be successfully repeated every 5 years to remain prequalified.

The name of the prequalified WTS and related 24-hour contact information shall be provided to the Construction Engineer at the preconstruction conference. If the designated WTS will not be available full time (24/7), the Contractor may designate an alternate (secondary) WTS to be available when the primary is off duty; however, the primary WTS shall remain the point of contact at all times. Any alternate (secondary) WTS is subject to the same training. Prequalification and other requirements outlined within this Special Provision. At all times the Construction Engineer must be informed of who the primary WTS (and secondary WTS, if applicable) is at the current time.

The WTS position has the primary responsibility of implementing the Traffic Management Plan (TMP), monitoring the safety and mobility of the entire work zone, and correcting Temporary Traffic Control (TTC) deficiencies for the entire work zone. The WTS, and alternate WTS when on duty, shall have sufficient authority to effectively carry out the identified WTS responsibilities and duties. The duties of the WTS are as follows:

1. Be available on a 24-hour per day basis.
2. Be on site for all emergency TTC needs within one hour of notification by OTIC or project staff, and effect corrective measures immediately on existing work zone TTC devices.
3. Attend the preconstruction meeting and all project meetings where TTC management is discussed.
4. Be available on site for other meetings or discussions with the Construction Engineer upon request.
5. Be aware of all existing and proposed TTC operations of the Contractor, subcontractors and suppliers, and ensure coordination occurs between them to eliminate conflicting temporary and/or permanent traffic control.
6. Coordinate project activities with the Construction Engineer. The WTS shall also be the main contact person with the Construction Engineer while Law Enforcement Officers (LEOs) are on the Project.
7. Coordinate and facilitate meetings with OTIC personnel, LEOs and other applicable entities before each plan phase switch to discuss the work zone TTC for implementing the phase switch. Submit a written detail of MOT operations and schedule of events to implement the switch between phase plans to the Construction Engineer five (5) calendar days prior to this meeting.
8. Be present, on site for, and involved with, each TTC set up/take down and each phase change.
9. On a continual basis ensure that the TTC zone and all related devices are installed, maintained and removed in compliance with the Contract Documents.
10. On a continual basis, facilitate corrective action(s) necessary to bring deficient TTC zones and all related devices into compliance with Contract Documents in the timeframe determined by the Construction Engineer.
11. Inspect, evaluate, propose necessary modifications to, and document the effectiveness of, the TTC devices and traffic operations on a daily basis (7 days a week). In addition, perform one weekly night inspection of the work zone setup for daytime work operations; and one daytime inspection per week for nighttime projects. This shall include (but not be limited to) documentation on the following project events:

A. Initial TTC setup (day and night review).

SPECIAL PROVISIONS

- B. Daily TTC setup and removal.
 - C. When construction staging causes a change in the TTC setup.
 - D. Crash occurrences within the construction area and within the influence area(s) approaching the work zone.
 - E. Removal of TTC devices at the end of a phase or project.
 - F. All other emergency TTC needs.
12. Complete the OTIC approved long term inspection form after each inspection as required in #11 and submit it to electronically to the Construction Engineer by the following workday. These reports shall include a checklist of all TTC maintenance items to be reviewed. A copy of the form will be provided at the pre-construction meeting. Any deficiencies observed shall be noted, along with recommended or completed corrective actions and the dates by which such corrections were, or will be, completed.
13. Have copies of the ODOT Temporary Traffic Control Manual and Contract Documents available at all times on the Project

The OTIC will deduct:

- A. The prorated daily amount of Item SP 614 Maintaining Traffic for any day in which the WTS fails to perform the duties set forth above. The prorated daily amount will be equal to the original bid amount for item SP 614 Maintaining Traffic divided by the difference between the original completion date and the first day of work, in calendar days.
- B. 1% of the original bid amount for Item SP 614 Maintaining Traffic for any day that a TTC issue is identified in the field and is not corrected in the given timeframe per the Construction Engineer. Deduction B shall not apply to situations covered by deduction C.
- C. 1% of the original bid amount for Item SP 614 Maintaining Traffic for any day that a lane or ramp is blocked (fully or partially) without TTC, as determined by the Construction Engineer. This deduction shall be in addition to any other disincentives established for unauthorized lane use.

For days in which more than one deduction listed above occur, the highest deduction amount will apply.

The OTIC reserves the right to remove the Worksite Traffic Supervisor for failure to satisfactorily provide and perform the services of Worksite Traffic Supervisor as described in SP 614WTS.

Payment for the above requirements, responsibilities and duties shall be included in the LS price bid for Item SP 614 - Maintaining Traffic.

SPECIAL PROVISIONS

SP 619

FIELD OFFICE, TYPE C

(03/19/2026)

A. Description

The Contractor shall provide a suitable Type C field office and field laboratory in an approved location for the exclusive use of the Chief Engineer and Inspectors for making reports, checking Plans, and Specifications, etc., for storing the Chief Engineer's records and for performing field testing of construction materials. This Item shall be performed in accordance with Section 619 of the **Ohio Department of Transportation Construction and Material Specifications (CMS)** unless otherwise specified herein.

Section 619.02 of the Specifications shall be amended to include the following:

1. Amend/Add the following items for a Type C field office:

- (a) Potable water from a local municipal water supply, certified well, or bottled with a heating/refrigerator unit to provide hot and cold water for each field office and disposable cups.
- (b) Portable first aid kits (2).
- (c) A multi-function color copier/printer/scanner to be provided with all necessary maintenance and paper supplies with the following specifications:
 - i. Color Copy/Print Speed: 30 Pages Per Minute (Letter), 15 Pages Per Minute (Legal), 15 Pages Per Minute (Ledger) or higher
 - ii. Duplex printing support
 - iii. Automatic document feeder with 50 sheet duplexing document feeder
 - iv. Copier Memory: 768 MB
 - v. Installed HDD: 40 GB
 - vi. Data encryption and HDD Erase Support included with machine
 - vii. Internal Stapler Support
 - viii. Paper Capacity - 250 sheet × 2 trays, 50-sheet Bypass tray
 - ix. Network Interface: 10/100Base-TX, 1000Base-TX
 - x. Analog Fax Support Included with machine
 - xi. Color Scanning with following requirements:
 - Up to 600 × 600 dpi
 - Scan Area up to 11" × 17"
 - Scanning Protocol Support - TCP/IP, SMTP, SMB, FTP, POP3, NCP
 - File Scan Types Supported: Single Page TIFF, JPEG, PDF, Multi- Page TIFF, PDF, and OCR PDF
 - Scanning Support for Scan-to-Email, HDD, SMB (Folder), URL, and TWAIN
 - xii. Network protocol support for TCP/IP
 - xiii. Client and Server Print Driver Support for PCL Print Drivers
 - xiv. Server Operating System Support for Windows Server 2016 and later (32 Bit/64 Bit)

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- xv. Client Print driver support for Windows 10 and later (Both PCL/(32 Bit and 64 Bit))
 - xvi. Minimum print/copy resolution of 600 × 600 dpi
 - xvii. Secure printing with password or pin from client to copier
 - xviii. Ensure outlet is available to hook up printer
- (d) Teleconferencing Equipment
- i. a wall mounted 43"-55" commercial display (must be for extended use, not just a standard television)
 - ii. a teleconferencing bar (Polycom Bar model R30 / 842D2AA#ABA or equivalent)
 - iii. HDMI Cable
 - iv. Up to 3 outlets available in close proximity to connect all three devices (1 – TV, 1 – Poly Bar, 1 – laptop)
- (e) Provide 1- 12 ft x 30" or 2- 6 ft x 30" tables with a minimum of 12 folding chairs to be set up in meeting area of field office..
- (f) The Contractor shall hire a 3rd Party CLEANING SERVICE to clean the field office weekly with services not limited to:
- i. Garbage removal/disposal
 - ii. Sweeping and wet mopping floors
 - iii. Cleaning desks, tabletops, and chairs from dust accumulation
 - iv. Cleaning of air conditioning/heating vents
- (g) Solid waste disposal consisting of a minimum of two waste baskets and an outside trash container of sufficient size to accommodate a weekly provided pick-up service.
- (h) One equipment cabinet of minimum inside dimension of 44 in. (1100 mm) high x 24 in. (600 mm) wide x 30 in. (750 mm) deep with lock. The walls shall be of steel with a 3/32 in. (2 mm) minimum thickness with concealed hinges and enclosed lock constructed in such a manner as to prevent entry by force. The cabinet assembly shall be permanently attached to a structural element of the field office in a manner to prevent theft of the entire cabinet.
- (i) One electric desk type tape printing calculator.
- (j) Furnish a concrete cylinder curing box capable of holding at least eight 6 × 12-inch (150 × 300 mm) cylinders at 73 °F (23 °C) ± 3 degrees no matter what the ambient temperature is when constructing either Portland cement concrete pavement over 10,000 square yards (8000 m²) or over 50 cubic yards (38 cubic meters) of bridge structure repair or replacement concrete. The box will have a sealed lid.

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The field office shall be set up, equipped and made ready for use at least three (3) days prior to the beginning of Work on the Project by the Contractor or any of its subcontractors and shall remain until all field records pertinent to the Project have been completed. It shall be maintained in good condition and appearance by the Contractor for the duration of the Project and shall then be removed and disposed of by the Contractor, after which the site shall be cleaned up and left in a neat and acceptable condition.

The Contractor shall arrange and pay for the installation and removal of individual-line telephone service at the field office for the official and exclusive use of the Chief Engineer and other representatives of the Commission. All telephone charges will be paid for by the Contractor.

The Contractor shall maintain drainage in the area of the field office at all times during construction and shall restore the area to original conditions after the Work is completed.

The Contractor shall comply with all local ordinances, State of Ohio Building Code and Department of Industrial Compliance requirements and/or safety regulations as it relates to the establishment and maintenance of the field office.

Office should be fully equipped and functional per specification prior to start of work.

Section 619.04 shall be deleted and replaced with the following:

B. Basis of Payment

The field office payment shall be full compensation for furnishing and maintaining facilities **as specified above, including** all utilities, heat, electric, telephones, weekly cleaning and removal of facilities upon completion of the Contract.

Payment for Unit Price bid per Month (MNTH) will be made as follows:

- 1. Payment will start at first full month office is fully equipped and functional per specifications.**
- 2. Payment will be made for the number of months the office is maintained.**
- 3. A partial month at the end of the project will be paid as a full month.**

<u>Item</u>	<u>Unit</u>	<u>Description</u>
SP 619	MNTH	Field Office, Type C

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SPECIAL PROVISIONS

SP 622

PORTABLE BARRIER

(08/29/2025)

A. Description

This item shall consist of furnishing, transporting, installing, maintaining, resetting and storing concrete portable barrier or steel portable barrier including end terminals, and all connecting hardware for maintaining traffic in accordance with these Specifications and as shown on the Plans. Concrete portable barrier or steel portable barrier and associated hardware will be furnished by the Contractor. The Contractor shall supply all tapered end sections for use in the locations shown in the Plans and Standard Drawings. All connecting hardware shall be in accordance with Ohio Department of Transportation (ODOT) Standard Construction Drawing (ODOT SCD) RM-4.2. All applicable provisions of Ohio Department of Transportation Construction and Material Specification (ODOT CMS) Item 622 and Special Provision (SP) 104 and SP 614 of these Special Provisions shall apply. Concrete barrier furnished by the Contractor shall be in accordance with ODOT SCD RM-4.2 or other shape approved by the Chief Engineer. All portable barriers shall meet the current National Cooperative Highway Research Program Report 350 (NCHRP-350) standards or AASHTO Manual for Assessing Safety Hardware (MASH). NCHRP-350 approved devices manufactured prior to 12/31/2019 will be permitted for use through December 31, 2029, provided they meet the ODOT Quality Standards for Temporary Traffic Control Devices (TTCDs).

Portable barriers shall have barrier reflectors, object markers and/or glare screens attached per ODOT Standard Construction Drawing MT-101.70 with the following exceptions: delineation of the impact attenuator nose cone shall be reflectorized with yellow and black ASTM III or IV sheeting in 6" wide alternate stripes which slope downward towards the center line of the road at an angle of 45 degrees. If the impact attenuator is located where traffic can lawfully pass on either side of it then the yellow and black stripes shall be installed in a chevron pattern. Barrier reflectors shall be oriented to face oncoming traffic, spaced as shown on TCR-14 and shall be in place before the barrier is exposed to traffic. Each barrier reflector shall be installed per Item 626.04.

Where required in the plans, a glare screen shall be attached to the barrier. The glare screen shall be in accordance with Item Special - Glare Screen.

B. Materials

Portable Barrier Option 1: Concrete portable barrier in accordance with this section, ODOT CMS 622 Portable Concrete Barrier and ODOT SCD RM-4.2 32" Portable Concrete Barrier.

Portable Barrier Option 2: A steel portable barrier system comprised of nominally eight (8) gauge thick ASTM A36 pressed steel panels, galvanized prior to assembly. Barrier sections shall be fifty (50) feet long and thirty-two (32) inches in overall height. Base width shall be a minimum of 2.3 feet and a top width of 6.25 inches. The barrier shall have a mountable foot section and have rubber feet fastened to the sections at four (4) foot intervals. A lifting system shall be incorporated into sections. Installation of the sections shall not impede drainage. Each section shall be anchored to the pavement at a minimum of two points. Steel portable barrier shall meet the requirements of NCHRP-350 Test Level 3 (TL3) and Test Level 4 (TL4) standards or AASHTO Manual for Assessing Safety Hardware (MASH). NCHRP-350 approved devices manufactured prior to 12/31/2019 will be permitted for use through

SPECIAL PROVISIONS

December 31, 2029, provided they meet the ODOT Quality Standards for Temporary Traffic Control Devices (TTCDs).

Glare Screen: If specified, the glare screen shall be provided in accordance with the Special Provision "Item Special - Glare Screen".

Barrier reflector shall be "Astro Optics Corporation Reflective Delineator series JD-1" or approved equal.

Adhesive for barrier reflector shall be "Signal Products Epoxy Adhesive" or approved equal. Apply adhesive according to the manufacturer's recommendations.

C. Construction Requirements

Concrete portable barriers shall be installed and removed as per Ohio Turnpike Infrastructure Commission Standard Drawing (OTIC SCD) TCB-1 at the locations shown in the Plans and in accordance with the provisions of SP 104.

Steel portable barrier shall be installed in accordance with OTIC SCD TCB-1 and be installed in accordance with the design guidance and installation instructions supplied by the manufacturer which shall include detailed arrangements of standard and minimum deflection system, anchoring details and connection to end treatments. Upon removal of the steel portable barrier the contractor shall repair the pavement surface at the anchor locations.

Upon completion of the Contract, all portable barrier furnished by the Contractor shall be removed from Turnpike right-of-way.

Portable barrier sections, which have been damaged by traffic during the life of the Project, shall be replaced as directed by the Chief Engineer. Damaged sections, whether by traffic or during handling, shall be disposed of in accordance with SP 105.

Barrier reflectors shall be cleaned on a monthly basis where possible or as directed by the Chief Engineer to provide maximum effectiveness of the reflectorization.

D. Method of Measurement and Payment

Concrete portable barrier or steel portable barrier shall be paid for as ft and include all barrier reflectors, replacement reflectors, object markers and glare screen as required during construction. The unit price bid per ft shall also include the furnishing, delivery, installation, maintaining, cleaning and replacement of reflectors, moving, transporting, storing, re-setting, as required, removal of the barrier from the Turnpike right of way, complete patching and repairing of the pavement at the anchor points, and disposal of damaged barrier sections throughout the term of the Contract. Bridge mounted portable barrier shall also include providing and installing anchors, removal of the anchors, patching of the bridge deck or pavement, and weatherproofing the patch area per SP 536.

SPECIAL PROVISIONS

E. Basis of Payment

Payment shall be made at the unit price bid at the unit shown in the plans for:

<u>Item</u>	<u>Unit</u>	<u>Description</u>
SP 622	FT	PORTABLE BARRIER (WITH GLARE SCREEN)
SP 622	FT	PORTABLE BARRIER (WITHOUT GLARE SCREEN)
SP 622	FT	PORTABLE BARRIER, ANCHORED (WITH GLARE SCREEN)
SP 622	FT	PORTABLE BARRIER, ANCHORED (WITHOUT GLARE SCREEN)

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SPECIAL PROVISIONS

SP 623

CONSTRUCTION LAYOUT SURVEY

(12-05-2019)

A. Description

In addition to the requirements of Item 623 of the Specifications, the Contractor shall be required to perform the following:

1. In order to meet established roadway grades, to assure the construction of the required thickness of deck slabs, and to assure the proper location of the reinforcing steel in the deck slabs; the Contractor shall obtain the elevations of the bridge beam seats and the top of new and existing steel beams after the complete removal of existing deck slab at the locations shown in the table for the final pavement elevations, and compute the deck thickness over the beams. The Contractor shall furnish the elevations to the Chief Engineer for final checking. If the computed deck thickness is found to be less than minimum thickness required, the top of final pavement elevations shall be adjusted as directed by the Chief Engineer. Formwork shall not proceed until a check of the final elevations has been performed by the Chief Engineer. The Contractor shall also compute the deck screed elevations, utilizing the dead load deflections. The Contractor is required to provide the information specified in this paragraph only when related Work Items are installed or modified in the Project.

Prior to placing the approach slabs, the Contractor shall provide the Chief Engineer lane line and edge of pavement elevations at five foot (5') intervals of the as-built elevations of the abutment and deck slabs, and for a distance of five hundred feet (500') beyond the approach slab limits. After receipt of these elevations, the Chief Engineer will calculate and provide to the Contractor final elevations for the approach slabs and approach pavement. No approach slabs shall be poured nor shall paving commence until receipt of these final elevations from the Chief Engineer. The Contractor is required to provide the information specified in this paragraph only when related Work Items are installed or modified in the Project.

The Contractor shall obtain elevation data at five foot (5') maximum increments along the cut line of the superstructure, abutment slabs, approach slabs and along the edge of asphalt pavement for five hundred feet (500') (minimum) beyond both ends of the structure. The Contractor shall review the data and identify all areas which do not provide a smooth profile. Corrective measures may be required immediately adjacent to the cut line and/or across the existing lanes. The survey data as well as the identified areas shall be submitted to the Chief Engineer for approval at least two (2) weeks prior to the superstructure concrete being placed.

SPECIAL PROVISIONS

2. The location of guardrail runs and impact attenuators shown on the Plans shall be approved by the Chief Engineer prior to installation. The locations of these items shall be field staked by the Contractor prior to installation for review by the Chief Engineer. The Chief Engineer may require adjustments to afford maximum protection for traffic. The Contractor is required to provide the information specified in this paragraph only when related Work Items are installed or modified in the Project.
3. The Contractor shall provide to the Chief Engineer survey data for verification of as-built conditions. The survey data shall include stationing, offsets, and elevations as required for the following items:
 - a) Following substantial completion, provide to the Chief Engineer the vertical clearance measurements on both mainline and overhead bridges along each fascia beam at each painted edge line and lane line below each bridge. This Work shall be performed on all bridges, Mainline and overhead, within the Project limits whether the bridge includes work items or not. Clearances are to be obtained to the nearest 1/100th of a foot. The survey data shall be documented on an OTIC provided form and the form shall be sealed by a State of Ohio Registered Surveyor. This information is required only for projects with pavement or bridge related Work Items.
 - b) Drainage items to include pipe runs, inlets, manholes, headwalls, underdrain runs and outlets, and all other drainage structures not listed herein. Invert elevations of inlets, manholes, underdrain outlets, headwalls, and other drainage structures shall be included. The Contractor is required to provide the information specified in this paragraph only when related Work Items are installed or modified in the Project.
 - c) Structure items including, but not limited to, piling, foundations, bearing seats, and other elements deemed necessary by the Chief Engineer. The Contractor is required to provide the information specified in this paragraph only when related Work Items are installed or modified in the Project.
 - d) Final cross sections for embankments, excavations, drainage swales, on-site borrow or waste areas. The Contractor is required to provide the information specified in this paragraph only when related Work Items are installed or modified in the Project.
 - e) Limits of Work for such items as pavement, concrete barrier, guardrail, SNAPs, and other elements deemed necessary by the Chief Engineer. The Contractor is required to provide the information specified in this paragraph only when related Work Items are installed or modified in the Project.

SPECIAL PROVISIONS

B. Basis of Payment

Payment for the above-mentioned Work shall be included with the lump sum price for Item SP 623 - Construction Layout Survey.

Payment shall be made under:

Item	Unit	Description
SP 623	Lump Sum	Construction Layout Survey

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**STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION 800
REVISIONS TO THE 2023 CONSTRUCTION & MATERIAL SPECIFICATIONS**

DATED 07/18/2025

101.02

On page 8, **Replace** DSR Dynamic Shear Rheometer (asphalt binder test) with the following:
DSR Daily Source Report

101.02

On page 9, **Add** the following abbreviation below NPDES National Pollutant Discharge Elimination System:
NWE Normal Water Elevation

101.03

On page 14, **Add** the following definition after Materials definition:
Normal Water Elevation. Water elevation within a waterway produced by groundwater flow and not influenced or minimally influenced by surface water runoff. The Normal Water Elevation shown in the plans is approximate and will fluctuate seasonally and from year to year.

104.02.D.

On page 25, **Replace** Table 104.02-1 with the following:

TABLE 104.02-1

Contract Price	Contract Limits
Up to \$1,000,000	\$50,000
\$1,000,001 to \$2,000,000	5% of Total Contract Price
Over \$2,000,000	\$100,000

105.20

On page 36, **Add** the following new section after 105.19:

105.20 As Per Plan Designation. Work item descriptions may include an “As Per Plan” (“APP”) designation in the proposal or the plans to assist with identifying Work with project specific requirements.

Read, bid and construct all items in accordance with all governing plan notes. The absence of an “As Per Plan” designation on work item descriptions having clear and controlling project specific requirements does not relieve the responsibility to read, bid and construct those particular items per the item’s governing project specific requirements. The “order of precedence” as identified by C&MS 105.04 will not be cause for disregarding project specific requirements for Work with or without an “As Per Plan” designation.

Item descriptions in the proposal or plans must be read or interpreted with the governing project specific requirements and the C&MS. Submit a Prebid Question per C&MS 102.05 if a perceived conflict exists between the work item description and the governing project specific requirements.

106.01

On page 36, **Replace** the first paragraph with the following:

106.01 Source of Supply and Quality Requirements. Notify the Engineer of the proposed sources of supply before the delivery of materials. Submit material information to the Department per Supplement 1136. The Engineer may approve materials at the source of supply before delivery. If the proposed sources of supply cannot produce the specified material, then furnish materials from alternate sources without adjustment to the Contract Price or Completion Date.

107.13

On page 46, **Replace** the entire section with:

107.13 Reporting, Investigating, and Resolving Motorist Damage Claims.

The Contractor and the Department are required to report, investigate, and resolve motorist damage claims according to 107.10 and 107.12 and as follows.

When a motorist reports damage to its vehicle either verbally or in writing to the Contractor, the Contractor shall within 3 days make and file a written report to the District's construction office. In the event that the Department directly receives the motorist's claim, the Department shall within 3 days send the claim report to the Contractor. In the event the Contractor has not agreed to resolve the motorist claim, the District's construction office shall forward the report to the Department's Court of Claims Coordinator in the Division of Chief Legal Counsel who, as a co-insured party, may then contact the Contractor's insurance company and request that the insurance company investigate and resolve the claim. If the Contractor or their insurance company does not resolve the claim in a timely manner, the Department may advise the motorist of the option of pursuing the claim through the Tort Claims Program with the Office of Risk Management in the Department of Administrative Services (claims other than non-injury pothole claims) or in the Ohio Court of Claims (non-injury pothole claims) in accordance with ORC 2743.15.

In the event of a claim filed against the Department with the Office of Risk Management (ORM) or a lawsuit filed against the Department in the Ohio Court of Claims by the motorist, the Department, as co-insured party, may request the Contractor's insurance company to defend this claim or lawsuit and hold the Department harmless according to 107.12.

If the ORM claim or Court of Claims lawsuit claim amount is \$10,000 or less and the Court of Claims Coordinator in the Division of Chief Legal Counsel determines that the Contractor is responsible for the claimed damages then the Department's Court of Claims Coordinator in the Division of Chief Legal Counsel may, after notifying the Contractor, determine that it would be in the best interest of the Department to settle the claim or lawsuit. Any compromise or settlement amount including court costs may be assessed to the Contractor and deducted from the project. The Engineer will notify the Contractor prior to executing the deduction. The Contractor or the Contractor's insurance company may within 14 days appeal the assessment decision of the Court of Claims Coordinator to the District Construction Engineer. The decision of the District Construction Engineer will be made within 14 days. Should the District Construction Engineer decision differ from the Court of Claims Coordinator, the District Construction Engineer will forward the decision to the District Deputy Director or Capital Program Administrator for final determination.

107.15

On page 47, after the second paragraph, **Add** "Portable Barrier" to the bottom of the list of items.

107.15 Contractor's Responsibility for Work.

On page 47, Under the second paragraph, **Add** "Queuing Detection Equipment" and "Work Zone Egress Systems" to the bottom of the list of items.

107.21

On page 51, **Replace** the first paragraph with the following:

107.21 Prompt Payment. In accordance with ORC 4113.61, make payment to each subcontractor and supplier within 10 Calendar Days after receipt of payment from the Department for Work performed or materials delivered or incorporated into the Project, provided that the pay estimate prepared by the Engineer includes Work performed or materials delivered or incorporated into the public improvement by the subcontractor or supplier.

A. Bonded subcontractors. Withhold no retainage from bonded subcontractors.

B. Unbonded subcontractors and suppliers. Withhold from unbonded subcontractors and suppliers the percent retainage, if any, the Contractor feels necessary to protect itself.

Retainage cannot exceed eight percent of the estimates paid until fifty percent of the work has been satisfactorily completed, then the amount retained cannot exceed four percent. Progressively and proportionately release any retainage held, as set forth in any subcontractor or supplier agreement. For the purposes of this section, a subcontractor's work is satisfactorily completed when payment for a subcontractor's work or supplier's material has been made by the Department. No subcontract provision shall permit the Contractor to delay subcontractor's retainage payments until the Project's final payment

108.02.F.

On page 54, **Replace** the last sentence of the first paragraph with the following two sentences:

Mitigation efforts may or may not result in additional costs. Mitigation efforts which result in additional cost will be compensated per 109.05.B or 109.05.C.

108.02.F.

On page 54, **Replace** the second paragraph with the following:

1. Contractor Initial Oral Notification. Provide ~~immediate~~ oral notification upon discovery of an issue to the Engineer that ~~upon discovering a circumstance that~~ may require a revision to the Contract Documents ~~or may result in a dispute~~ prior to pursuing or constructing future work that will impact mitigation efforts of the issue. Upon notification, the Engineer will attempt to resolve the identified issue as quickly as possible.

108.02.F.

On page 54, **Replace** the last sentence of the third paragraph with the following:

This early notice must be given by the end of the second working day following the discovery of the circumstance.

108.02.G.

On page 54, **Replace** the second paragraph with the following:

All parties to the dispute must adhere to the Dispute Resolution and Administrative Claim process. Informal discussions with the DCE are permissible during the Step 1 review. Do not contact other Department personnel who are to be involved in a Step 2 or Step 3 review until a decision has been issued by the previous tier. Department personnel involved in Step 2 or Step 3 reviews will not consider a dispute until the previous tier has properly reviewed the dispute and issued a decision.

108.02.G.

On page 55, **Replace** the first sentence of the first paragraph with the following:

Failure to meet any of the timeframes outlined above or below or to request an extension may terminate further review of the dispute and serve as a waiver of the Contractor's right to file a claim.

108.02.G.

On page 55, **Add** the following sentence to the end of the first full paragraph:

Failure by the Department to meet the timeframes outlined in this section will be a de facto equivalent time extension to the Contractor for the subsequent Dispute Resolution and Administrative Claims Process step.

108.02.G.1.

On page 55, **Replace** the subsection with the following:

1. Step 1 (Project Level Determination). The Engineer will meet with the Contractor's superintendent within two (2) working days of receipt of the Contractor Written Early Notice set forth in 108.02.F.2. Jointly review all pertinent information and contract provisions and negotiate in an effort to reach a resolution. If the Engineer has considered all information previously offered by the Contractor when issuing a response to the Written Early Notice, then the Engineer's written response shall be considered a Step 1 decision if the response clearly states it is in response to the Written Early Notice. If not, the Engineer will issue a written Step 1 decision within seven (7) calendar days of the meeting. If the dispute is not resolved, either abandon or escalate the dispute to Step 2.

108.02.G.2.

On page 55, **Replace** the second paragraph of the subsection 108.02.G.2. with the following:

Within seven (7) calendar days of receipt of the Step 1 decision, either abandon the dispute or submit a written request for a Step 2 meeting to the District Construction Engineer (DCE). The DCE will assign the dispute a dispute number. Within fourteen (14) calendar days of submitting the request for a Step 2 meeting, electronically submit the Dispute Documentation to the DCE as follows:

108.02.G.3.

On page 56, **Replace** the first sentence in the ninth paragraph with:

3. Step 3 (Director's Claims Board Hearing or Alternative Dispute Resolution). Submit a written Notice of Intent to File a Claim to the Dispute Resolution Coordinator in the Division of Construction Management within seven (7) calendar days of receipt of the Step 2 decision.

108.02.G.3.a.1.

On page 56, **Replace** the first sentence of 108.02.G.3.a.1. with the following:

(1) Electronically submit the Claim Documentation to the Dispute Resolution Coordinator within thirty (30) calendar days of receipt of the Notice of Intent to File a Claim. This timeframe may be extended with approval of the Dispute Resolution Coordinator.

108.02.G.3.a.3.

On page 58, **Replace** the fourth paragraph with the following:

The Board will hear the entire claim on behalf of the Director. The Board may have its own technical advisors at the hearing for consultation and assistance in reviewing the claim. The Contractor and District will each be allowed adequate time to present their respective positions before the Board. The Contractor and District will also each be allowed adequate time for rebuttal, limited to the scope of the opposing party's presentation. The Board may suspend any portion of a presentation or rebuttal it deems to be argumentative, repetitive, or irrelevant to the claim. The Contractor's position will be presented by one or more of the Contractor's employees who are thoroughly knowledgeable of the claim. The Contractor may have legal counsel present during the hearing to observe or for private consultation but shall not present on behalf of the Contractor. Similarly, the District's position will be presented by one or more District representatives who are thoroughly knowledgeable of the claim.

108.02.G.4.

On page 59, **Replace** the fourth paragraph with:

4. Interest on Claims. The Department will pay interest in accordance with ORC Section 5703.47 on any amount ultimately found due on a claim which is not paid within 30 days of the expenditure of funds by the Contractor in accordance with ORC 126.30 when all Work related to the Claim is complete. However, interest will not be paid on the amount of any agreed settlement unless specifically itemized and included in the total settlement prior to agreement.

108.07.B.

On page 66, **Replace** Table 108.07-1 with the following:

TABLE 108.07-1 SCHEDULE OF LIQUIDATED DAMAGES

Original Contract Amount (Total Amount of the Bid)		Amount of Liquidated Damages to be Deducted for Each Calendar Day of Overrun in Time
From More Than	To and Including	
\$0.00	\$500,000	\$450
\$500,000	\$2,000,000	\$600
\$2,000,000	\$10,000,000	\$1,000
\$10,000,000	\$50,000,000	\$2,300
Over \$50,000,000		\$4,200

108.095

On page 67, **Add** the following new section after 108.09 and before 108.10:

108.095 Partial Severability Due to Legal Revisions. If any term of the Contract is to any extent illegal, otherwise invalid, or incapable of being legally enforced, such term shall be excluded to the extent of such invalidity or unenforceability; all other requirements hereof shall remain in full force and effect.

109.05.D.2.e.2

On page 85, **Replace** the first paragraph with the following:

(2) The delay for which payment of field overhead is sought is only due to delays defined in 108.06.D.2, 108.06.D.3, 108.06.D.4, 108.06.D.5 or for delays due to revised Work as specified in 104.02.B or 104.02.F.

109.05.D.2.f.2

On page 85, **Replace** the first paragraph with the following:

(2) The delay for which payment of home office overhead is sought is only due to delays defined in 108.06.D.2, 108.06.D.3, 108.06.D.4 and 108.06.D.5.

201.04

On page 94, **Replace** the subsection with the following:

201.04 Scalping. Scalping includes removing surface material such as roots, sod, grass, residue of agricultural crops, sawdust, and decayed vegetable matter. The depth of scalping does not include topsoil or other material below the scalping operation.

A. The Engineer will not require areas to be scalped in the plan embankment construction locations when both of the following conditions are true:

1. The embankment height is greater than 9 feet as measured vertically from the existing ground surface to the proposed ground surface, and
2. The slope of the existing ground is 8:1 or flatter.

B. Scalp all other areas where excavation or embankment is required.

202.03

On page 96, **Add** the following paragraph after the last paragraph of the section:

Demolition of bridges or portions of bridges in which the work endangers property or the welfare, life, health of any individual requires an engineered drawing and meeting according to 501.05.

202.09

On page 99, **Rename** the section to the following:

202.09 Guardrail, Anchor Assembly, Bridge Terminal Assembly, Impact Attenuator, and Fence Removed.

202.09

On page 99, **Add** the following paragraph after the first paragraph:

When an existing guardrail, anchor assembly, bridge terminal assembly, or impact attenuator is designated for removal, completely remove and dispose of all posts, anchors, delineators, and underground hardware. Remove all concrete foundations completely unless otherwise instructed by the Engineer

202.09

On page 99, **Revise** the first sentence of the third paragraph as follows:

When guardrail or an associated component (anchor assembly, bridge terminal assembly, or impact attenuator) is designated to be replaced and traffic is being maintained in the adjacent lane, do not

leave hazards unprotected except for the actual time required to remove the existing guardrail and install the proposed guardrail in a continuous operation.

202.09

On page 99, **Revise** the fourth paragraph as follows:

Backfill any cavity, hole, or void created by the removal item according to 202.02, except when the cavity lies within the limits of subsequent excavation or other work.

203.06.A

On page 107, **Replace** the first sentence of the 3rd paragraph with the following:

Compact Type D and Type E granular material using at least ten passes of a smooth drum vibratory roller having a minimum effective weight of 10 tons.

204.05

On page 114, **Replace** the entire subsection with the following:

204.05 Rock, Shale, or Coal Subgrade. Excavate rock, shale, or coal encountered in the subgrade to 6 inches below the final subgrade elevation. Ensure the excavated surface is shaped to drain and has a uniform surface that cannot trap water. Excavate for a width of 1 foot beyond the shoulders. Replace to the subgrade profile with suitable material conforming to 204.02 Granular Material Type B, following the gradation of 703.17, and compacted according to 204.03.

204.06.B.2

On page 115, **Replace** the entire paragraph with the following:

2. For granular soils, and mixtures of soil, rock, and granular materials, use a 50-ton roller with a tire pressure of 120 pounds per square inch.

209.09

On page 140, **Replace** the second line of the Basis of Payment table with the following:

209	Feet	Ditch Cleanout
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255

On page 146, **Replace** Item 255 in its entirety with the following:

ITEM 255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT

255.01 Description

255.02 Materials

255.03 Removal of Existing Pavement

255.04 Correction of Subgrade or Subbase

255.05 Placing Dowel Bars, Deformed Bars, and Tiebars

255.06 Placement of Portland Cement Concrete

255.07 Wearing Course Replacement

255.08 Opening to Traffic

255.09 Method of Measurement

255.10 Basis of Payment

255.01 Description. This work consists of full depth removal of existing pavement; compacting the subgrade or subbase; furnishing and placing dowel bars, deformed bars, tiebars, and reinforcing steel

where specified; placing, consolidating, finishing, and curing new portland cement concrete to the level of the adjacent portland cement concrete pavement or wearing course; replacing wearing course where required; and restoring affected shoulders.

255.02 Materials. Furnish materials conforming to:

Concrete, Class QC 1, QC MS, QC RS 499
Curing materials, Type 2 705.07
Non-shrink non-metallic grout..... 705.20
Reinforcing steel 709.10
Preformed elastomeric joint sealer.. 705.11
Deformed bars and Tiebars 705.01 or 709.00
Dowel bars and basket assemblies 705.01 or 709.13
Expansion shield anchors Type A 712.01

Use epoxy coated hook bolt, wiggle bolt, and coupling.

Select and furnish grout from the Qualified Product List issued by OMM that firmly anchors the dowel bars, deformed bars, and tiebars within 30 minutes.

Rapid Repair Concrete Mix Materials. ~~If the bid item requires RRCM (Rapid Repair Concrete Mix) do not use the Concrete classes listed above. Develop a specialized mix design as follows:~~

~~Use one of the following special rapid early repair admixture systems such as:~~

~~—— 4 x 4 concrete system~~

~~—— Rapid 1~~

~~—— Other manufactured systems acceptable to the Director~~

~~Develop a RRCM concrete mix design that will achieve a flexural strength of 400 psi (2.8 MPa) in not less than 4 hours and not more than 6 hours using 6 in x 6 in (150 mm x 150 mm) beam samples conforming to ASTM C293.~~

~~Use cements conforming to 701.02, 701.04 or 701.05~~

~~Use fine aggregate conforming to 703.02.A~~

~~Use coarse aggregate(s) conforming to 703.02.B and 703.13~~

~~Provide concrete with 4 to 8 percent air content.~~

~~During the testing of the RRCM mix design develop the mix's maturity curve according to Supplement 1098 using the actual materials that will be used on the project.~~

~~Document and submit to the Engineer the RRCM mix design results showing flexural strength, time to strength, materials, sources of materials, quantities of materials and batching requirements.~~

~~The Engineer will have 10 days to review the mix design and accept or reject.~~

255.03 Removal of Existing Pavement. The Engineer will locate and mark all areas for repair before the start of diamond sawing. Provide the Engineer with aerosol spray paint to outline those areas for repair.

Saw cut the existing rigid pavement to the full depth at the limits of the area designated by the Engineer using a diamond saw blade. For Type 1 repairs where there is an existing asphalt concrete overlay on top of the concrete pavement to be removed, the Contractor may make either a full depth saw cut through the asphalt concrete overlay and the concrete pavement, or make an offset saw cut through the asphalt concrete overlay. If making an offset saw cut through the asphalt concrete overlay, remove the overlay as necessary

to provide clearance for the full depth saw cut through the concrete pavement. Do not make offset saw cuts with Type 2 repairs. The Contractor may elect to make additional cuts to facilitate the removal of the pavement.

Remove pavement in the repair area by the lift-out method without damaging or undermining the remaining pavement. After the repair area is isolated by full depth saw cuts, drill holes through the deteriorated slab, and install lift pins. Vertically lift the pavement out of the repair area. Remove loose debris left behind after lift-out using hand methods. Dispose of removed pavement according to Item 202.

Do not break the pavement and clean out the material using a backhoe unless the Engineer determines that the lift-out method is not feasible due to deteriorated pavement or existing asphalt concrete repairs.

If the bottom face of the adjacent concrete pavement is deteriorated for a height greater than one-fourth (1/4) the thickness of the rigid pavement, make additional full depth saw cuts as directed by the Engineer along the full width of the lane or lanes to remove the deteriorated areas. Repair pavement damaged during the pavement sawing or pavement removal according to Item 255 or Item 256.

255.04 Correction of Subgrade or Subbase. After removing the pavement full depth and before installing dowel bars, deformed bars, or tiebars, shape and re-compact the subgrade or subbase to the satisfaction of the Engineer. Use concrete to replace any subgrade or subbase material removed as part of the rigid pavement replacement.

255.05 Placing Dowel Bars, Deformed Bars, and Tiebars. Drill dowel bar, deformed bar, and tiebar holes using hydraulic, electric, or pneumatic percussion drills without spalling or damaging the existing concrete. Provide drills capable of independent adjustment of each drill shaft in the horizontal and vertical direction. When drilling for dowel bars, use a device capable of drilling a minimum of three holes at a time. For repairs 10 feet (3 m) or greater in length, provide tiebars or wiggle bolts of the size and spaced as shown on the standard construction drawings along the longitudinal joint(s). Blow all drilled holes clean with oil-free compressed air. Maintain holes dry and frost free before grouting the bars. Pneumatically inject grout starting at the rear of the drilled holes and drawing a bead of material towards the front. Inject a sufficient amount of grout to fill all voids around the bars. Use a grout retention disc with a radius slot as shown in the standard drawings to retain the grout within the drilled holes. Place the grout retention disc on the bars at the end to be inserted in the hole. Insert the bars in the holes and rotate them approximately one full revolution. Ensure a small amount of grout extrudes through the radius slot in the grout retention disc when the bars are installed. Hold dowel bars in proper alignment until the grout has hardened.

255.06 Placement of Portland Cement Concrete. Place concrete for Type 1 repairs to the level of the adjacent portland cement concrete and replace the wearing course where applicable. Place concrete for Type 2 repairs to the level of the adjacent wearing course.

Do not place any portland cement concrete until the grout around the bars has hardened. Coat dowel bars with bond breaking material conforming to 451.09.B. Place portland cement concrete according to 451.07. Use forms when placing portland cement concrete against any unbound material and if necessary, when placing against asphalt concrete. Cast each repair in one continuous operation. Consolidate the concrete around the perimeter of the repair and within the limits of the repair area using an internal type vibrator. Use approved internal type vibrators capable of visibly affecting the concrete for a distance of 12 inches (0.3 m) from the vibrator head.

When using QC RS concrete, if a maturity curve exists, the Contractor may install maturity sensors to measure the maturity of each day's placement according to Supplement 1098. If QC RS placement from one location to another is delayed by more than 1 hour treat the delayed placement as a new day's placement and install additional maturity sensors according to Supplement 1098.

Ensure that batch tickets of the delivered QC RS conform to the accepted mix design. Provide batch tickets in accordance with 499.07.

Ensure the delivered QC RS mix is workable and produced without balling or clumping of the macro-fibers. A demonstration of the mix may be required by the Engineer prior to placing any of the mix on the project.

While the concrete is still in a plastic state, test the surface for trueness and for being flush with the edges of the adjacent slabs using a 10-foot (3 m) straightedge. Place the straightedge parallel to the pavement centerline with half of the straightedge resting on the adjacent pavement and draw the straightedge across the repair to test the repair edges. Check areas within the repair length in a similar manner. Where the straightedge shows deviations, correct all high or low areas exceeding 1/8 inch in 10 feet (3 mm in 3 m). Recheck the concrete surface after making corrections to ensure conformance to the above tolerance. Make additional checks and corrections until the repair is within tolerance.

Texture Type 1 repairs like that of the surrounding pavement. Texture Type 2 repairs according to 451.10.

Apply the liquid membrane-forming curing compound at a minimum rate of 1 gallon (1 L) of material for each 150 square feet (3.7 m²).

255.07 Wearing Course Replacement. Trim the limits of the repair to form a vertical face 1.5 inches (38 mm) deep from the surface. Replace the removed asphalt concrete overlay with material as shown on the plans. Compact the material as approved by the Engineer using any of the roller types specified in 449.02. Apply Item 407 tack coat to the surface of the portland cement concrete and between any lifts of asphalt concrete.

Before opening the rigid replacement to traffic, restore the shoulders to the original line and grade. Use either aggregate or asphalt concrete as shown on the plans or as the Engineer directs. Fill the low areas and compact them flush with the surrounding shoulder.

Seal the perimeter surface of the repaired areas by applying a 2 to 4 inch (50 to 100 mm) wide strip of approved 705.04 material or 702.01 approved PG binder.

255.08 Opening to Traffic. Do not open the rigid replacement to traffic until the concrete meets the requirements of Table 255.08-1 based on beam testing on the project or maturity testing.

TABLE 255.08-1 OPENING TO TRAFFIC

Repair Thickness, in (mm)		Modulus of Rupture, psi (MPa)
Greater than or equal	Less than	
	8 (200)	400 (2.8)
8 (200)	9 (225)	350 (2.4)
9 (225)	10 (250)	300 (2.1)
10 (250)		250 (1.7)

If maintaining traffic in adjacent lanes, schedule work to place the concrete in the prepared repair area within 48 hours after removing pavement. In accordance with standard drawing MT-101.90, drums may be used as a separator to the adjacent traveled lane for repairs 60 feet (18 m) or less in length.

If unable to complete placement of the concrete in the exposed repair area by the end of a daily work shift, fill or cover repair areas less than 4 feet (1.2 m) from the traveled lane. Fill using a temporary patch material suitable to the Engineer or cover unfilled repair areas 10 feet (3 m) or less in length with a steel plate.

Do not leave repair areas unfilled with concrete when work is suspended on weekends or holidays. If unable to complete placement of the concrete in the exposed repair area before suspending work for a weekend or holiday or within the 48-hour time specified above, fill the repair area with an asphalt concrete mixture or other suitable temporary patch material with a durable surface as the Engineer directs. Maintain the temporary patches while they are in service.

255.09 Method of Measurement. The Department will measure the quantity of Full Depth Pavement Removal and Rigid Replacement by the number of square yards (square meters) repaired in the complete and accepted work.

The Department will measure the quantity of Full Depth Pavement Sawing by the number of feet (meters) of perimeter full depth saw cuts in the complete and accepted work. The Department will not measure offset saw cuts. The Department will not measure additional cuts made to facilitate the removal of the pavement.

255.10 Basis of Payment. Payment is full compensation for furnishing all materials, including paint; developing and testing the concrete mix, removing pavement by any method; compacting subbase and subgrade; placing rigid pavement, including concrete necessary to replace removed subbase or subgrade; furnishing and placing dowel bars, deformed bars, tiebars, and reinforcing steel; performing maturity testing and acceptance; placing, maintaining, removing, and disposing of temporary patches; and restoring the shoulders.

The Department will not pay for additional concrete sawing and removal depths within 1 inch (25 mm) greater than those shown on the plans.

The Department will not pay for additional work to repair damage caused by pavement sawing, pavement drilling or pavement removal.

The Department will include tack coat in the cost of the asphalt concrete. The Department will pay for asphalt concrete according to Item 301, Item 441, or Item 442.

The Department will pay for accepted quantities at the contract prices as follows:

Item	Unit	Description
255	Square Yard (Square Meter)	Full Depth Pavement Removal and Rigid Replacement, Type 1, Class ____
255	Square Yard (Square Meter)	Full Depth Pavement Removal and Rigid Replacement, Type 2, Class ____
255	Foot (Meter)	Full Depth Pavement Sawing

301.01

On Page 160, **Replace** the last sentence of the section with the following:
The requirements of Item 440 apply.

302.02.A.

On Page 161, in Table 302.02-1 Mix Composition **Add** the following row after “Binder Content” row as follows:

F/A Ratio, max. ^[5]	1.4
--------------------------------	-----

302.02.A.

On Page 161, in Table 302.02-1 **Replace** rows for “Blows”; “Stability”; “Flow”; and “Design Air Voids” with the following:

Blows ^[6]	70
Stability, lb ^[6] (N)	3000 (13,345) [Min]
Flow, 0.25 mm ^[6]	28 [Max]
Design Air Voids ^[7]	4.0

302.02.A.

On Page 161, in Table 302.01-1 Footnotes **Add** Footnote ^[5] and shift remaining footnote numbers down as follows:

- [5] Using effective asphalt binder content
- [6] ASTM D5581
- [7] Percent, Supplement 1036

401.02

On Page 171, **Add** the following to the materials list:

Hot applied joint sealer..... 702.17 Type 1

401.05

On page 173 **Replace** the first paragraph with the following:

401.05 Weather Limitations. Place asphalt concrete only if the surface is dry and if weather conditions are such to ensure proper handling, finishing, and compaction. Never place asphalt concrete if the surface temperature is below the minimum established in Table 401.05-1. Chemical warm mix asphalt (WMA) additives on the approved list are required for placement in colder temperatures.

401.05

On page 173 **Replace** Table 401.05-1 with the following:

Table 401.05-1 Weather Limitations

Course Thickness	Minimum Surface Temperature	
	All mixes ^[1]	Chemical WMA Required ^[1]
3.0 inches (75 mm) and over ^[2]	36 °F (2 °C)	32 °F (0 °C)
1.5 to 2.9 inches (38 to 74 mm)	40 °F (5 °C)	32 °F (0 °C)
1.0 to 1.4 inches (25 to 37 mm)	50 °F (10 °C)	40 °F (5 °C)
Less than 1.0 inch (25 mm)	60 °F (16 °C)	50 °F (10 °C)
Variable Intermediate, 0 to 3.0 inches (0 to 75 mm)	40 °F (5 °C)	32 °F (0 °C)
<p>[1] If used or required, only use chemical WMA additives on the approved list according to 402.05.B.</p> <p>[2] When paving on an aggregate base or subgrade, use a minimum air temperature of 40 °F (5 °C), or a minimum air temperature of 32 °F (0 °C) when using chemical WMA.</p>		

401.05

On page 173 **Replace** the fourth paragraph with the following:

Do not schedule the placement of any surface course with a polymer modified asphalt binder after November 1, regardless of pavement and air temperatures. Obtain the approval of the Engineer to place any surface course with a polymer modified asphalt binder after November 1. Use an approved chemical WMA additive during production, if approved, with the minimum pavement and air temperatures of 40 °F (5 °C).

401.06

On Page 174, **Delete** the second paragraph, that begins with:
If placing asphalt concrete...

401.08.D

On Page 177, **Replace** the fifth full paragraph with the following:

If placing asphalt concrete against a vertical pavement face, curb, gutter, manhole, or other structure, clean the surface of foreign material and apply a thick, uniform coating of certified 702.01 PG binder, 702.09 Hot Applied Asphaltic Joint Adhesive, or 702.13 SBR Asphalt Emulsion to provide 100 percent coverage.

Apply a 2 to 4 inch wide strip of approved 705.04 material or 702.01 approved PG binder at butt joints where a new asphalt surface course meets existing asphalt concrete pavement, including at project limits, drives, and intersections.

After completion of the surface course, seal gutters at curbing, median barriers, concrete medians, and traffic islands with certified 702.01 PG binder as directed by the Engineer. Apply the binder at a uniform width of approximately 4 inches (100 mm) and at a rate just sufficient to fill surface voids. The Contractor may open the surface course to traffic before sealing the gutters.

402.03

On Page 180, **Replace** the first paragraph with the following:

402.03 Calibration. Ensure the plant is calibrated and adheres to the procedures according to Supplement 1101 when producing any asphalt concrete for the Department. Verify the calibrations biweekly using a quick calibration method outlined in S1101. Document all data from calibrations by means of data logger or mix plant controls printouts and post the results in plain view in the plant control room and plant laboratory for reference by the Monitoring Team. All plant quick calibration results for the previous 12 calendar months need to be stored and available for review at the mix plant. Store all remaining records in accordance with 403.03. If issues arise within quick calibration results, documentation, mix production, or plant operation, the Department may require the plant is calibrated according to Supplement 1101 when producing any asphalt concrete for the Department.

402.04.D.

On Page 181, **Replace** the first paragraph with the following:

D. RAP and RAS QC and Management Requirements. Provide enough space for meeting all RAP and RAS handling requirements at a mix plant facility. Provide a clean, graded base for stockpiles that does not collect water. Test processed stockpiles to ensure uniform gradation and asphalt binder content. Sample at the face of stockpiles and test at least every two weeks or once every 5,000 tons of RAP or RAS used, whichever occurs first. This includes an inspection to ensure no deleterious materials are in the stockpile. Ensure stockpiles adhere to a maximum tolerance from the established stockpile average on the JMF of ± 4 percent passing the No. 4 (4.75 mm) sieve and ± 0.30 percent for asphalt binder content by centrifuge extraction before continued use of the processed stockpile. If the stockpile is out of tolerance based on testing, immediately stop using the stockpile and notify District Testing until the issue is resolved. If the issue cannot be resolved, the stockpile will

be rejected and all JMFs using the stockpile will be withdrawn or rescinded. Provide all test results and forms on the TE-199. Include a summarized table of the data with date tested for each stockpile and include the stockpile identification(s). Ensure the summarized table is posted in the testing facility and mix plant control room and easily available for review by the Department for the life of the stockpile.

402.04.D.

On page 182, **Replace** the first paragraph with the following:

Maintain in the plant lab and control room an up to date and dated site map of all tested and untested RAP and RAS stockpiles. Give each stockpile a unique identification using the following format: Year processed, company abbreviations, plant location and number where the stockpile was processed, screen size, “GR” if the pile contains coarse gravel, and A, B, etc. based on number of stockpiles processed (e.g., 2023, ODOT, Columbus-614, ½”, GR, A). Identify if RAS stockpiles are from un-used manufactured shingle waste or used roofing tear-off shingles. Provide in the plant lab RAP and RAS properties for each uniform, blended stockpile cross referenced with its identification. In addition, provide the date the stockpile processing was completed and the stockpile estimated size in tons. For all RAP and RAS established stockpiles, provide a log for each stockpile of the tonnage used and subtracted from the initial measured stockpile versus the measured stockpile tonnage to date that is updated weekly and is available at the testing facility and mix plant control room and easily available for review by the Department for the life of the stockpile. Ensure the measured tonnage is within five percent tolerance of the actual. If the tolerance is exceeded, immediately stop production and notify District Testing until the issue is resolved. If the issue cannot be resolved, the stockpile will be rejected and all JMFs using the stockpile will be withdrawn or rescinded. Provide signage at all RAP and RAS stockpiles. Do not add to a stockpile once it is tested for uniformity. Provide signage at all uniform stockpiles to inform haulers that uniform stockpiles are not to be added to.

402.04.D.

On page 182, in the second paragraph, **Replace** the second sentence with the following::

Rejection of stockpiles can occur for the presence of foreign or deleterious materials, lack of uniformity, incomplete mixing in the asphalt mixture, adding to stockpiles, or moving RAP or RAS in a way not traceable through the QCP records and methods.

402.05

On Page 182, **Replace** the first paragraph with the following:

Notify District Testing before using and ensure the daily TE-199 Quality Control Report reports that WMA was used during production. Warm Mix Asphalt (WMA) is defined as asphalt mixtures produced with various technologies, including water foaming and chemical additives, that have the capacity to be used with lower production temperatures (below 300 degree F), but can also be used at normal production temperatures to achieve improved compactability, in-place density, and sustainability and without a diminution of short- and long-term performance. WMA technologies may be used to produce asphalt concrete. Specify the use of warm mix asphalt in the QCP for approval by OMM.

402.05.B

On Page 183, **Replace** the second paragraph with the following:

Chemical WMA may be used where WMA is allowed. Use chemical WMA additives on the approved list only at the recommended rates listed on the approved list. When chemical WMA is required by specifications for cold temperature paving, produce mix using HMA mixing

temperatures. Ensure bill of lading from terminal and TE-199 documents that chemical WMA additive was used, the amount used, and the product name used.

402.06

On Page 183, **Replace** the entire section with the following:

402.06 In-line Blending of Modifiers and Additives. Provide in-line blending at the asphalt concrete mix plant of modifiers such as SBR polymer binders and additives such as liquid antistrips. Ensure asphalt concrete mix plants meet the following if the mix plant plans to use modifiers or additives. Include in the QCP what mix plant facilities will use modifiers or additives and how they will be incorporated into the mix. Ensure modifier and additive rates are not consistently on the low or high side and adjust to meet target rate and note change on the TE-199.

Ensure in-line blending pumps and flow meters meet S-1053 and also meet or exceed the modifier or additive manufacturer's recommendations. Provide a written statement from the manufacturer that the pump and flow meter meet S-1053 and also meet or exceed the modifier or additive manufacturer's recommendations.

A. Post Blended SBR Polymer Binders. If an asphalt binder is modified by SBR at an asphalt concrete mixing plant, equip the plant with an automated SBR flow control and monitoring system. Obtain OMM's approval of the system before operating and demonstrate the system calibration to District Testing. If District Testing waives the demonstration, provide a letter documenting calibration data for the flow system to District Testing for each project. Obtain written approval from OMM for the use of SBR and ensure the QCP contains methods for properly controlling and sampling SBR binder blends.

For drum mix plants, introduce the SBR directly into the asphalt binder line through means of an in-line motionless blender or other device approved by OMM that is able to provide a homogeneous blend. Ensure the in-line motionless blender design provides aggressive interaction of asphalt binder and SBR emulsion to provide a homogenous blend at the sampling port. Do not use swirl type blend.

Locate a sampling valve between the in-line blender and the plant drum, at least 12 ft (3 m) downstream of the in-line blender and at least 5 ft (1 m) downstream of a piping elbow. Ensure the sampling valve port is at least 1 inch (25.4 mm) in diameter. Ensure the sampling valve can be opened quickly for maximizing sample flow for the purpose of obtaining a proper sample.

In place of an in-line sampling valve, a sample may be taken from a 3 to 5 gal (11 to 19 L) surge tank as long as the tank is downstream of the required blender and the in-line flow can be quickly and directly diverted to the surge tank.

Continue mixing for a minimum of 20 seconds after SBR is added and long enough to provide a uniform mixture.

Ensure the SBR pumping and metering system is capable of adding the SBR within the limits of 702.01. For drum plants ensure the SBR pump is automatically controlled by an independent computer and interfaced with the asphalt binder flow to automatically maintain the SBR flow within specification limits. Produce asphalt mixtures for placement in automatic SBR control mode only.

Ensure the SBR meter is a magnetic flow meter consisting of a metering flow tube which utilizes Faraday's Law of Induction to measure the flow and includes a transmitter to transmit the flow signal to a totalizer located in the control room of the asphalt plant. Obtain OMM approval for use of any other type of SBR meter. Locate the SBR meter downstream of any recirculation lines. Provide a means for removing the SBR line at the in-line blender to be able to obtain a sample of the SBR for calibration purposes. Ensure the SBR meter is accurate to ± 2.0 percent over a flow range typical of

that used at the asphalt plant (typically 0.8 to 12 gpm (0.05 to 0.76 L/s) at drum plants and 10 to 25 gpm (0.63 to 1.58 L/s) at batch plants).

Ensure the totalizer displays total volume measured and flow rate in standard engineering units. Ensure the totalizer is interfaced with a data logger that produces printouts of the logged data every five minutes for a drum plant or every batch for a batch plant. Ensure the logged data includes time, date, flow rate, and flow total except flow rate is not necessary for batch plant production.

B. Liquid Antistrip Additives. Use liquid antistrip additives on the approved list only. When liquid antistrip additives are required by specifications, in-line blend at the asphalt concrete mix plant only according to Supplement 1053.

C. Chemical WMA Additives. When using chemical WMA additives, in-line blend according to Supplement 1053. In-line blending may occur at asphalt binder terminals as long as in-line blending equipment meets Supplement 1053 and the system is approved by OMM.

403

On Page 185, **Replace** Item 403 in its entirety with the following:

ITEM 403 ASPHALT CONCRETE QUALITY ASSURANCE

403.01 Description

403.02 General

403.03 Quality Control Program (QCP)

403.04 Testing Facilities

403.05 Asphalt Mixture Sampling

403.06 Quality Control tests

403.07JMF Field Adjustments

403.08 Quality Control Reports

403.09 Mixture and Placement Deficiencies

403.10 Verification Acceptance (VA)

403.11 Restricted Acceptance

ITEM 403 ASPHALT CONCRETE QUALITY ASSURANCE

403.01 Description. This specification outlines the asphalt concrete quality assurance program including the contractor requirements for controlling asphalt concrete mixtures during production and construction through Contractor provided quality control (QC) and the Department Verification Acceptance (VA) program.

403.02 General. The Contractor is responsible for all aspects of process control and QC needed to ensure quality of the specified material, including but not limited to sampling, testing, inspecting, assessing, and corrective action to ensure the quality of the final product.

The Department is responsible for all aspects of quality assurance (QA) and independent assurance (IA) to ensure and verify the quality and acceptability of the final product. Independent (non-split) random samples are required for Contractor QC when those results are used in the acceptance decision, and for Department VA.

The Department will verify Contractor QC results by QC monitoring reviews and by Department VA sampling and testing. If the Contractor results cannot be verified, Department results will be used for acceptance and payment. If the Contractor fails to operate according to their Department-accepted Quality Control Program (QCP), the Department will accept asphalt mixtures by Restricted Acceptance.

Restoration of Contractor QC sampling and testing used for acceptance will be by the Department's Quality Control Review Group (QC Review Group) based on District recommendation and review of the Contractor problems, resolutions, and QCP. The QC Review Group consists of the Asphalt Materials Engineer, Office of Materials Management ([OMM](#)); the Administrator, OMM; and the Pavement Engineer, Office of Construction Administration.

Acceptance does not relieve the Contractor of responsibility for supplying and installing a finished product conforming to all requirements of the Contract.

Supplement 1041 outlines the responsibilities and requirements for Contractor and Consultant employees engaged in all aspects of asphalt concrete production at any level, including, but not limited to, management, supervision, QC, plant operations, materials management, paving operations, and hauling truck drivers.

403.03 Quality Control Program (QCP). For each paving season create and execute a QCP. In the QCP cover processes conducted to provide an asphalt mixture at the paving site that is uniform in composition, conforms to the specification requirements and that when placed is free of any defect (ex. segregation, lack of mixture and texture uniformity, raveling, rutting, holes, debris etc.) within the Contractor's control at project completion. The intention of the QCP is not to copy and paste or paraphrase what is already in the specifications. It is expected that contractors that only place asphalt mix (i.e., paving contractors) also submit a QCP. A minimum of four weeks before mix production and placement, but no later than second Friday in January, submit a hard copy of the proposed QCP to OMM for review and acceptance.

Provide digital copies in a searchable formatted PDF, such as Optical Character Recognition. Convert files from Microsoft Office documents (printed or saved as a PDF) and other computer programs (e.g., plant control systems), including all appendices, as a single document with page numbering. Documents that are unable to be converted digitally without printing can be scanned into a PDF, however, the results must be digitally readable. Save digital files with the date of revision in the file name. Keep a copy of the Department's acceptance letter and the QCP in both the Contractor plant laboratory and the plant operation control room. A digital copy of the QCP and acceptance letter may be kept in each location provided that the QCP file icon is labelled with a descriptive file name that includes the revision date and is on the computer's desktop in each area. Remove out-of-date QCPs from the computer desktop. Updates to the QCP will require the entire QCP to be submitted with the updates and a summary of the changes. Send a hard copy and a digital copy of the acceptance letter and QCP to OMM and District Testing in every District in which work is performed.

Execute and comply with the Department accepted QCP. Failure to comply with the accepted QCP may result in removal of personnel in accordance with Supplement 1041, removal from VA, and adversely affect the Contractor's Prequalification rating.

For Contractors who produce and place material, include all sections in the order below and include the bold titles. For Contractors who only produce mix include sections A through M, S, and T. For Contractors who only place mix include sections A through C and M through T. As a minimum, include in the following in the QCP:

Make the first page of the QCP a front cover with the Company name(s) and logo, the construction year, a statement that this is their Quality Control Plan, and the revision date. Start the second page with the Table of Contents listing all the required sections below in the same order with page numbers and including Appendices. Name Appendices with letter and title of each section and include after the revision sheet.

A. Quality Control Personnel: Provide the Contractor's full name including main address, mailing address if different, phone number(s), email(s), and other information as deemed fit. Provide a table of

organization (can be a hierarchy list) including company president, vice president, superintendents, Quality Control, Plant, and Paving Managers including area managers, and supervisors and note their designated responsibilities to meet QCP requirements. Include office and cell phone numbers, emails, office location if different than the main office, and Department approvals (e.g. Asphalt Level 2 or 3 and FQCS). Provide the name of the Quality Control Manager holding a Supplement 1041 Level 3 approval for production and the names of FQCS for placement and who are company employees. Provide lists of approved Asphalt Level 2 and 3 technicians and FQCS technicians in Appendix A that includes expirations and a date showing when the lists were put together. Note any technicians that are consultants and the company that employs them.

B. Training: Document means for annual training including in ethical conduct according to company expectations of all company employees and consultants who are responsible for the mix design, production, testing, and placement of asphalt mix and their supervisors. Document how and when training is given, what the expectations are, how expectations are communicated and list the personnel classifications being trained. Describe the QC Manager's and supervisor's responsibilities and methods to ensure personnel are trained and ethical conduct is maintained throughout the year.

C. Review of QCP: Procedure for ensuring that every Contractor employee involved in the testing of asphalt mix, operation of the asphalt plant facility, and placement has read the QCP and has on site access to all applicable Department specifications, supplements, proposals, policies, and the current approved JMF.

D. Level 2 Lab Calibration: Procedures for equipment calibration and documentation for Level 2 lab equipment including calibration record storage. Ensure calibration intervals meet or exceed the Department requirements (Supplements, AASHTO, ASTM standards, and AASHTO R 18). Provide documentation that all Level 2 lab equipment has been calibrated at the time of the Level 2 lab approval inspection.

E. Asphalt Mixture Quality Control Sampling and Testing:

E1. QC Technicians: Assign Level 2 technicians for all Level 2 QC testing duties. Provide a list designating Level 2 technician responsibilities and expected actions. A list of technician names is not required in the QCP but shall be included in AWP. Ensure only approved personnel handle and test samples at all times. If Level 2 consultant technicians are used, include a document in the QCP listing designated responsibilities and expected actions (if different from employee expectations). Provide a copy of the document to the Level 2 consultant technician.

E2. Random Numbers: Provide and follow the procedure for determining random numbers for asphalt mix QC sampling and testing including additional sampling and full testing at the start of production. Track random numbers used. Include how random numbers are tracked and the frequency that they will be monitored and that processes are being done correctly (that they have an approximately equal distribution of results across the entire Lot or Sublot). Document how any misuse of the random number procedure is corrected and ensure future compliance.

E3. Labeling: Document and follow the procedure for labeling QC, calibrations, sublots, and split samples and testing done on the TE-199, TE-448, and TE-125. Include procedures for saving samples, including duration, and how samples will be destroyed and removed from the lab that are not required by specification (e.g., heat up pills in oven and bust open).

E4. Extra Testing: Provide and follow procedures, frequencies, and expectations (e.g., how will the extra testing help with ensuring the mixture conforms to the specification requirements) for extra testing (e.g., responses to poor test results or field mix problems, aggregate stock testing, reclaimed asphalt concrete pavement checks, additional moisture checks) and any other testing necessary to control materials not already defined in these Specifications. Include how these will be labeled on the Quality

Control Report. If extra testing procedures do not follow Department procedures, provide step-by-step instructions for each test in Appendix E4. Note: District Testing may observe, review, and approve or disapprove the procedures at any time according to 403.06.E.

E5. Warning Band & Control Charts: Provide and use warning bands for all tests and give specific instruction how the warning bands and control charts will be used for tests in concert with 403.06.E, 403.06.F, Table 403.06.G-1 specification requirements. Include an example control chart according to 403.06.E in Appendix E5.

E6. QC Test Result Issues: Provide and follow step-by-step procedure of how QC technicians will handle mix that is in the warning band, out of specification including when multiple failures happen, and how these issues will be resolved (e.g., when air voids are out what adjustment(s) will be made, etc.). Flow charts may be used and provided.

E7. Recording: Provide how results will be accurately and correctly recorded and reported and who will be responsible for sending daily results to District Testing. If the role for sending daily results to District Testing is the QC technician, indicate QC technician (a specific name is not required). Provide copies of all test reports and forms used in the quality control process including any forms that would be used for handwritten data in Appendix E7.

F. Record Retention: Provide and follow methods to maintain all worksheets, including all handwritten records, and other test and sample records from all plant(s) and, or project(s) for a minimum of eight years. Define the test record retention process. Define company records retention requirements.

G. Asphalt Binder QC: Provide and follow procedures for handling and testing of the mix plant asphalt binder QC samples and subsequent corrective action of binder test failures of any sample (QC or Department). Include how samples will be labeled and stored. Failure to perform QC of asphalt binder samples is at the Contractor's risk. Any Department binder sample failures will result in penalties according to Supplement 1102. These include remove and replace, pay deductions, or other penalties for the asphalt mix represented by the Department's sample. The Department may take as few as one sample representing the entire course being placed according to C&MS 700.00.

H. Mix Plant Info: List of each mix plant name, mix plant number, AWP Facility ID, plant operator(s), phone number(s), email address(es) (if applicable), county the plant is located, physical address, mailing address (if different), and if plant is portable. For each mix plant also include the mix plant type including drum type (e.g., counter-flow, parallel flow, double barrel, mini drum, uni-counterflow), if applicable, plant operating system, the high and low operating tons per hour, number and size of storage silos, number and size of liquid asphalt binder silos or tankers, RAP processing method used, if the plant has the capabilities to in-line blend chemical additives (e.g. chemical WMA and liquid antistrips), if plant has WMA water injection system, RAP bin sizes and number of bins, and if RAS will be used. Provide copies of 5-minute printouts with labels showing the minimum criteria required according to Supplement 1101 with each computerized system used in Appendix H.

I. Quick Calibrations:

Provide expectations on when quick calibrations will be performed according to Supplement -1101 outside of the minimum frequency (e.g., mix production issues). Provide example quick calibration documentation forms in Appendix I.

J. RAP/RAS Processing: Provide and follow procedures to meet the processing, testing and documentation requirements for RAP and RAS in 402.04 including test forms, record keeping, technician responsibilities, and the following.

J1. RAP Processing: Include in the QCP methods of validating RAP properties when using concurrent project RAP. Include additional methods and procedures to dictate how the processing of RAP

by means of fractionation or by additional in line processing will be accomplished for mix plants using Method 2. Specify documentation method for RAP pile measurements. Include any additional information about RAP or RAS processing and pile maintenance (e.g., if RAP piles are moved to other or shared between plants).

J2. RAS Processing: If RAS is used, include RAS usage methods before using RAS and include what Contractor requirements apply to the RAS processor. Include the Contractor's blending equipment type and operation and uniformity testing requirements for preblended RAP and RAS or RAS and virgin aggregate. If methods are different based on the mix plant, specify what plants follow what methods. Other methods must be approved by OMM prior to use on a project.

K. Material Verification & Handling: Provide and follow procedure and frequency for ensuring aggregates, RAP, and RAS piles, and asphalt binder source and PG grade (bill of lading and BOL load number) are reviewed against the running JMFs and record of review listing the above information be kept in the plant lab for the duration of the project. Means to meet the handling and storage requirements of 402.06 and asphalt binder suppliers for all asphalt binders.

L. In-Line Blending of Additives: Provide and follow processes outside of Supplement 1053 for in-line blending for chemical WMA additives and liquid antistripping additives (e.g., storing and handling additive during cold weather). Include procedure(s) to calibrate in-line additive pumps. Include a description of what chemical WMA additives and antistripping additives will be used at each facility (may be included in 403.03.H). Include example weight tickets with chemical WMA used according to 402.05.B and forms for dosing rate verification in Appendix L.

L1. 401.05 Cold Temp Production: Provide and follow procedure and processes for producing mix with chemical WMA for cold temperature paving according to 401.05 including how it will be communicated with District Testing when it will be used, how the target dosage will be determined, and corrective actions when mix issues occur (e.g., chunking or low density in the field). Address communication efforts and checks with paving company.

L2. Dosage Verification: Provide and follow procedures to ensure proper dosing rates are within tolerance according to Supplement 1053 and a corrective action plan when rates do not meet requirements.

M. Haul Vehicles & Mix Quality: Define who is responsible at each mix plant and at the paving site to meet delivered mixture uniformity/coating. Provide and follow specific methods for ensuring all haul vehicles meet all Department requirements including procedures for ensuring haul vehicles not meeting requirements are not used, that proper bed release products are used and checks to ensure non-approved release agents or products (i.e., diesel) are avoided, and that tarps completely cover all loads. Include immediate notification to the Department of non-compliance. Detail procedures of loading mixture to minimize thermal and material segregation.

N. Field Quality Control Supervisor (FQCS): Provide a Supplement 1041 approved FQCS who is a company employee that is routinely and usually at the paving site during placement of any permanent asphalt concrete pavement. Define the roles and responsibilities of the FQCS including how the FQCS will be determined when more than one person on the paving crew is a FQCS and what position on the crew (e.g., paving foreman) would likely be the FQCS.

O. Misc. Equipment for Paving: Provide and follow details on calibration and verification of asphalt distributors, tar kettles, and other equipment used for applying emulsions and hot applied materials (e.g., tack coats, longitudinal joint adhesive, VRAM).

P. 401.05 Cold Temp Paving: Describe and follow the extra steps (e.g., additional rollers, extra monitoring of density) planned for cold temperature paving, including any communication.

Q. Mix Paving Issues: Provide and follow a detailed description of how the FQCS will handle and correct all paving issues including segregation, tenderness, mat tears, debris, holes, low density, bleeding/flushing, not straight joints, poor tack coat, longitudinal joint sealant, VRAM application, and milling/planing irregularities like scabbing, etc. Include that the FQCS is to immediately communicate all issues to the Department.

R. Field Sampling & Coring: Provide and follow procedures for sampling, tracking, handling and documentation method for all sampling and testing at the project paving site including taking of all cores used for density determination or density gauge correlation. Describe the process for Supplement 1055 cores including who will run the cores for the Contractor and how the results will be reported back to the Supplement 1055 gauge operator. Ensure personnel obtaining and handling cores at the project site are approved Asphalt Level 2 technicians, FQCS or personnel approved by [OMM](#) or Office of Construction Administration.

S. Signatures: Provide the signature of the Quality Assurance Manager for both production and placement and, if different, the person in authority to enforce all operations covered by the QCP as outlined in this subsection.

T. Revision Sheet: Provide a revision sheet with the last 8 years of records. In the revision sheet include three columns: the first column being the date of the revision (matching with the revision sheet date); the second column is to list the section and page number being updated; and the third column is to provide a short description of what was revised, added, or removed. Highlight all revisions from the previous version to make clear to the Department what was revised or added.

Stone-Matrix Asphalt (SMA) Mixes: For 443 mixes, develop and follow a separate project specific QCP with the following additional information beyond the above sections in a single QCP and submit to OMM, District Testing, and the Engineer at least 3 weeks before the start of production for acceptance. Include production and placement activities for the SMA. If separate companies produce and place the mix, collaborate to develop a single project specific QCP. Also, submit the already accepted QCP outlined above along with the project specific QCP. Provide a front cover for the project specific QCP that clearly indicates its use for SMA; the construction project number; the Company names(s) and logo(s); and the revision date. Provide a Table of Contents as the second page including page numbers and sections in the order below.

U. Quality Control:

U1. Manager and Technicians: List the QC Manager that will oversee production and their experience with SMA. Provide a list of approved Asphalt Level 2 and 3 technicians that will be present during production of the SMA and their experience with SMA sampling and testing.

U2. Testing Equipment: Provide additional equipment and calibrations to test SMA.

U3. Additional Testing for SMA: Describe what additional testing will take place. Include special testing worksheets to calculate the additional tests required for SMA in Appendix U3.

U4. Troubleshooting Production of SMA: Provide step-by-step details on what adjustments will be made if mix issues happen (e.g., segregation, draindown, fiber stabilizer clumps in mix, etc.)

V. Production: Provide the plant(s) that will produce the SMA and the experience the plant operator(s) has with SMA production. Include additional calibration procedures for the fiber stabilizer and verifying rates.

W. Placement of SMA:

W1. FQCS: Provide the FQCS that will oversee the placement of the SMA and their experience with placing SMA.

W2. Hauling: Provide any additional steps on hauling of the asphalt mix including special considerations related to haul distance, air temperature, etc.

W3. Project Specific Paving: Provide any additional steps that are specific to paving SMA for this project that will need special considerations (e.g., gore areas, hand work, pavement geometry, etc.).

W4. Test Strip: Provide details on placement of the test strip including any changes needed compared to non-443 mix placement.

W5. Troubleshooting: Provide step-by-step details on what adjustments will be made if mix issues happen (e.g., segregation, fat spots, bleeding/flushing, etc.)

X. Signatures: Provide signatures and dates of the QC Manager, Asphalt Level 3, Plant Operator, and FQCS so that they understand the SMA specification, their duties, and have read this project specific QCP and company QCP.

403.04 Testing Facilities. Provide testing facilities at the plant site conforming to Supplement 1041. Provide testing facilities and sufficient testing equipment and qualified staff that can handle the production at the plant, including multiple projects being produced during the same production day.

403.05 Asphalt Mixture Sampling. Sample and provide enough material to perform all required and requested testing by the Department. Follow sampling requirements as outlined below.

The District may require sampling and testing from the roadway according to AASHTO R 97, Subsection 5.9 (*Sampling from Roadway before Compaction*).

Report all sampling and testing on the Quality Control Report, as applicable (TE-125 for 301, 302, and 424 Type A or TE 199 for all other mixes) and when applicable the 448 and 449 Sublot Report (TE-448).

A. Quality Control (QC) Sampling & Testing. For QC sampling and testing, the Contractor's technician will randomly select the truck in which to take a sample by using a Department provided random number generator. For 448 and 449 sublots, the Department will provide the random number immediately prior to each sublot. The Contractor's technician will give no indication to anyone other than the Department of the time that the sample is to be taken. Include the random number, sample tonnage location, and time of sampling on the daily Quality Control Report with each test. with each test.

Random independent (not split) sampling and testing is required by Federal regulation. A single pattern of non-randomness will be a minor event as indicated in Supplement 1041 and a continued pattern of non-randomness will trigger a major event and Restricted Acceptance according to 403.11.

For QC 446, 447, and non-449 sublot samples, sample and test a minimum of one time for each 750 tons (680 metric tons) of asphalt concrete produced, or for any portion of 750 tons, for every production day.

For 448 and 449 sublot sampling and testing, the sublot sample will be the QC sample as described below. For low production days where a sublot sample is not generated, sample and test one random QC sample.

A production day includes the period of time from when mix production begins to the time the last load of asphalt leaves the asphalt plant, either from the mix drum or from any storage silo. Any planned break in plant production to accommodate a new work shift triggers a new production day.

Perform random additional sampling and full testing beyond the minimum specified for QC during the first three days of production. These samples will be called 'Additional Tests' and are required. All tests are required to be reported on the Quality Control Report.

Extra sampling and testing are at the Contractor's discretion according to their QCP and are considered process control. All tests are required to be reported on the Quality Control Report. Contractor process control sampling and testing do not need to be random and cannot be used for acceptance.

If samples are split, test all samples taken. Split samples are for process control or troubleshooting shooting differences in Department and Contractor results and cannot be used for acceptance. When split samples are requested, provide a clean area of sufficient size and a hard surface to perform sample splitting at the testing facility. Split samples by quartering and recombining only as described in AASHTO R 76, Method B for hard surfaces for the Department and Contractor's sample. Alternately, use a mechanical splitter according to AASHTO R 47, Type A, followed by the quartering method. The split sample size required is generally 22 to 27 pounds (10,000 to 12,000 g). A mechanical quartering device approved by OMM may be used in lieu of the above but only split according to the procedure outlined in the Contractor QCP. Wrap and label split samples as process control, the Lot Sublot, time, location (tonnage), and accompanying Contractor test identification. The Monitoring Team will pick up all Department samples within four work days. Sample mishandling (careless identification, changing sample size, consistency, or pre-testing) will result in a change to Restricted Acceptance.

B. Sublot Sampling and Testing. For 448 and 449 acceptance mixes not including 301, 302, and 424 Type A mixes, conform to the procedures of Supplements 1035, 1038, 1039, and 1043. Use 3000 tons (3000 metric tons) Lots and 750 tons (750 metric tons) Sublots. However, when production is limited to less than 3000 tons (3000 metric tons), the quantity produced will be considered a partial Lot, unless otherwise approved by District Testing or OMM. For partial Lots of 1500 tons (1500 metric tons) or less sample and test at least two subplot samples regardless of the tons produced. The Department will provide the random number for the subplot immediately prior to each subplot sample. It is the responsibility of the QC technician to ensure they have the subplot sample and immediately notify the Monitoring Team if they do not have one.

Sublot samples will be considered QC samples and will have full testing performed as outlined in 403.06. The test results will apply for both QC and subplot requirements.

Test all subplot samples from locations selected by the Monitoring Team or Engineer. A change in the location of the Sublot sample must be approved by the Monitoring Team and be reasonably close to the original location. This location allowance does not apply to any other samples including Department VA sample locations selected by the Monitor.

Record all subplot test data on form TE-448 in addition to the Quality Control Report.

C. Small Quantity. Small Quantity (SMQ) sampling and testing will be allowed for Contractors with an accepted QCP according to 403.03 and for facilities not on Restricted Acceptance. SMQ is only allowed for JMF's that have been properly offset according to Supplement 1043, show documented acceptable comparison testing according to 403.06 and 403.10, and do not represent a 448/449 subplot sample location. Notify District Testing a minimum of 24-hours prior to testing of any SMQ material unless otherwise authorized by District Testing. The total production per project for each mix type is not to exceed 750 tons or 20 percent of the mix type bid quantity tonnage, whichever is less.

District Testing can sample, test and reject any material received under this procedure. Material may be rejected by visual inspection by the Department or rejected through Department verification testing. Poor plant or mix control, poor mix performance, poor mix quality, failure to submit the required forms as required, or ongoing District sample failures can result in disallowing further use of this procedure on the project and future projects. This procedure may be disallowed by the Department for any Contractor's facility when documented premature SMQ mix failure in any application has occurred on the Contractor's previous project(s).

When material is being produced under this procedure and has a quantity of less than 150 tons per production day for each mix type, no QC sampling or testing is required, and the acceptance is by Contractor certification as outlined below. A Department Level 2 or 3 technician must be present to verify the mix in the haul trucks is acceptable, not visually segregated, well coated, and is within an acceptable mix temperature. Any mixture sent to the paving site greater than 150 tons that does not have adequate QC testing will be considered non-specification material and subject to removal.

A quick check plant calibration must have been performed in accordance with the Contractor's QCP as outlined in 402.03. Computerized plant operation tickets, a copy of the dated and signed quick check calibration(s), and a TE 199 SMQ form must be submitted.

The required SMQ information must be submitted by the Contractor to District Testing by the end of each production day unless otherwise authorized by District Testing. The TE-199 SMQ form will be signed by an employee of the Contractor having authority to represent the Contractor as outlined in the Contractor's QCP. The TE-199 SMQ form will be sent to the Project Engineer and District Testing.

Failure to follow the procedures outlined above may result in the removal of SMQ use for the mix plant facility. Ongoing issues occurring company-wide may result in the removal of SMQ acceptance for the company.

403.06 Quality Control Tests. Prior to each production day, determine the moisture content of each aggregate, RAP, and RAS stockpile to be used in the JMF according to AASHTO T 255 and ensure the moisture contents are entered into the mix plant controls. Retest stockpiles after weather event prior to resuming production day and as outlined in the Contractor's QCP.

Perform process and QC tests on all samples to control the asphalt concrete mix within the specifications and report each test result according to Table 403.08-1. As a minimum and as required by mix type, ensure that these QC tests measure the asphalt binder content, gradation, air voids, Maximum Specific Gravity (MSG), and any additional testing according to the Contractor's accepted QCP. Perform only asphalt binder content and gradation testing for 301, 302, and 424 Type A. Ensure QC tests for asphalt binder content and air voids are not consistently on the low side or high side of JMF and adjust the mix within the tolerances allowed by the specification.

Perform additional process testing, QC sampling and testing, or both, over the minimum required, during production when the QC tests show the asphalt concrete being produced is outside the warning bands in the Contractor's QCP. Immediately resolve problems indicated by any test result exceeding the warning bands and immediately retest a sufficient number of samples to validate corrections have returned the materials to within the warning band limits. The Contractor may determine the method of testing the asphalt concrete beyond the minimum specified contractually according to the details and the methods technicians will follow in the Contractor's accepted QCP.

Should additional testing as required above not be performed, District Testing, after consultation with OMM, will require the testing frequency to be increased for the remainder of the project. If this occurs, District Testing will request an opinion from the QC Review Group for action(s) against the technician, Contractor, or both including but not limited to warning, removal, or a change of the facility to Restricted Acceptance.

Record the results of every test performed, including failed tests.

Perform the required QC tests, control charts, and test requirements as follows:

A. Asphalt Binder Content. Determine the asphalt binder content of a sample of asphalt concrete by performing an Asphalt Content (AC) Gauge test according to Supplement 1043. Make all printouts available for review by the Monitoring Team at any time. Offset the AC Gauge for each JMF on each project at the start of the project. Perform the offset using the solvent extraction method for every QC

sample according to Supplement 1038 and the AC Gauge Verification and Offset Record until the offset is established. Use solvent extraction according to Supplement 1038 when an AC Gauge problem exists and for testing cooled samples that cannot adequately be tested in an AC Gauge test.

Total, for each day's production, the flow meter printouts for SBR polymer added at the asphalt concrete mixing plant. Calculate the percent of polymer versus neat asphalt binder in the mix each day and record values on the Quality Control Report. Provide calculation worksheets and printouts in the plant laboratory for review by the Monitoring Team. A +/- 0.2 percent tolerance from the target amount of SBR polymer will be used as a guide for an acceptable amount of SBR polymer, but consistently low values will not be acceptable. Only take SBR PG-Modified Binder samples using a five-gallon (19 L) bucket. Take 1 gallon (4 L) of binder to clean the valve port and discard it. Take 2 gallons (7.5 L) of binder, stir its contents and transfer it to the required sample containers.

Determine the moisture content of the asphalt concrete for each AC Gauge test according to Supplement 1043. Maintain the moisture content at 0.80 percent or less.

B. Gradation. Perform the gradation test on aggregate remaining after removing the asphalt binder with a solvent from an asphalt concrete sample used in an AC Gauge test (solvent sample) or on aggregate remaining after removing the asphalt binder with a preapproved asphalt ignition oven according to Supplement 1054 and from an asphalt concrete sample used in an AC Gauge test (ignition oven sample). For asphalt concrete samples with polymer modified PG Binder use only an asphalt ignition oven to obtain aggregate gradation results. District Testing may make an exception to this for SBS polymer if no issues arise. Correct each solvent sample for ash. Perform all other gradations on solvent samples, ignition oven samples, or on samples obtained according to the Contractor's accepted QCP.

The gradation results of all the sieves must be representative of the JMF. If the Contractor fails to control the entire gradation, the Department may require a redesign according to 440.

When the F-T value is specified for a mix, calculate it for each gradation analysis. Maintain the F-T value at +4 percentage points or less for these mixes during production.

Calculate the F/A ratio for every solvent sample or ignition oven sample analysis. Maintain the F/A ratio so no F/A ratio is greater than 1.2 for all mixes. Use the effective asphalt binder content determined by the AC Gauge for calculating the F/A ratio. For 302 mixes, use total asphalt content determined by the AC Gauge. Calculate the effective asphalt binder content according to the Department's Asphalt Level 2 procedures. Use MSG from the production mix test. Use the combined Gsb value based on bin percentages during the time the sample was taken. Calculate the effective asphalt binder content on the calculation sheet using the asphalt binder content determined by the AC Gauge and attach it to the Quality Control Report. If the F/A ratio is greater than 1.0 for ignition oven samples, calculate the F/A ratio using the percent passing the No. 200 (75 μ m) sieve from a washed gradation of the ignition oven sample according to AASHTO T 30.

C. Air Voids and MSG. Determine the air voids of the asphalt concrete by analyzing a set of compacted specimens and a corresponding MSG determination according to Supplement 1036. Use a Marshall or gyratory compactor meeting the requirements of Supplement 1041 to compact specimens. If the compactor was moved to the plant before production, calibrate it and present the results to District Testing for acceptance. Ensure that the cure temperature and specimen compaction temperature are the same. Use a 1-hour cure for all mix samples used in air voids analysis. The Contractor may use a 2-hour cure time if voids are consistently near the low air void warning band. When a 2-hour cure is used, notify District Testing and OMM and use the 2-hour cure for all air voids testing through the remainder of the project, and record the cure time and temperature on the Quality Control Report. Use the approved JMF lab compaction temperature. Do not reduce lab compaction temperature for warm mix asphalt. Use a compaction temperature tolerance of +/- 5.0 °F (3.0 °C). Compact specimens to design blows or Ndes.

Record on the Quality Control Report if the mixture produced was run at the asphalt plant as a hot mix asphalt (HMA) or as a warm mix asphalt (WMA) produced according to 402.05 or another approved method.

Calculate the Voids in Mineral Aggregate (VMA) value for every set of compacted specimens according to Supplement 1037.

Calculate the average of all the MSG determinations performed each production day and report this average on the Quality Control Report. When the range of three consecutive daily average MSG determinations is equal to or less than 0.020, average these three average MSG determinations to determine the Maximum Theoretical Density (MTD). Exclude the MSG in the daily average MSG if the sample did not meet the requirements in Table 403.06.G-1. After the MTD is established, compare all individual MSG determinations to the MTD.

D. Other Requirements. Perform an APA test once each day for the first 3 days according to Supplement 1057 if the produced mixture requires an APA test. Compact the sample the same day the sample was taken, cure it overnight, and test it the following day. Give the test result and sample density to District Testing the day of the APA test. Report the APA data on the Quality Control Report.

Retain all QC samples for each AC Gauge test and MSG test and all compacted specimens for review by the Department for at least two days for AC Gauge tests and at least seven days for MSG and compacted specimen samples unless directed otherwise. Maintain MSG samples in the state described in AASHTO T 209, Section 7.3 and keep sample at room temperature.

Measure the temperature of the mixture and record the value. Validate the results on the load tickets at least once during each hour of production.

The Contractor may conduct extra process control testing of any type. Record all extra testing along with all other quality control records and have these records readily available for the Monitoring Team's review. District Testing may observe, review, and approve or disapprove the procedures at any time.

E. Control Charts. Maintain up to date control charts showing each individual test result and the moving accumulative range as follows for all mixes:

1. Plot tests showing the percent passing for: 1/2 inch (12.5 mm), No. 4 (4.75 mm), No. 8 (2.36 mm), and No. 200 (75 μ m) sieves, the percent asphalt binder content, the MSG, percent air voids, the VMA, the Gmb, the produced mixture Gsb, the effective specific gravity of combined aggregate blend (Gse), and aggregate bin percentages, including baghouse fines.

2. Show the out of specification limits specified in 403.06.F and Table 403.06.G-1 and QCP Warning Band Limits on the control charts. Additionally, for MSG show the established MTD range limits.

3. Label each control chart to identify the project, mix type and producer.

4. Record the moving accumulative range for three tests under each test point on the chart for air voids, MSG, and asphalt binder content. Accumulative range is defined as the positive total of the individual ranges of two consecutive tests in three consecutive tests regardless of the up or down direction tests take. If more than the minimum required testing (i.e. 750 tons per sample per production day, 403.05.A) is performed do not include the result in accumulative range calculations.

Regularly calculating and tracking Percent-Within-Limits (PWL) is suggested to assist in determining process control and QC effectiveness and for identifying potential areas that need additional attention (e.g., low PWL values for any material characteristic). For PWL calculations reference AASHTO R 9 or the Federal Highway Administration's Standard Specifications for the Construction of Roads and

Bridges on Federal Highway Projects ("FP-24"), Section 106.05, and use the material characteristic specification limit(s) for upper limits, lower limits, or both.

Make all charts available for review by the Department.

F. Test Requirements for 301, 302, and 424 Type A. Control mixes as follows:

1. If a single asphalt binder content is more than ± 0.50 percent beyond the JMF, immediately take and test an additional sample.
2. If the Range difference in any three consecutive asphalt binder content tests is greater than 0.70 percent for 302 mixes or 0.60 percent for 301 and 424 Type A mixes immediately notify the Monitoring Team. Range is defined as the difference between the largest and the smallest test result.
3. If the Range difference in any three consecutive gradation tests for the No. 4 (4.75 mm) sieve is greater than 10.0 percent, immediately notify the Monitoring Team.
4. Maintain gradations within design limits of mix type.
5. Maintain a minimum of 7 percent retained on the 1 inch (25.0 mm), $\frac{3}{4}$ inch (19.0 mm), $\frac{1}{2}$ inch (12.5 mm), and $\frac{3}{8}$ inch (9.5 mm) for 302 mix.

Stop production and immediately notify the Monitoring Team when either 6 or 7 occurs:

6. If two consecutive asphalt binder content tests are more than ± 0.50 percent beyond the JMF, notify the Monitoring Team and cease production until the problem is corrected.
7. If Range deviations as specified in 2 or 3 continue, cease production.

Any mixture sent to the paving site without stopping production and notifying the Monitoring Team, when required by this specification, will be considered non-specification material.

G. Test Requirements for all other mixes. Control all other mixes in accordance with Table 403.06.G-1 and as follows:

TABLE 403.06.G-1

Mix Characteristic	Out of Specification Limits^[5]
Asphalt Binder Content ^[1]	-0.30% to 0.30%
1/2 inch (12.5 mm) sieve ^[1]	-6.0% to 6.0%
No. 4 (4.75 mm) sieve ^{[1][8]}	-5.0% to 5.0%
No. 8 (2.36 mm) sieve ^[1]	-4.0% to 4.0%
No. 200 (75 µm) sieve ^[1]	-2.0% to 2.0%
Air Voids ^[2]	2.5% to 4.5%
Air Voids ^[3]	3.0% to 5.0%
MSG ^[4]	-0.012 to 0.012
F/A	1.2 max
F-T	+4 max ^[6]
VMA	Design – 0.5% ^[7]

[1] Deviation from the JMF

[2] For Design Air Voids of 3.5%

[3] For Design Air Voids of 4.0%

[4] Deviation from the MTD

[5] Unless otherwise restricted by mix type specification

[6] When specified for mix type

[7] Reduce VMA production minimum 0.5% from minimum design VMA (e.g., minimum design VMA for a 442 19.0 mm is 13.0 and the minimum during production will be 12.5%)

[8] For 442 12.5 mm mixes do not exceed 63% max during production

Stop production and immediately notify the Monitoring Team when either 1, 2, or 3 occurs:

1. Any two tests in a row or any two tests in two days are outside of the specification limits of Table 403.06.G-1. Do not shut down during the first three days of production for VMA unless two VMA tests in a row are outside specification limits.

2 Any two tests in a row or any two tests in two days (QC and 448 and 449 subplot) exceeding 63 percent passing the No. 4 sieve for 442 12.5 mm mixes.

3 Any four consecutive moving accumulative ranges greater than specification limits of 2.50 percent for air voids or 0.60 percent for asphalt binder content occur.

Any mixture sent to the paving site without stopping production and notifying the Monitoring Team, when required by this specification, will be considered non-specification material.

H. Load-and-Hold Testing and Restart of Production. Perform a load-and-hold procedure by producing the mix and performing full testing if production is stopped due to a plant shutdown from failing test results. Demonstrate to the Department that the plant can produce the JMF conforming to the appropriate mix specifications. Provide notification of the date and time of the scheduled load and hold testing that is mutually agreed upon by the Contractor and the Department. Provide full test results to the Department including any plant or mix changes to correct all deficiencies. The Department will review the results to determine if production may continue. Do not restart production until an adequate correction to remedy problems is in place and the Monitoring Team is satisfied. Determine root-cause(s) for problem(s) and take immediate action to resolve when there is a lack of Department satisfaction with mix quality or control. When production problems cannot be solved within one day after a plant shut down a contractor's representative holding Level 3 Asphalt Department approval is required to be at the asphalt

plant until a full production day is achieved with results satisfactory to the Monitoring Team. If deficiencies cannot be corrected, the Department may opt to rescind the JMF according to 403.09.

Multiple load-and-holds at a mix plant facility may result in the Department requiring the Contractor to prove that the mix can be produced and meet specifications on non-Department and non-LPA projects at the cost to the Contractor before being permitted to proceed producing for the Department or LPA projects.

403.07 JMF Field Adjustments. During the first three days of production the Contractor may adjust the JMF gradation within the below limits without a redesign of the mixture. For projects with less than 3 days of production, give District Testing written notice of any JMF gradation adjustments within 1 workday following the last day of production. Limit adjustments of the JMF to conform to actual production, without a redesign of the mixture, to ± 3 percent passing each of the 1/2 inch (12.5 mm), No. 4 (4.75 mm), and No. 8 (2.36 mm) sieves and ± 1 percent passing the No. 200 (75 μ m) sieve. Do not exceed the limits in Table 424.02-1, Table 441.02-1, Table 442.02-2, and Table 443.03-1 in the adjusted JMF. Do not exceed five percent adjustment for each individual aggregate. RAP may be reduced up to five percent (virgin AC would go up to meet total AC) and maintain the original JMF virgin PG grade (e.g., going from 30 percent to 25 percent would still require a PG 58-28). Determine the need for any JMF gradation adjustments in the time specified. Should no adjustments be made, the Department will base acceptance on conformance to the original JMF. After the time period specified, the Department will not allow additional adjustments to the JMF.

Should a redesign of the mixture become necessary, submit a new JMF according to the requirements for the initial JMF. A new acceptance lot begins when a new JMF established by a redesign of the mixture becomes effective. Make any adjustment of this new JMF as provided for the original JMF. Record both the design JMF and the adjusted JMF in effect during production of an acceptance lot on the Quality Control Report for that lot. In the event that a new JMF is proposed, tested, and approved, also make a notation on all tickets for the first day's production under the new JMF.

403.08 Quality Control Reports. Record all test results and sample identification on the Quality Control Report including the random number, sample tonnage location, and time of sampling with each test. Record on the Quality Control Report if the mixture produced was ran at the asphalt plant as a hot mix asphalt (HMA) or as a warm mix asphalt (WMA) produced according to 402.05 or another approved method. Also record if antistrip additives were used, dosage rate, the daily quantity used, and copies of the yield checks according to Supplement 1053. After startup adjustments, report any plant operation changes on the Quality Control Report. Ensure that these documents contain technician comments as to production quality, input materials received and condition, and include any other process or QC activities as specified in the QCP. Document all decisions regarding responses to test results on the Quality Control Report. (referring to the particular test), including reasons why a particular problem may exist, what action was taken to correct the problem (plant operation or testing), and what communication with Department personnel took place. Attach computerized plant printouts representing samples tested to that day's report, if desired by the Monitoring Team, or otherwise keep them with the quality control records. Ensure that the technician records the test results for the AC content and percent passing the No. 4 (4.75 mm) sieve on the plant printout from the tonnage the quality control sample was taken. Keep remaining printouts and a copy of all QC reports in the plant laboratory for the duration of the project after which they may be transferred to an office location for records retention.

Deliver (fax, e-mail, hand) completed Quality Control Reports to District Testing by the end of each day in which testing is conducted. If desired by District Testing and always for unsigned E-mail versions, mail the originals. Ongoing problems with submitting reports on time may also result in the plant not being able to produce until the report is submitted with adequate time for review by District Testing. Ongoing problems with inadequate, incomplete, or illegible reporting will result in a change to Restricted Acceptance. The Contractor's technician must sign each Quality Control Report. Retain copies of all

records documenting the quality control inspections and tests as outlined in the Contractor's QCP according to 403.03.F and furnish them to District Testing on request.

Provide delivery tickets of liquid or hydrated lime antistrip additive, if used, to District Testing at the end of the project and at the end of each construction year on a multiple year project. Provide the following information for each shipment: letter of certification, production date, shipment date, shipment destination, batch or lot number, and net weight. The District Testing will verify the weight (in pounds) of antistrip additive used is within 10 percent of the calculated amount of antistrip additive required for the total weight of asphalt binder, based on the produced JMF. The Department may obtain samples of the hydrated lime at any time to verify quality. If the quality of the hydrated lime is in question, the Department may require independent laboratory testing.

Report test results to the accuracy of the following decimal places. When the figures to be dropped in rounding off are exactly one-half of unity in the decimal place to be retained, round the value up to the nearest number in the decimal place to be retained.

TABLE 403.08-1 REPORTING ACCURACY

	Single Test	Average
Asphalt Binder Content, Effective Binder Content (PBE)	0.01	0.01
No. 200 (75 µm) sieve	0.1	0.1
Other sieves	Whole number	0.1
BSG, MSG, MTD, GSB, GSE	0.001	0.001
Air Voids	0.1	0.1
VMA	0.1	0.1
F/A	0.1	0.1
F-T	Whole number	Whole number
Mix Moisture Percent	0.01	0.01
APA, inch (mm)	0.0004 (0.01)	0.004 (0.1)

Additionally for 448 and 449 acceptance mixes (excluding 301, 302, and 424 Type A), track the Sublot and Lot tonnages through the project and identify on the Quality Control Report each random Sublot test as to Lot number and Sublot tonnage location. In addition to the Quality Control Report and submit form TE-448 with lot identification and actual sieve weights for each Sublot sample from the technician's gradation worksheets.

403.09 Mixture and Placement Deficiencies. The Contractor is responsible for controlling all production processes to assure the Engineer that the mixture delivered to the paving site is uniform in composition, within the specification requirements and limits, conforms to the JMF, and that the placed mixture is free of any defect (ex. segregation, tenderness, lack of mixture and/or texture uniformity, raveling, flushing, rutting, holes, debris etc.). Correct pavement problems according to 401.08. If the Department has any suspicion that other mixture composition or pavement problems exist, the Monitoring Team will conduct an initial investigation through review of data, sampling of the asphalt pavement, or both. Should a Department investigation determine that the Contractor's QCP is not controlling the mixture in a manner to achieve mixture quality as described above, the Contractor's QC test results, and corresponding pavement quality may be rejected. In that case the Department will conduct a thorough investigation by testing samples from the roadway and use those test results in determining disposition of the non-specification material.

A mixture is not uniform in composition if multiple non-specification individual tests or any four consecutive non-specification moving accumulative ranges exist. The mixture can be rejected, production can be stopped or a redesign can be required by the Department. OMM will not approve any redesign it determines is unsatisfactory to provide acceptable mix performance. Submit this new design for approval according to 440 and at no additional cost to the Department.

When any Contractor QC tests are out of specification and not within the limits of 403.06.F and Table 403.06.G-1, [material](#) that is sent to the paving site, the Engineer in conjunction with District Testing or OMM will determine disposition of the material according to Supplement 1102.

403.10 Verification Acceptance (VA). The Code of Federal Regulations requires independent random sampling and testing for acceptance through verification sampling and testing; and requires evaluation with an independent assurance (IA) program.

District Testing will perform VA by testing independent random samples. If the independent random Department VA sampling and testing verifies the accompanying Contractor tests, the individual and average of the Contractor's quality control tests will be used to determine acceptance as follows:

- For 449 acceptance mixes (301, 302, and 424 Type A) according to 449.04.A - Each production day;
- For 448 and 449 acceptance mixes - Average of the Contractor's tests for each Lot according to 448.04 and 449.04 B, respectively;
- For 446, 447, 448, or 449 acceptance mixes - Daily average MSG (other than 301, 302, and 424 Type A).

A. Monitoring. The Department will establish District Monitoring Teams for the purpose of verifying all Contractor mixture production processes. Verification will be accomplished by obtaining independent random samples from the plant or roadway. Split samples may be used to help isolate differences in test results resulting from a technician performing the test or equipment but cannot be used for verification of Contractor QC results or acceptance.

B. Sampling. The Department will perform VA by sampling and testing independent samples a minimum of one in every four production days to verify Contractor sampling, testing, and mix control. The Department will determine where the sample is taken. One day may be added to the above Department sample testing frequency for each production day that is less than 500 tons (450 metric tons). In addition to the above, for 446 and 447 acceptances, the Department may take a daily sample for asphalt content and the sample may also be utilized for gradation and MSG. The Department can require samples from the plant or project site (hopper, plate or truck).

The Department may take additional samples including split samples, to determine plant operation and equipment, and personnel process control functionality, effectiveness, proficiency, and isolating variability and for additional verification of Contractor QC or as desired. Other properties can be tested by the District as desired.

The Department will sample or require the Contractor to sample with the Monitor witnessing sufficient material to perform all the tests. If the Contractor desires, enough material will be taken or provided to obtain three split samples: one is the Contractor split for information purposes only; one is the Department split for verification acceptance; and one is the referee split for dispute resolution. If requested, provide the Monitor access to split the sample at the plant facility. If the Contractor takes the sample for the Monitor, the Monitor or Department must witness the entire sampling process and must take immediate possession of the Department's verification and referee samples. The Department will take immediate possession of the Department and referee splits and deliver them to District Testing.

District Testing or OMM will also perform independent assurance (IA) monitoring and testing of QC technicians and for projects from independent assurance samples (IAS) or split samples.

The Contractor's portion of the Department's VA split sample or IAS results are for informational purposes only and cannot be used for quality determination, verification, acceptance, or payment (Federal regulation 23 CFR 637).

C. Department Verification Testing and Monitoring. All Department VA or IAS samples will be prepared by the Monitor (e.g., material for nuclear gauge pans or MSG) and tested at District Testing or OMM using Department equipment.

All VA samples will be tested for asphalt content and gradation. The Department will also perform MSG testing on VA samples on all mixes other than 301, 302, and 424 Type A.

Record the results, date tested, and technician performing the testing, and include in District Testing project record.

The Contractor may test the split of the VA sample with the Monitor witnessing

The Department will use its VA test results and the Contractor's production day QC individual and average test results or subplot tests in the comparison for the Department VA testing.

The Department can use QC split samples to investigate contractor data but they cannot be used as VA samples. The results will be compared to the Contractor split using tolerances in Table 403.10-1.

TABLE 403.10-1 DEPARTMENT VERIFICATION ACCEPTANCE

Percent Asphalt Binder^{[1] [2]}	Percent Passing No. 4 (4.75mm) ^{[1] [2]}	MSG Comparison ^[3]
± 0.30	± 4	0.010

[1]District VA mix test deviation from the approved JMF.

[2]District VA mix test deviation from that production day QC test result and/or individual and average lot testing results.

[3]Deviation of District MSG VA compared to QC MSG daily average for all asphalt pavement mixture types except 301, 302, and 424 Type A. mixtures.

If the Department VA tests confirm Contractor testing is within the verification tolerances, but a pattern of high or low results exist that suggests mix control is not at the approved design JMF, then investigate with the Monitoring Team to correct the problem to the Monitoring Team's satisfaction. Direct any questions regarding interpretation of circumstances to OMM [in writing](#).

If the Monitor witnesses the Contractor's portion of the Department's VA split sample being tested, the results may also be utilized as an IAS sample.

D. Contractor QC Tests are Acceptable and Verified. Production is acceptable if:

1. The Monitoring Team determines that the Contractor's QCP is being fully followed; and
2. The Department VA tests verify contractor QC testing and both results are within the limits specified in 403.10.C; and
3. For 301, 302, and 424 Type A mixes, the remaining sieves do not exceed the limits of the applicable specification.

Failure on the Contractor's part to respond and resolve Monitoring Team concerns may result in a change to Restricted Acceptance.

Acceptance is according to 446, 447, 448, or 449.

E. Contractor QC Tests Not Acceptable or Verified. If the Department VA test is not within specification, tolerance limits, or does not verify the accompanying Contractor QC tests within the verification tolerances of Table 403.10-1, immediately cease production until resolved. Investigate to the Department's satisfaction.

The Monitoring Team, District Testing, or OMM may choose to participate in determining the cause of non-verification or out of specification results. Until fully resolved, the Department results will be utilized for acceptance.

The Contractor may dispute the results within seven calendar days with written notification to the Department as to why the Contractor believes the Department's VA results may be erroneous with supporting documentation and testing (which could include historical test data). If Contractor documentation and testing adequately supports their tested results as determined by OMM, the referee sample will be sent to OMM. for dispute resolution. The Department will deliver the referee sample to OMM. The results closest to the referee sample results will be used in acceptance.

If the Contractor's written request for referee testing is accepted The Department may allow District Testing to investigate a non-comparison or out-of-specification material issue by testing the Department's VA sample at the Contractor's mix plant lab to determine if the non-comparison is from Contractor testing (technician or equipment). If this material is found to verify the original Department's VA results, the referee sample will be sent to OMM for dispute resolution. If this material does not compare with the Department's VA results, then the Department's initial results will be utilized for acceptance.

If a Contractor's MSG test result is not verified by Department MSG VA testing according to the tolerance in Table 403.10-1, the Department's corresponding MSG for that production day and every day back to when the Contractor's MSG was verified by the Department's MSG VA will be used for each 446, 447, 448, or 449 acceptance mixes (other than 301, 302, and 424 Type A Day/Lot density and QC air void determination). If an independent VA plant sample is not available, the Department may test MSG from a random independent field sample or road cut sample for Department VA testing.

The Contractor may occasionally request a review with the Department for the purpose of determining the cause of a verification comparison problem. Department decisions upon review are final. If a Contractor is requesting a review of every occurrence of lack of comparison and the Department test is predominantly found correct, the Department may deny that Contractor further reviews until the Contractor has determined the root-cause of the problem and made corrections to prevent it from recurring.

TABLE 403.10-2 DEVIATION LIMITS

Property	Mix	Limits
Asphalt Binder Content	All	±0.50 %
No. 4 (4.75 mm) sieve	All, except 302	±6.0%
	302	±7.0%

Additionally, stop production and perform additional tests to aid in problem solving if ongoing Department VA tests do not verify. . Document the resolution and root cause. If needed, contact OMM for assistance in resolving problems.

F. Contractor Department VA Removal and Restoration. For 446 and 447 MSG, for a given Contractor facility, if in a series of eight or more Contractor/ Department MSG comparison tests (VA, Monitoring tests) the Contractor MSG is lower than the Department MSG by more than 0.002 or low MSG comparisons that occur more than 65 percent of the time, the facility will be removed from Department MSG Verification Acceptance and operate under 403.11.

The District will request an opinion from the QC Review Group before notifying the Contractor of removal from Department VA if repeated problems occur with: poor comparison of tests originating from Contractor sampling or testing (not the District); poor comparison of Contractor tests to the JMF; plant operation; source materials; or any of the other requirements of Department specifications regardless of whether they occur in a single project or successive projects. The District will immediately notify the Contractor of the removal with a follow up letter from District Testing. Once notified, acceptance of asphalt mixtures is by Restricted Acceptance. Restoration of the VA procedures may occur on a future project with a District recommendation to the QC Review Group based on consistent improved plant operation and mix control, a review of the Contractor problems and resolutions, and a review of the QCP by the QC Review Group.

G. Dispute Resolution for 446 and 447 cores. The Contractor may dispute the results of District Testing core results within seven calendar days with written notification to the Department as to why the Contractor believes the Department's results may be erroneous with supporting documentation and testing (which could include historical test data). If Contractor documentation and testing adequately supports their information as determined by OMM, the Department's core(s) will be delivered to OMM by District Testing. Do not cut more cores unless the Department feels the cores were damaged prior to the original District Testing core results. If OMM BSG core test results differ by more than 0.010 from District Testing results, OMM results will be used in the calculation of the pay factor. If not, then the original District Testing core results will be used.

The Contractor may occasionally request a review of District Testing results. However, if a Contractor frequently requests a review of District Testing core results and the District Testing results are predominantly found correct, the Department may deny that Contractor further reviews. Department decisions upon review are final.

403.11 Restricted Acceptance. If the Contractor is removed from Department VA, the following will occur.

The Contractor must bring its QCP and operation to a level acceptable to the District, OMM, and QC Review Group before production continues. District Testing will ensure that the project C-95 (Contractor's Prequalification Rating survey) reflects the change to Restricted Acceptance in all of the appropriate C-95 categories. The Department will accept all material for Department projects from the facility under Restricted Acceptance. SMQ acceptance while the facility is under Restricted Acceptance will not be permitted.

Quality control testing requirements specified in 403.06 are modified as follows:

A. Sampling and testing once every 90 minutes during the production day using a random number to determine the time to sample for each JMF produced. Ensure the sample is within five minutes of the random time. If no trucks are being loaded, sample the next truck to be loaded. Do not discuss sampling times with anyone other than the Department.

This requirement does not apply to 446 and 447 MSG Restricted Acceptance according to 403.10.F.

If the sampling and testing exceeds the capacity of the testing facility according to 403.04, immediately notify the Engineer and District Testing, then stop production until the testing facility can handle the

capacity. The Department may limit the number of JMF's being produced at a mix plant facility if more than one is being produced and sampling and testing becomes an issue while on Restricted Acceptance.

B. For 301, 302, and 424 Type A mixes, if the variation from the JMF for one test is ± 8 percent passing the No. 4 (4.75 mm) sieve or ± 0.30 percent asphalt binder content, investigate and correct the problem, then resample and test. Maintain the moving average of three tests within ± 4 percent passing the No. 4 (4.75 mm) sieve and ± 0.20 percent asphalt binder content. In addition to the applicable Quality Control Reports, maintain control charts according to 403.06.E for asphalt binder content and the No. 4 (4.75 mm) sieve. If the Range difference in any three consecutive tests is greater than 0.6 percent for asphalt binder content or 10.0 percent passing the No. 4 (4.75 mm) sieve, notify the Monitoring Team. If Range deviations as specified continue, cease production.

For 446 and 447 MSG, the Department will test a single daily MSG for each corresponding 446 and 447 Day/Lot density determination from the facility. The facility can be returned to Department MSG VA when the 65 percent criteria (see 403.10.F) are not exceeded in a series of 30 comparison tests.

C. Report each day's testing on a Quality Control Report, according to 403.08. Report all testing performed by the Contractor's technician on the Quality Control Report. After startup adjustments, report any plant operation changes on the Quality Control Report. Ensure that each Quality Control Report contains technician comments as to production quality, input materials received and condition, and includes any other quality control activities required in the QCP. The Contractor's technician must sign each Quality Control Report. Attach each day's computerized plant printouts to that day's report. The technician must note on the accompanying printout from which tonnage the quality control sample was taken with accompanying test results for asphalt binder content and percent passing the No. 4 (4.75 mm) sieve. Keep a copy of all Quality Control Reports for a project in the Contractor's plant laboratory.

District Testing will monitor according to 403.10, except notification for ceasing production does not have to be in writing. Additional samples may be obtained for Department testing at any time.

For 301, 302, and 424 Type A mixes, if the average of the Lot or partial Lot acceptance tests for any sieve other than the No. 4 (4.75 mm) sieve exceeds the specification limits, the pay factor is determined as follows:

TABLE 403.11-1 301, 302, 424 TYPE A PAY FACTORS

Number of Tests	1	2	3	4
Pay Factor	0.98	0.97	0.96	0.95

For 448 and 449 Sublot acceptance mixes, the Department will perform acceptance sampling and testing according to 403.05, 448.04, and 449.04 except the Lot size will be 5000 tons (5000 metric tons) with 1250 ton (1250 metric tons) Sublots. Sublots and acceptance samples may be taken from the roadway or plant at the District's discretion. Department testing under Restricted Acceptance will receive a lower testing priority than other VA projects.

407.07

On Page 204, **Add** after the 1st paragraph the following new paragraph:

Provide weight tickets (including weigh back tickets) for every load, or partial load used, according to Supplement 1060 based on weight tickets from an Ohio Permitted Device according to provisions of Ohio Revised Code Section 1327, and Ohio Administrative Code Chapter 901:6.

407.08

On Page 204, **Add** after the last pay item the following:

407 Gallon Tack Coat, 702.13

408.09

On Page 205, **ADD** after the 1st paragraph the following new paragraph:

Provide weight tickets (including weigh back tickets) for every load, or partial load used, according to Supplement 1060 based on weight tickets from an Ohio Permitted Device according to provisions of Ohio Revised Code Section 1327, and Ohio Administrative Code Chapter 901:6.

421.02

On Page 211, **ADD** to “Mineral Filler (Portland Cement)” after 701.04 the following:
or 701.05

421.02

On Page 212, **Replace** the 2nd paragraph the following:

For mineral filler, use Supplement 1028 Certified Portland cement conforming to 701.04 ASTM C 150, Type I or 701.15 ASTM C 595, Type IL. Do not interchange Type I and Type IL and specify which is being used in the mix design. Adjustments in the quantity of mineral filler added to the mixture are permitted to improve mixture consistency, mix time, or set time. Do not exceed $\pm 0.5\%$ from the mix design during placement.

421.12.B

On Page 221, in the 1st sentence of the section **Replace** the reference to “Table 421.02-3” with the following:

“Table 421.02-2”

421.12.B.

On Page 221, **Replace** the third paragraph with the following:

Stockpile a minimum of 10 percent of the project aggregate or 200 tons (180 metric tons) of aggregate whichever is less at a staging area. Obtain three (3) aggregate samples from the stockpile prior to any production starting and perform gradation testing on each sample according to AASHTO R 90, AASHTO R 76, Supplement 1004 (AASHTO T 11 where required), and moisture content per AASHTO T 255. Use dry gradations for determining the No. 200 (75 μ m) sieve. Determine the percent passing for each sieve size listed in Table 421.02-2. Calculate the average of each sieve for all three tests. Ensure the average value for each sieve is within the requirements of Table 421.02-2. Do not begin production if not in compliance with gradation band and stockpile tolerance. Prior to production, the Contractor may request a JMF adjustment to the JMF gradation in writing to the Engineer within the below limits without a redesign of the mixture based on the results from the three stockpile samples. Limit the adjustment from the original JMF gradation to conform to actual production to ± 3 percent passing each of the No. 4 (4.75 mm) and No. 8 (2.36 mm) sieves and ± 1.0 percent passing the No. 200 (75 μ m). The Department will not approve adjustments that exceed the design ranges in Table 421.02-2.

421.12.B.

On Page 221, **Replace** the first sentence of the fifth paragraph with the following:

Reject aggregate that does not meet the stockpile tolerance in Table 421.02-2 compared to the approved JMF or JMF adjustment.

423.02

On Page 235, **Replace** “Type I” with the following:

Type I.....702.17.A

423.02

On Page 235, **Add** the following after “Type IV”:

Type V.....702.17.E

423.02

On Page 236, **Replace** the first paragraph with the following:

Furnish crack sealant or mastic materials according to 702.17.

423.03

On Page 236, **Add** the following paragraph after the third paragraph:

For Type V mastic sealants, heat the sealant in a kettle or melter constructed as a double boiler, with the space between the inner and outer shells filled with oil or other heat-transfer fluid. Use a kettle or melter with separate thermometers for the oil bath and mixing vat. Equip the kettle with a full sweep type agitator to prevent the Type V material from separating.

423.03

On Page 236, **Add** the following paragraph after the fifth paragraph:

For Type V mastic sealants use the manufacturer’s recommendation for application equipment requirements.

423.05

On Page 237, **Add** the following paragraph after the first paragraph:

For Type V mastic sealant, clean cracks and joints to remove debris and any loose deteriorated pavement. For crack or joint reservoir depths greater than 2.5 inches (62.5 mm), fill according to 423.07. Stop application if the material becomes separated (asphalt and aggregate are not homogenous).

423.07

On Page 237, **Replace** the second paragraph with the following:

Seal only cracks that are wide enough to permit entry of sealant. Seal tightly closed cracks (less than 1/4-inch (6 mm) wide) only if they show signs of raveling or spalling.

423.07

On Page 237, **Add** the following paragraph after the second paragraph:

For Types I, II, and IV sealants, do not seal cracks greater than 1-inch (25 mm) wide, and do not seal spalls or cavities greater than 4 inches (100 mm) wide, unless otherwise directed.

423.07

On Page 237, **Add** the following paragraph after the last paragraph:

For Type V mastic sealant, place the sealant such that it fills the cracks and joints with a band on all sides, 2 inches (50 mm) wide beyond the edges of the deteriorated area and does not exceed 1/8 inch (4 mm) thickness above the pavement. If the crack or joint depths are greater than 2.5 inches (62.5 mm), fill the crack or joint in multiple lifts allowing the first lift to cool prior to adding the final lift.

423.10

On Page 238, **Add** the following to the end of the list:

423 Pound (Kilogram) Crack Sealing, Type V
 or Square Yard
 (Square Meter)

424.02.A.

On Page 238, **Delete** the 2nd sentence of the section.

424.02.E.

On Page 239, in Table 424.02-1 **Replace** Footnotes [1] and [3] with the following:

[1] Gradation includes any baghouse fines and mineral filler and is specified in percent passing.

[3] Fine Aggregate - Use natural sand with at least 50 percent silicon dioxide by weight according to 703.05.D. For 50 blow mixes, use no more than 20 percent limestone sand, No. 10 limestone, or combination of both by weight of total aggregate. For 75 blow mixes, use 20 percent limestone sand, No. 10 limestone, air cooled slag sand or combination thereof by weight of total aggregate. Baghouse fines and mineral filler percentages used will be included with the percentages for limestone sand, No. 10 limestone, and air cooled slag sand and not for natural sand. If 10 percent RAP is used the silicon dioxide content of the total natural sand blend must be at least 50 percent. Contact OMM for guidance on submitting RAP aggregate silicon dioxide data.

440.03

On Page 241, **Replace** the third sentence of the first paragraph with the following:

Develop a JMF to comply with the mix design criteria and submit it to OMM on approved forms and in AWP at least four weeks prior to the start of production for preliminary approval.

440.03

On Page 241, **Add** to the end of the 4th paragraph the following:

Baghouse fines from the mix plant and mineral filler may be used in the JMF, however, limit the combination of both to 2.0 percent by weight of total aggregate. Use the lowest fine aggregate Gsb listed in the JMF submittal for the baghouse fines ~~and mineral filler~~.

440.03

On Page 241, **Add** to the end of the 4th paragraph the following:

Use the mineral filler Gsb on the aggregate annual gravity list and if not on the list, then have the mineral filler tested by an AASHTO accredited lab.

440.03

On Page 241, in the first sentence of the fifth paragraph, **Replace** (2020) with (2021).

440.03

On Page 241, in the fifth paragraph, **Delete** “AASHTO MP 23-15 (2021), Section 4” and **Replace** with “AASHTO M350”.

440.03

On Page 241, **Replace** the sixth paragraph with the following:

Note on the JMF submittal RAP page whether Method 1 or Method 2 RAP processing is used.

440.03

On Page 241, **Replace** the seventh paragraph with the following:

For surface course JMF submittals having polymer asphalt binder and RAP, including 424 mixes, do not submit any blends having 1 through 9 percent RAP.

440.03

On Page 241, **Delete** the eighth paragraph.

440.03

On Page 242, beginning with and including the 2nd full paragraph **Replace** the remainder of the section the following:

Include any required antistripping additive in the mix design but perform the volumetric design without the antistripping additive. Submit the following to OMM with the proposed JMF:

A. The product name, manufacturer, and the rate of liquid antistripping additive used by weight of total AC. Also provide the rate used by weight of virgin AC for purposes of metering at the mix plant. If using hydrated lime submit certified test data showing the hydrated lime conforms to AASHTO M 303, Type 1 and include the rate used meeting 440.06.B. Only use one LAS additive manufacturer's product and do not combine products with other manufacturer's additives including when chemical WMA is being used.

B. All Tensile Strength Ratio (TSR) data. If antistripping additives are required according to 440.06 due to the materials used, submit TSR results after addition of the antistripping additive. If antistripping additives are optional or required due to not meeting the minimum TSR, then submit TSR results before and after addition of the antistripping additive.

C. Results of the washed gradation test of the individual components of the mix used in determining the combined gradation.

D. Results of the adherent fines testing for each component.

OMM may perform additional tests on lab or plant produced mix according to Supplements 1004, 1051, and 1052. If a change in the aggregate production is suspected, OMM may require the Contractor to perform washed gradations on components and calculate adherent fines to determine the need for additional TSR review.

440.03

On Page 242, **Replace** the first sentence of the last paragraph with the following:

OMM may perform additional tests on lab or plant produced mix according to Supplements 1004, 1051, 1052, and 1118.

440.04

On Page 242, **Replace** the first and second sentences of the third paragraph with the following:

Use the effective asphalt binder content when calculating the F/A ratio. Calculate the effective asphalt binder content according to the Department's Asphalt Level 2 procedures.

440.04

On page 242, **Replace** the third and fifth sentences of the 1st paragraph with the following:

Provide a mix design with at least four asphalt binder content points but no more than five, including a minimum of two points above and two points below the JMF asphalt binder content.

Use a two hour cure for volumetric mix samples and ensure the cure temperature and specimen compaction temperature are the same.

440.05

On Page 243, **Add** the following sentence after the third sentence in the fourth paragraph:
Give each RAP stockpile a unique identification according to 402.04.D.

440.05

On Page 243, **Replace** the last sentence of the fourth paragraph with the following:
For design assume 10.0 percent available RAS binder. Determine gradation and specific gravity according to AASHTO PP 78-17 (2021), Section 5 or subsequent AASHTO applicable standard.

440.05.A

On Page 244, **Replace** the first full sentence of the paragraph with the following:
If 26-30 percent RAP is used in the JMF submittal, the Contractor may submit a 10,000-gram RAP sample along with a blend chart using the PG grading system, according to the Department's Level 3 Mix Design procedures and MS-2 Section 11.4.2, to determine the grade of virgin asphalt binder to use.

440.05.A.

On Page 244, **Add** the following sentence before the last sentence of the section:
When using RAS, blend the mixture meeting the proposed mix design proportions, extract and recover, and PG grade according to the Department's Level 3 Mix Design procedures and MS-2 Section 11.4.2. If the combined binder exceeds the proposed PG grade at the high or low temperature, redesign or do not use RAS.

440.06

On Page 245, **Replace** the section with the following:

440.06 Antistrip Additive. Use liquid antistrip (LAS) additives meeting the requirements of 440.06.A or hydrated lime meeting the requirements of 440.06.B. LAS or hydrated lime is required to be used for all mixes if the proposed JMF contains any gravel coarse aggregate, contains more than 25 percent natural sand, or contains more than 20 percent RAP containing gravel coarse aggregate. Conduct the tests listed in Table 440.06-1 for all 442 mixes and all mixes requiring LAS or hydrated lime. The minimum TSR result is 0.80.

TABLE 440.06-1 ANTISTRIP TESTS

Test Description	Specification
Moisture damage potential test	Supplement 1051
Washed gradation	AASHTO T 11 as modified by Supplement 1004
Adherent fines test for each component	Supplement 1118

For 442 mixes, add, if not already required, or increase LAS or add hydrated lime, if the results of the moisture damage potential test show the TSR of the asphalt concrete mix to be less than 0.80. Increase LAS for all other mixes if the results of the moisture damage potential test show the TSR of the asphalt concrete mix to be less than 0.80.

A. Liquid Antistrip Additive.

Use LAS additives on the approved list only. Include LAS additive at rate by weight of total AC specified in Table 440.06-2. Do not use more than one additive manufacturer's product including when chemical WMA is used.

TABLE 440.06-2 LAS RATES

Requirements	301 & 424 Type A mixes ^[1]	All other mixes	
		Min	Max ^[2]
Additive also a chemical WMA additive	0.30	0.30	0.75
Additive specifically for antistrip	0.50	0.50	1.00
Organosilane Product	0.10	0.05	0.10

[1]The moisture damage potential test is not required for 301 and 424 Type A mixes

[2]If LAS additive is used at the maximum dosage rate, the Department will waive performing the moisture damage potential test.

B. Hydrated Lime. Include hydrated lime in the dry form at a rate of 1.0 percent by the dry weight of aggregate for asphalt concrete except use 0.75 percent for 302 mixes. Conform to AASHTO M 303, Type 1 for hydrated lime. If hydrated lime is used at the specified rates, the Department will waive performing the moisture damage potential test.

441.02

On Page 247, in Table 441.02-1 **Replace** the row "Asphalt Binder^[2]" with the following:

Asphalt Binder ^[2]	5.8 to 10.0	5.8 to 10.0	4.6 to 9.0
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441.02

On Page 247, in Table 442.02-1, **Replace** the row "VMA, Min. ^[7]" with the following:

VMA, min. ^[7]	15.5	15.5	12.5
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442.02

On Page 249, in Table 442.02-2 in the row designated "No.4", column designated "12.5 mm Intermediate Course Mix" **Revise** the [1] footnote designation as shown: 60 max

442.02

On Page 249, **Replace** the third and fourth sentences of the third full paragraph with the following: Deformation less than 0.20 inch (5.0 mm) at 120 °F (48.9 °C) are considered passing for PG 58-28 and PG 64-22 mixes. Deformation less than 0.12 inch (3.0 mm) at 130 °F (54.4 °C) are considered passing for all other mixes.

443.03

On Page 252, **Replace** Table 443.03-3 MORTAR TEST REQUIREMENTS with the following:

TABLE 443.03-3 MORTAR TEST REQUIREMENTS

Tests	Description	Specification
AASHTO T315	Unaged Dynamic Shear Rheometer, $G^*/\sin \delta$ (kPa)	5 minimum
AASHTO T315 & T240	RTFO Aged Dynamic Shear Rheometer, $G^*/\sin \delta$ (kPa)	11 minimum
AASHTO R28 & T313	PAV Aged BBR, Stiffness (MPa)	1500 maximum

446.04

On Page 256, **Replace** the 1st sentence of the 3rd paragraph with the following:

A Lot consists of the area of pavement, including shoulders, placed using material produced in one production day as defined in 403.05. If any production day (Lot) exceeds 3000 tons, an additional lot is required to be cored.

446.04

On Page 257, **Add** to the end of the last paragraph and before Table 446.04-1 the following:

The Contractor may dispute the results of the cores following 403.10.G.

447.04

On Page 260, **Replace** the 1st sentence of the 3rd paragraph with the following:

A Mat Density Lot consists of the area of pavement, including shoulders, placed using material produced in one production day as defined in 403.05. If any production day (Lot) exceeds 3000 tons, an additional lot is required to be cored.

447.04

On Page 261, **Add** to the end of the last paragraph and before Table 447.04-1 the following:

The Contractor may dispute the results of the cores following 403.10.G.

447.05.C

On Page 262, **Replace** the last sentence in the 1st paragraph with the following:

Once all test results for the Joint Density Lot have been received, the Department will compute the PWT and average in place density for each lot according to Supplement 1044 using the Excel spreadsheet on the Department's website.

447.05.C.

On Page 263, **Add** to the end of the last paragraph in the section, and after Table 447.05-1, the following:

Values computed using equations referenced in this specification may vary slightly from the spreadsheet values due to rounding of numbers. In all cases the numbers computed using the Department's Excel spreadsheet will govern. All pay factors are shown in number form (not percentages) and are rounded to the hundredth decimal place by the spreadsheet. No other rounding is allowed. The Contractor may dispute the results of the cores following 403.10.G.

448.04

On Page 264, in Table 448.04-1, **Replace** the 1st Row with the following:

Asphalt Binder Content	0.30	1.00
------------------------	------	------

449.04.A.

On Page 268, **Replace** Table 449.04-1 with the following:

Table 449.04-1 Mix Acceptance

	Deviation From JMF^[1]	Range
Asphalt Binder Content ^[2]	± 0.30%	0.50
Asphalt Binder Content ^[3]	± 0.40%	0.70
No. 4 (4.75mm) Sieve	± 6%	12
^[1] Based on the average of the day or night QC tests		
^[2] For 301 and 424 type a mixes		
^[3] For 302 mixes		

449.04.B.

On Page 268, in Table 449.04-2, **Replace** the 1st Row with the following:

Asphalt Binder Content	0.30	1.00
------------------------	------	------

449.04.B.

On Page 268, **Replace** the first sentence of the second paragraph with the following:

If the average of the Lot acceptance tests for a particular sieve or sieves, or for asphalt binder content deviates from the JMF by more than the tolerances shown in Table 449.04-2 449.04-3, but falls within the tolerances shown in Table 449.04-2, then the Lot is considered reasonably acceptable and may remain in place with payment at a reduced pay factor as show in Table 449.04-3.

451.03

On Page 271, **Replace** the last sentence of the section with the following:

When the concrete pavement bid item includes “with QC/QA” the Engineer will perform Quality Assurance conforming to 455.

455.03.C

On Page 296, **ADD** to the end of the numbered list the following:

21. Initial Curing Method*
22. Minimum and maximum temperatures of cure box during initial curing*
23. Date received at lab *

455.04.F.

On Page 298, **Add** the following listed items (all remaining items are re-numbered in correct numerical sequence):

1. Describe the process to ensure the evaporation rate does not exceed 0.1 lbs/ft²/hour during the placement period as determined using ACI 308-18 prior to scheduling placement.
Provide an example of the forms, charts, and details used to determine the evaporation rate and how the information will be provided to the Department project staff.
2. Describe the method of determining the correct saw cutting window and how the depth of saw cuts will be measured for verification. Provide an example of how the information will be provided to the Department project staff.

455.04.F.9

On Page 298, **Replace** the 451.05.B. with 451.04:

9. Describe methods of monitoring the vibrator operation and frequency, time of day, station location and track speed according to 451.04.

499.02

On Page 303, **Add** at the end of the list the following:

Macro-fibers^[6]705.29

499.02

On Page 303, **Revise** footnote [5] to the following:

[5] Admixtures shall contain no more than 50 parts per million chloride ions by weight of cement except for Type C accelerating admixtures or calcium chloride for QC RS only.

499.02

On Page 303, **Add** at the end of the footnote list the following:

[6] Applies only to Class QC RS.

499.03

On Page 304, **Replace** table 499.03-1 CONCRETE MIX DESIGN REQUIREMENTS as follows:

TABLE 499.03-1 CONCRETE MIX DESIGN REQUIREMENTS

Quantities per Cubic Yard (Cubic Meter) Provide Concrete with 7±2% Air Content				
Class	Design Strength psi (MPa)	Permeability [1] Maximum (Coulombs)	Cementitious Content [2] Minimum. lbs (kg)	Aggregate Requirements
QC 1	4,000 (28.0) at 28 days	2,000	520 (309)	Well-Graded
QC 1P ^[9] [10]	4,000 (28.0) at 28 days	2,000	520 (309)	Well-Graded
QC 2	4,500 (31.0) at 28 days	1,500	520 (309)	Well-Graded
QC 3 Special	As per plan	1,500 or as per plan	520 (309) or as per plan	Well-Graded or as per plan
QC 4 Mass Concrete	4,000 (28.0) or as per plan ^[3]	2,000 or as per plan	470 (279) ^[4] ^[5] or as per plan	Well-Graded or as per plan
QC 5 ^[8]	4500 (31.0) at 28 days	N/A	520 (309)	1 inch or 3/8-inch nominal maximum size
QC SCC ^[8]	4500 (31.0) at 28 days	1,500 or as per plan	520 (309)	Well-Graded, 1 inch or 3/8-inch nominal size or as per plan
QC MS	See Supplement 1126	N/A	800 (476)	1-inch nominal maximum size
QC RS ^[11]	See Supplement 1126	2,000	520 (309)	Well-Graded
QC Misc. ^[6]	4,000 (28.0) at 28 days	N/A	550 ^[7] (327)	1-inch nominal maximum size

[1] AASHTO T277 Modified.

[2] Cementitious Content includes cement and pozzolan denoted as Cm.

[3] Strength for Mass Concrete (QC 4) may be tested at either 28 or 56 days.

[4] Do not use Type III cement or accelerating admixtures in mass concrete.

[5] The maximum fly ash, natural pozzolan, or slag cement content may be increased up to 50%.

- [6] For QC Misc. mixes only –Water/Cementitious ratio limited to 0.50 maximum.
- [7] Cement or a combination of cement and up to 15% fly ash or natural pozzolan; or up to 30% slag cement.
- [8] For QC 5 and QC SCC mixes with 3/8-inch nominal size, provide an air content of $8\pm 2\%$.
- [9] Portland cement concrete pavement mix design.
- [10] QC 1P may be used in lieu of QC 1. QC 1 may not be used in lieu of QC 1P.
- [11] Provide QC RS with $6\pm 2\%$ air content.

499.03

On Page 305, in Table 499.03-4 **Revise** the 2nd row under the “Type of Work” column as follows:

Structural Concrete (511, 622)

499.04

On Page 306, **Replace** paragraph **A.** with the following:

A. Batch the concrete to the proportions of the accepted JMF. Provide a workable and finishable mix. Adjustments to the JMF’s aggregate proportions up to 100 lbs (44 kg) for workability may be made. Adjustments greater than 100 lbs (44 kg) may be made if approved by the Engineer. Maintain an absolute volume of 27.0 cubic feet/cubic yard for the adjusted concrete mix. For Well Graded JMF adjustments, maintain the combined aggregate gradation within the optimal zone II requirements and the Tarantula Curve limits for well-graded mixes as defined in Supplement 1126. If outside the optimal zone II of the Coarseness Factor Chart or the Tarantula Curve limits of the Tarantula Curve, adjust the JMF’s proportions to maintain the combined gradation within Zone II and the Tarantula Curve limits and report the JMF changes to the Engineer.

499.04.B

On Page 306, **Add** the following sentence to the end of the paragraph:
Keep aggregate stockpiles at or above SSD condition prior to batching.

499.04.D

On Page 306, **Replace** the subsection with the following:

D. Adjust the SSD aggregate design weights in the JMF to compensate for the moisture contained in the aggregates. Perform moisture burn offs on all aggregates prior to concrete production. For bridge deck concrete, perform a moisture burn off 2 hours prior to the start of concrete placement.
Provide moisture burn off calculations showing the free moisture of each aggregate prior to batching concrete.

499.05.D.

On Page 308, **Replace** the last sentence of the first paragraph with the following:

Limit the use of volumetric truck mixers to QC Misc., QC MS, QC RS, Item 613, and QC 1 when used for residential driveways, Item 606, Item 608, Item 609, Item 611 concrete collars or encasements, and Item 623. ~~Limit the use of volumetric truck mixers to QC Misc., QC MS, QC FS RS, and Item 613.~~

499.06

On Page 308, **Replace** the second paragraph with the following:

Prior to and during batching, maintain all coarse and fine aggregates at a uniform moisture content, at or above, an SSD condition.

499.06.D

On Page 309, **Replace** the third paragraph with the following:

Batch each material to ensure weights are within the tolerance specified in Table 499.06-1, based on the amount specified in the approved JMF including any proportion adjustments according to Item 499.04.

499.06.D

On Page 309, in Table 499.06-1, **Add** the following footnote designation “[4]” to the sixth row:

Water ^{[3] [4]}	±1.0
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499.06.D

On Page 309, in Table 499.06-1, **Add** the following footnote “[4]” after footnote [3] as follows:

[4] Tolerance based on target water quantity, not water quantity allowed at maximum water-cementitious ratio.

499.06.D.

On Page 309, in Table 499.06-1, **Add** a new row after the current last row as follows:

Macro-fibers	±3.0
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499.06.D.

On Page 309, in Table 499.06-2, **Add** a new row after the current last row as follows:

Macro-fibers	±3.0
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499.07

On Page 310, **Replace** Table 499.07-1 as follows:

TABLE 499.07-1 EVERY BATCH TICKET

Name of ready-mix batch plant	
Batch plant No.	
Batch plant location	
Producer/Supplier Code	
Serial number of ticket	
Date	
Truck number	
Class of concrete	
JMF Number	
Batch time	
Batch size	yd ³ (m ³)
Actual weights and % variance of cementitious material:	
Cement	lb (kg)
Fly ash	lb (kg)
Natural pozzolan	lb (kg)
Slag cement	lb (kg)
Micro-silica	lb (kg)
Other	lb (kg)
Actual weights and % variance of aggregates:	
Coarse	lb (kg)
Intermediate	lb (kg)
Fine	lb (kg)
Carbonate Micro-Fines	lb (kg)
Other	lb (kg)
Actual weight of water and % variance	lb (kg)
Actual volume of admixtures:	
Air-entrainer	fl oz (mL)
Superplasticizer	fl oz (mL)
Water-reducer	fl oz (mL)
Retarder	fl oz (mL)
Macro-fibers	lb (kg)
Other	fl oz (mL)
Aggregate moisture contents:	
Coarse aggregate	%
Intermediate aggregate	%
Fine aggregate	%
Water-cementitious ratio, leaving the plant	
Allowable additional water	gallons

499.07On Page 311, **Replace** the last sentence in the section with the following:

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Provide a copy of the moisture burn off calculation sheet with the first ticket of the day, or when there is an updated moisture burn off performed.

499.07

On Page 311, in Table 499.07-2, **Add** a new row after the row labeled “Water-reducer” as follows:

Macro-fibers		
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499.08

On Page 311, **Replace** the fourth paragraph of the section as follows:

Use admixtures containing more than 50 parts per million chloride by weight of cement only when specified in the Contract Documents, the accepted JMF, or with the Engineer’s written permission.

499.08

On Page 311, **Add** the following after the last sentence in the section:

For bridge deck concrete, ensure the temperature of the concrete does not exceed 85 °F (30 °C).

501.03

On Page 312, **Replace** the last word of section 501.03 with received.:

Payment per 109.10 will not be made until 30 days after OMM is notified and proper documentation is received.

501.04.A.

On Page 312, **Replace** the second paragraph with the following.

For structures carrying railroad traffic, submit the prepared shop drawings at least 40 days prior to the pre-fabrication meeting to each railroad company involved for review and approval. Resolve all railroad comments prior to submitting drawings to OMM. The submission to OMM shall include shop drawings accepted by each railroad company involved; copies of all documentation between the railroad(s) and the Contractor; Contractor accepted shop drawings, and the Contractor’s written acceptance letter. Also furnish the fabricator’s quality control specialist with these drawings before the pre-fabrication meeting.

501.04.A.

On Page 312, **Replace** the third paragraph with the following.

For all other structures, the submission to OMM shall include a written acceptance letter and each drawing. Also, furnish the fabricator’s quality control specialist with these drawings before the pre-fabrication meeting.

501.04.B.

On Page 313, **Replace** the second paragraph with the following.

Submit the shop drawings to the Engineer and the District Office of Planning and Engineering with the materials delivered to the project. Do not incorporate material into the work until after submitting the drawings. Department approval of these shop drawings is not required.

501.05.B.6

On Page 319, **Replace** the section with the following:

6. Analyze the load effects from construction loads on bridges when:

a. Construction loads exceed 75 percent of posted loads or 60,000-lbs whichever is less. Construction loads include: construction material, vehicles, construction equipment and construction debris. To determine posted load allowance for load posted bridges:

(1) Compare the total vehicle weight and axle configuration of a construction vehicle to 75 percent of the weight limit of the posted vehicle with the same axle configuration shown on the posting sign. Do not place more than one construction vehicle on a posted bridge at any one time. For tracked vehicles, each wheel inside the track counts as an axle.

(2) If no construction vehicle is placed on a posted bridge, the construction load shall not exceed 75 percent of the heaviest posted vehicle weight.

(3) No construction point load shall exceed 5,000-lbs.

b. Applied construction load supported on an outrigger exceeds 60-psi or the minimum loaded area is less than 200-in². Do not support any loads on outriggers on load posted bridges.

The analysis shall be in accordance with the AASHTO LRFD Bridge Design Specifications.

503.03

On Page 322, **Replace** the entire second sentence of the second paragraph as follows:
If this is not practical, support members shall be structural steel and left in place.

507.03

On Page 331, **Add** the following sentence after the last sentence of the subsection:
Provide a Concrete Cylinder Cure Box per 511.04.

509.03

On Page 339, **Replace** the last sentence of the second paragraph with the following.

Perform necessary repairs according to 509.10 for epoxy coated reinforcement, 711.02 for galvanized reinforcement and 509.11 for GFRP reinforcement.

511

On Page 345, **Replace** Items 511.04 and 511.05 with the following:

511.04 Quality Control Requirements

511.05 Mass Concrete Requirements

511.03

On Page 346, **Add** the following sentence to the end of the first paragraph:
Mix concrete according to 499.08.

511.04

On Page 346, **Replace** section 511.04 with the following:

511.04 Quality Control Requirements When the concrete bid item requires QC/QA, develop and submit a Quality Control plan (QCP) for the work and perform quality control testing of the concrete conforming to Item 455.

When the concrete bid item requires QC/QA, The Engineer will perform Quality Assurance conforming to 455.

When the concrete bid item does not require QC/QA, the Engineer will make at least one set of acceptance test cylinders for each 50 cubic yards of concrete.

With any 511 concrete bid item provide and maintain a Concrete Cylinder Curing Box (CCCB) capable of holding at least twelve 4 × 8 inch cylinders at a temperature of 60 to 80 °F degrees no matter what the ambient temperature. Provide a max-min thermometer with each CCCB to ensure these temperature requirements are met. The box will have a sealed lid. If the project has numerous 511 concrete bid items, one CCCB may be used for multiple items of work. Locate the CCCB at a site that is convenient to the concrete work and will eliminate handling damage to both the Contractor QC or QA cylinders and the Department Cylinders. Move the CCCB as needed during the project when the distance from the concrete work increases the possibility of cylinder handling damage.

511.05

On Page 347, **Replace** section 511.05 with the following:

511.05 Mass Concrete Requirements. For concrete components with a minimum dimension of 5-ft or greater, develop a concrete mix design QC-4 for mass concrete according to 499.03. Develop a Thermal Control Plan (TCP) to control placement of the mass concrete so that the highest maximum internal temperature of the placed concrete is not greater than 160 °F and the maximum differential concrete temperature does not exceed 36 °F over 28 days from time of placement.

For drilled shafts with a dimension of 7-ft diameter or greater, develop a concrete mix design QC-4 for mass concrete according to 499.03. Develop a TCP to control placement of the mass concrete so that the highest maximum internal temperature of the placed concrete is not greater than 160 °F.

Submit the TCP to the Engineer for acceptance at least 10 calendar days prior to placement along with the approved JMF (s).

As a minimum, the TCP shall include the following information:

- A. Duration and method of curing.
- B. Procedures to control concrete temperature at the time of placement. The mix shall contain no frozen pieces of ice after blending and mixing components.
- C. Methods and equipment used for controlling temperature differentials.
- D. Temperature sensor types, locations and installation details. As a minimum, concrete temperatures shall be monitored at the calculated hottest location, on at least 2 outer faces, 2 corners, and top surfaces.
- E. Temperature monitoring and recording system; operation plan; recording and reporting plan with example output; and a remedial action plan.
- F. Criteria for form removal to control the maximum temperature differential.

As an alternative to the maximum differential concrete temperature specified above, the Contractor may propose maximum differential temperature limits based on strength gain with time. The TCP for the alternative proposal shall include the methods used to determine the temperature and supporting data and design to support the accuracy of the method chosen. Provide complete calculations and basis for increasing the maximum differential temperature specification. The TCP for the alternative proposal shall also provide the Engineer with tables that define ambient temperatures for acceptable concrete placement, the required temperature of the concrete for the ambient air temperature, the maximum predicted concrete temperature, the maximum predicted differential temperature, the time for removal of forms, the allowable air temperature for form removal, and the predicted maximum and differential temperature from placement to age of 28 days. The Department will consider all cracking of a mass concrete placement where the differential temperature exceeded 36 °F the responsibility of the Contractor.

Upon the Engineer's acceptance of the TCP, continuously monitor all temperature sensors over the required age of the concrete. If the maximum limit or differential temperature limits are exceeded at any time, immediately take action to retard and reduce the out-of-specification temperatures. If a mass concrete placement temperature exceeds the specification limits of the currently accepted TCP, re-engineer, revise and resubmit the TCP. Do not place additional mass concrete until the revised TCP is accepted.

The Department will consider in-place mass concrete that exceeds the temperature limits or that cracked, as defective and resulting delays as non-excusable. Determine the extent and effect of the damage and submit a proposed repair plan to the Engineer to return the concrete to acceptable quality. The Department will determine if the proposed repair methods are acceptable or if removal is required.

511.07

On Page 348, **Delete** the first paragraph, the calculations and the second paragraph:

511.07

On Page 349, **Replace** the first paragraph on the page after Table 511.07-1, with the following:

Until discharged in the work, ensure the temperature of bridge deck concrete does not exceed 85 °F (30 °C) and ensure that the temperature of all other concrete does not exceed 95 °F (35 °C).

511.07

On Page 350, **Replace** the first paragraph on the page with the following:

Do not add or apply water to the concrete after it has left the truck and before applying curing materials according to 511.13.

511.08

On Page 352, **Replace** the sixth sentence of the third paragraph with the following:

After the concrete curing period specified in Item 511.13 has been reached, before applying construction loads on the deck (excluding personnel, hand operated equipment and manually powered vehicles) and before allowing vehicle traffic in the lane immediately adjacent to median bridge railing saw cut each control joint at least 4 inches (~~100 mm~~) deep around the perimeter of the front face, top and back face of the top portion of parapet, no lower than 12 and ½ inches (~~313 mm~~) above the top of the concrete deck slab.

511.08

On Page 352, **Replace** the third sentence of the fourth paragraph with the following:

Cure slipform concrete according 511.13, Method A.

511.09

On Page 352, **Replace** the last sentence of the first paragraph with the following:

Cure the construction joints according to 511.13.

511.13

On Page 355, **Replace** section 511.13 as follows:

511.13 Curing.

Cure concrete as follows:

TABLE 511.13-1, CURING REQUIREMENTS

Location	Curing Method ^[1]
Superstructure concrete	Method A
Concrete to which sealer is applied	Method A
Construction joints	Method A
Top surface of concrete deck superstructure concrete	Method A followed by Method B
Concrete with waterproofing	Method A or Method B
All other concrete	Method A or Method B
[1] Method A is water curing. Method B is membrane curing. If using Method B on areas to be waterproofed, remove the curing membrane.	

Concrete curing methods are as follows:

A. Method A, Water Curing. With the exception of the top surface of deck superstructure concrete, protect surfaces not covered by forms immediately after final finishing with two thicknesses of wet burlap. Keep burlap wet for at least 7 days by the continuous application of water. If forms are removed before 7 days, immediately drench the exposed concrete with water and cover it with burlap. Continuously apply water to the burlap for the remainder of the curing period.

Instead of continuous application of water, with the exception of the top surface of deck superstructure concrete, the Contractor may cover the wet burlap with white polyethylene sheeting or plastic coated burlap blankets conforming to 705.06. Place plastic coated burlap blankets wet and with the burlap side against the previous layer of wet burlap. Sufficiently lap and secure adjoining plastic coated blankets or polyethylene sheets at the laps and edges to form a seal that maintains the concrete wet at laps and edges. Cover white polyethylene sheeting or plastic coated blankets containing holes or tears with an additional covering of plastic sheeting or blankets as directed by the Engineer. Cover the top surface of deck superstructure concrete with a single layer of clean wet burlap after it is bull floated if necessary and finished. Keep the burlap wet by a continuous flow of water through soaker hoses and cover the hoses with a 4 mils white opaque polyethylene film for 7 days. After 7 days, allow the surface of the deck to dry.

After curing the top surface of the deck superstructure concrete for 7 days, remove the burlap and standing water. Within 12 hours after removing the burlap, apply a curing membrane and cure the concrete according to Method B.

B. Method B, Membrane Curing. Immediately after the free water has disappeared on surfaces not protected by forms, apply curing material conforming to 705.07, Type 1, 1D or 2. ~~Immediately after the free/ water has disappeared on surfaces not protected by forms, apply curing material conforming to 705.07, Type 1 or 1D.~~ If forms are removed before the end of the 7-day curing period, apply curing material on the concrete exposed by removing the forms.

Thoroughly mix curing material immediately before use. Apply the membrane curing material at the rate of at least 1 gallon per 200 square feet of surface and in a fine mist to provide a continuous, uniform, and water impermeable film without marring the concrete surface, The surface of the 705.07, Type 2 material shall have the appearance of a white sheet of typing paper. ~~Apply the membrane curing material at the rate of at least 1 gallon per 200 square feet of surface and in a fine mist to provide a continuous, uniform, and water impermeable film without marring the concrete surface, The surface of the 705.07, Type 1D material shall have the appearance of a white sheet of typing paper.~~

Do not allow workers, materials, and equipment on the concrete during the curing period, unless adequately protecting the membrane curing material from damage.

If the film is broken or damaged during the specified curing period, reapply curing material as specified above to the damaged or affected areas.

511.14

On Page 355, **Replace** section 511.14 with the following:

511.14 Application of External Loads to New Concrete, Removal of Forms, Removal of Falsework and Opening to Traffic.

A. Applications of External Loads to New Concrete

Do not apply external loads to or perform work on new concrete until workers and construction materials will not damage the concrete or interfere with its curing.

- 1) Prior to 36 hours after placement, Worker foot traffic is allowed on the concrete as long as they do not make any impressions or damage the concrete.
- 2) After 36 hours after placement and prior to reaching 85% $f'c$ (*) apply only minor loads including tying reinforcement in place, setting bearings or forms being placed for future work. No stockpiling of reinforcement, forms or other materials or using machinery on the concrete.
- 3) After 36 hours and after the field cured compressive strength cylinders or maturity results reach 85% $f'c$ (*) apply any additional external loads or superimposed concrete placement.

* Test 2 field cured cylinders per 511.04 with the average compressive strength required to be greater than or equal to 85% $f'c$ or test 2 flexural strength beams with an average strength greater than or equal to 650 psi. The maturity curve method may be used for determining the strength according to supplement 1098 in lieu of field cured samples.

B. Removal of Formwork.

Forms may be removed as soon as the concrete has hardened sufficiently. Damage to concrete form removal prior to field cured compressive strength cylinders or test 2 flexural strength beams with an average strength greater than or equal to 650 psi maturity results reach 85% $f'c$ (*) will be the responsibility of the contractor.

* Test 2 field cured cylinders per 511.04 with the average compressive strength required to be greater than or equal to 85% $f'c$ or test 2 flexural strength beams with an average strength greater than or equal to 650 psi. The maturity curve method may be used for determining the strength according to supplement 1098 in lieu of field cured samples.

C. Removal of Falsework and Opening to Traffic.

Remove falsework and open structures to traffic only after the concrete has reached the strength specified by Table 511.14-1A for concrete bid items requiring QC/QA. Use Table 511.14.1B for concrete items not requiring QC/QA. Do not shorten the minimum required Method A curing time regardless of strength test results.

TABLE 511.14-1A
LOADING REQUIREMENTS FOR CONCRETE REQUIRING QC/QA

	Span ^[1]	Required Strength ^[2]
Removing Falsework	Any Span	Compressive Strength $\geq 85\% f'c$ or Flexural Strength (Center point) ≥ 650 psi
	All pier caps	
Traffic	Any	
[1]Span is defined as the horizontal distance between faces of the supporting elements when measured parallel to the primary reinforcement.		
[2] Field cured samples. Applicable only when the average modulus of rupture for two flexural strength (Center Point) tests is ≥ 650 psi or two compressive strength cylinders is $\geq 85\% f'c$. The maturity curve method may be used for determining the strength according to Supplement 1098 in lieu of field curing samples.		

TABLE 511.14-1B
LOADING REQUIREMENTS FOR CONCRETE
NOT REQUIRING QC/QA

	Span ^[1]	Age of Concrete in Days	
		No Test	Test ^[2]
Removing Falsework	Over 10 feet (3 m)	14	5
	10 feet (3 m) or less and all pier caps	7	3
Traffic	Any	14	7
[1] Span is defined as the horizontal distance between faces of the supporting elements when measured parallel to the primary reinforcement.			
[2] Field cured samples. Applicable only when the average modulus of rupture for two flexural strength (Center Point) tests is ≥ 650 psi or two compressive strength cylinders is $\geq 85\% f'c$. The maturity curve method may be used for determining the strength according to Supplement 1098 in lieu of field curing samples.			

Take enough specimens to verify compliance with the strength requirements of Table 511.14-1A. Obtain samples from the first and last sublots of continuously placed concrete for quantities of 500 yd³ or less, and one extra set of specimens for each additional 500 yd³ or fraction thereof. Obtain samples in equally spaced increments throughout the placement as directed by the Engineer. Delays in placements of more than 4 hours are not considered continuously placed and are to be treated as separate placements.

If the air temperature surrounding the concrete is maintained between 32 and 50 °F, and if the provisions of 511.12 do not apply, maintain the concrete above 32 °F for 7 days or until a successful strength test conforming to Table 511.14-1A, except this time shall not be less than 5 days.

511.19

On page 360, **Replace** the section with the following:

511.19 Joints, Cracks, Sealing and Spalls

A. Joints prior to opening to traffic

After completing all curing operations and allowing the deck to thoroughly dry, seal the following areas with a high molecular weight methacrylate (HMWM) sealer. Flood the areas and squeegee off the excess material as specified in Item 512 before opening the deck to traffic:

1. Transverse joints in the deck.
2. Joints between the concrete deck and steel end dams.
3. Longitudinal joints in the deck.
4. Longitudinal joints between the deck and safety curb, barriers, and parapets, etc.
5. Repaired portable barrier anchor locations.

B. Cracks prior to opening to traffic.

Evaluate the top and bottom of the deck for cracks, within 7 days of opening the deck to traffic in the presence of the Engineer. Provide the Engineer with a summary of the inspection including top surface crack locations, bottom surface crack locations, size of cracks on the top surface greater than 20 mils (0.020 inches) and the percentage of top and bottom cracked area itemized separately. The Department will define the top surface as all exposed deck surface area for a phase width not covered by parapets or sidewalks multiplied by the bridge limits. The Department will define the bottom surface of the same phase as all exposed deck surface area not covered by flanges or encased in diaphragms.

The Department will define all cracked area per phase as follows:

1. For cracks spaced greater than 12", the cracked area will include 6" on each side of crack for full length of the crack.
2. For cracks spaced 12" or less, the cracked area will include the area between the cracks and 6" outside the limits of the crack clusters.

For deck cracking that is 20% or less than the top or bottom deck areas per phase and less than 20 mils in width, seal top surface cracks with HMWM sealer. All costs with sealing the cracking are incidental to the appropriate concrete item.

For deck cracking exceeding 20% of the top or bottom deck area per phase or if a crack exceeds 20 mils, an investigation will be performed by the Engineer and OMM to determine the treatment of the cracks and evaluate the project for violations that would contribute to the cracking. Provide documentation requested by the Engineer for review. If the OMM investigation finds no violations of the specification that would cause the deck cracking, the Department will pay the cost of the additional corrective work on a negotiated price per 109.05.B. If the investigation shows the contractor had violations of the specification that would contribute to deck cracking, the cost of the corrective work will be the responsibility of the contractor.

C. Cracking investigation prior to Final Inspection

Evaluate the top and bottom of the deck for cracks, within 30 days of final inspection per 109.12.A in the presence of the Engineer. An earlier date may be approved by the Engineer. Provide the Engineer with a summary of the inspection including top surface crack locations, bottom surface crack locations,

size of cracks on the top surface greater than 20 mils and the percentage of top and bottom cracked area itemized separately. If the Engineer deems it necessary to set up traffic control for the final inspection, the Department will pay for additional work on a negotiated price per 109.05.B. The Department will define the cracked area per 511.19.B.

For deck cracking that is 20% or less than the top or bottom deck areas per phase and less than 20 mils in width, seal top surface cracks as directed by the Engineer with HMWM sealer on a negotiated price per 109.05.B.

For deck cracking exceeding 20% of the top or bottom deck area per phase or if a crack exceeds 20 mils (0.020 in) width, an investigation will be performed by the Engineer and OMM to determine the treatment of the cracks and evaluate the project for violations that would contribute to the cracking. Provide documentation requested by the Engineer for review. If the OMM investigation finds no violations of the specification that would cause the deck cracking, the Department will pay the cost of the additional corrective work on a negotiated price per 109.05.B. If the investigation shows the contractor had violations of the specification that would contribute to deck cracking, the cost of the corrective work will be the responsibility of the contractor.

D. Scaling and spalls

For deck scaling that is greater than 0.250 inches deep, or on more than 20% of the deck surface area, or deck spalling on more than one area, or an area greater than 32 square yards, the Engineer will investigate the project with OMM to determine the treatment and proceed according to 108.02 to resolve.

511.24

On Page 364, **Revise** the 7th paragraph as follows:

All costs for sealing as specified in 511.19.A are incidental to the appropriate concrete item.

513.04

On Page 383, **Replace** the third paragraph on page 383 with the following:

At least two weeks before starting shop fabrication, the fabricator shall notify the Office of Materials Management and furnish a proposed fabrication schedule for the work and tentative date that the structural steel will be ready for delivery. The ready for delivery date shall include ten days for the Department to perform final inspection upon accepting the final inspection request. The fabricator shall update OMM on any changes to their schedule to allow for the ten days to perform final inspection.

513.04

On Page 383, **Replace** the fifth paragraph on page 383 with the following:

The fabricator shall not ship fabricated members performed under Item 513, UF Level or Levels 1 through 6 from the shop without prior hold point inspections unless the Office of Materials Management waives the inspection. Requests for final inspection will not be accepted until the fabricator completes and inspects with documentation, final fabrication and shop coatings and the Contractor documents approval of shop drawings and material test reports have been received by the Department. The Department will have ten days to perform the final inspection upon accepting the final inspection request.

513.06

On Page 384, **Add** the following sentence at the end the second paragraph:

Include a title block on each drawing with the ODOT Project Number and the Bid Line Item.

513.06

On Page 384, **Replace** the first sentence of the third paragraph with the following.

For multiple span beam and girder bridges, include an overall layout with dimensions showing the relative unloaded vertical and horizontal position of beam or girder segments with respect to a full-length base or work line.

513.19

On Page 388, **Replace** the first paragraph of 513.19 with the following:

513.19 Holes for High-Strength Bolts and Bearing Bolts. Provide cylindrical holes, perpendicular to the member, clean cut, and free of ragged edges. Remove burrs by countersinking not more than 1/16 inch or by grinding. Provide finished holes with a diameter not larger than the nominal diameter of the bolt plus 1/16 inch for bolts less than 1 inch in diameter. Provide finished holes with a diameter not larger than the nominal diameter of the bolt plus 1/8 inch for bolts greater than 1 inch in diameter. The hole diameter shall not vary by more than 1/32 inch from a true circle for 85 percent of the holes in a contiguous group, and not more than 1/16 inch for the remainder.

513.20.C.

On Page 391, **Replace** the first full paragraph on the page with the following:

Do not reuse galvanized A 325 bolts. Re-tightening previously tightened bolts that became loose by tightening adjacent bolts is not reused.

513.22

On Page 393, **Replace** the first sentence of the second paragraph of with the following.

In addition to the stud bend tests of Article 9.6.6.1 of the AASHTO/AWS *Bridge Welding Code*, perform bend tests of stud shear connectors at the start of each workday, when welding has been interrupted for an hour or more, when changing grounds, when changing weld settings, and when changing cable loop due to arc blow.

513.25.A.

On Page 395, **Replace** the first sentence of the second paragraph of with the following.

Use a steel stamp to make the radiograph identification mark shown on the shop drawing layout in the area marked "Weld Identification" of Figures 8.1A through 8.1D of the AASHTO/AWS *Bridge Welding Code* in a manner to make it visible in the radiograph of the area without resorting to superimposed like markings.

513.25.A.

On Page 395, **Replace** the third paragraph with the following.

For film radiographic, use film locations or a technique employed that will show the top and bottom images of the plate edge. Use films 4 1/2 × 17 inches (114 × 432 mm) where practical and a minimum film size of 4 1/2 × 10 inches (114 × 254 mm).

513.25.A.

On Page 395, **Add** the following as a new paragraph after the third paragraph:

For digital radiographic images, follow AWS D1.5-2020 clause 8.12.4.2. The contractor will provide software and training to the Department for the evaluation of radiographic images.

513.25.A.

On Page 395, **Replace** the fourth paragraph of 513.25.A with the following that is now the fifth paragraph:

Supply a technical report for the RT testing similar to Annex N Form N-6 of the AASHTO/AWS Bridge Welding Code, and include the following: Project identification, member piece mark, description of the repairs made, and the qualification level of the technician.

513.25.B.

On Page 396, **Replace** the second paragraph with the following:

Inspect welds using the procedure and techniques for the dry powder magnetic-particle examination of welds using the prod or the yoke method according to AWS 8.7.8. The prod test equipment shall have a functioning ammeter. Provide a prod magnetizing current of 100 amperes per inch (25 mm) of prod spacing but not less than 400 amperes. Use only aluminum prods.

513.25.B.

On Page 396, **Delete** the sixth paragraph of 513.25.B. The paragraph starts with “MPI will not...”

513.26

On Page 397, **Replace** the third paragraph with the following:

Place material stored in the fabricating shop or in the field on skids or blocks to prevent the metal from contacting the ground. Place and store girders and beams in an upright position for shipping, and field and shop storage. Field splice plates shall be bolted with temporary bolts, which shall be removed and replaced, when field splice plates are placed in their final position or shifted laterally with respect to their final position. Keep material clean and properly drained. Install bearing devices and anchorages according to Item 516.

514.03

On Page 400, **Replace** section 514.03 with the following:

514.03 Superintendent. In addition to the requirements of 105.06, the Superintendent must successfully complete a Bridge Painting pre-qualification course and training offered by the Department. The course must have been completed within the past four years and an individual course transcript must have been received by the Superintendent. Present transcript to the Engineer prior to commencing work. No work is permitted unless the Superintendent provides a valid course transcript.

514.17.C.

On Page 414 continuing to page 415, **Replace** the first paragraph of section 514.17C as follows:

C. Additional Information Pertaining to Shop Applied Paint. Apply a full prime coat to all structural steel surfaces except for the top surface of steel beams and girders by brush or spray methods, including insides of holes, behind stiffener clips, areas that are to be embedded in concrete and contact surfaces of connection, and splice material that is to be fastened with bolts in the shop or field. Apply a mist coating from 0.5 to 1.5 mils on the top surface of steel beams and girders. For ASTM A709 Grade 50W and 70W steel embedded in concrete diaphragms, apply a prime coat to the entire surface area encased within the diaphragm and extending at least 12-in outside the diaphragm. Apply a mist coating from 0.5 to 1.5 mils on surfaces within 2 inches of field welds other than those attaching intermediate or end cross frames to beams or girders. Apply one coat of primer to pins, pin holes, and contact surfaces of bearing assemblies, except do not paint those containing self-lubricating bronze inserts. Once the prime coat is dry, apply erection marks, using a thinned paint of a type and color that is completely concealed by, and compatible, with the second coat.

515.14

On Page 429, **Replace** the second sentence of the first paragraph as follows:

Forms made of material other than metal may be used for bulkheads, voids, and shear keys.

515.14

On Page 429, **Replace** the last sentence of the fifth paragraph with the following:

Do not use spliced strands.

515.15

On Page 431, **Replace** Table 515.15-1 with the following:

TABLE 515.15-1, TEST SPECIMEN REQUIREMENTS

Cubic Yards per Bed	Sampling Frequency	Number of Cylinders Required
Less than or equal to 30 cubic yards	First and last load per bed	Minimum of 6
30 to 60 cubic yards	First and last load per bed plus one random sample.	Minimum of 9
Greater than 60 cubic yards	First and last load per bed plus 2 random samples.	Minimum of 12

515.15

On Page 431, **Replace** the first paragraph after Table 515.15-1 with the following:

Determine strength, for both strand release and final shipping, by testing a group of cylinders, which consists of at least one cylinder from every sample location. Test a minimum of three cylinders for release, and a minimum of three cylinders for final shipping strength. Each group of cylinders shall have an average strength of what is specified in the shop drawings, and no individual cylinder shall have less than 95 percent of the specified strength.

515.18

On Page 434, **Replace** the section with the following:

515.18 Prestressed Member Acceptance and repair. Throughout the fabrication process reject all prestressed members not meeting specification requirements except as noted below for camber.

For all rejected members provide the Department with a complete description of the rejection, and unless waived by the Director, an Ohio registered professional engineer's written evaluation of the criticalness of the rejection and the professional engineer's proposed repair method that will repair the rejected member to an acceptable condition. The Department will determine the acceptability of the member and the repair procedure. If acceptable, the fabricator will only make repairs witnessed by the Department's inspector unless waived by the Director.

Use the Precast/Prestress Concrete Institute's Manual for the evaluation and repair of Precast, Prestressed Concrete Bridge Products MNL-137-06 as a general guide.

The Department will not accept for shipping, prestressed members with measured camber exceeding the Design Camber (Dt), used to establish the seat elevations, according to 511.07, by more than the Sacrificial Haunch thickness nor camber more than one inch less than Design Camber, until a corrective work plan has been approved by the Engineer. The plan shall be signed, sealed and dated

by an Ohio Registered Engineer and shall include all revised plan information necessary to place the deck to the plan thickness. If the prestressed members are acceptable, exclusive of the deviation from Design Camber, the Department will pay for all costs incurred resulting from measured camber exceeding or more than 1 inch under Design Camber calculated for the actual beam age at the time of deck placement, as Extra Work, 109.05.

515.19

On Page 435, **Replace** the fifth and sixth paragraphs with the following paragraphs:

Place box beams to ensure a correct fit of the shear keys and ensure proper grouting of the shear keys. After placing the beams and installing tie devices, fill the longitudinal shear keys as shown in standard drawing PSBD-1-25 using non-shrink shear key grouts, 705.22, approved by OMM. Stop the grout at the top of the shear key as shown. The grout in the shear key will crack if extended above the shear key into the throat. Mix, install, and cure the grout according to the manufacturer's published recommendations to obtain a design compressive strength of 5000 pounds per square inch.

On full width construction, do not pour the bridge decks or allow vehicular loads on a prestressed concrete box beam structure until the grout in the shear keys obtains the specified design strength of 5000 pounds per square inch. On part width construction, do not allow the deck pour or vehicle loads on each stage until after the shear keys in that stage obtain 5000 pounds per square inch. Stage 1 can have vehicle loads during construction of stage 2. Do not open the stage 2 portion of part width construction or pour the closure pour portion of the deck as shown in PSBD-1-25 until after the grout in the shear key between stages obtains the specified design strength of 5000 pounds per square inch.

516.03

On Page 437, **Replace** the first paragraph with the following:

516.03 Coating. Coat steel components of bearings as follows:

- A. Uncoated weathering steel bearings attached to uncoated weathering steel members shall remain uncoated.
- B. Galvanize, metallize or apply inorganic zinc prime coat to steel bearings attached to steel members to be painted followed by field application of the epoxy and urethane coat.
- C. Galvanize or metallize steel bearings attached to concrete, galvanized steel and metallized steel members.

The bearing's faying surface in contact with the supported member need not be coated. Inorganic zinc prime coating shall be in accordance with 514. Metallizing shall be in accordance with Supplemental Specification 845. Galvanizing shall be in accordance with 711.02. Repair damage to metallized or galvanized coatings according to 711.02.

516.04

On Page 437, **Add** the following material to list in 516.04:

Steel Plate Shims711.01

516.04

On Page 437, **Add** the following sentence at the end of 516.04:

Steel plate shims shall be the same material as the adjacent structural steel.

516.07

On Page 439, **Replace** the section with the following:

516.07 Bearing Devices.

A. Steel Bearings

For sliding plates, lubricate the sliding surfaces with flake graphite, and superimpose plates on each other with their edges flush.

After making final connection to structure, the following tolerances apply:

1. The bearing's marked centerline shall be within ± 0.125 -in of the substructure's marked centerline.
2. After deck placement, the position of rockers, sliding plates and rollers shall be plumb to within an angular tolerance of 0.20-rad. (1-degree) at 60°F.
3. The bearing's marked centerline shall be within ± 0.125 -in of the punch marked bearing centerlines on the steel beam/girder.

Accurately set, level and align bearing plates, and bolsters. Set bearing plates and bolsters on 0.125 inch (3 mm) thick sheet lead, conforming to 711.19.

Set bearing plates or bolsters on bridge seat areas that are flat with a smooth level surface. If the bridge seat area is high or uneven, use a bushhammer or grinder followed by thin film of trowelable mortar per Supplemental Specification 843 to fill the pitted surface to bring the seat area to the proper elevation and provide a level, even surface. If the bridge seat area is lower than Plan elevation by 0.25-in or less, use trowelable mortar per Supplemental Specification 843 to level the surface. If the bridge seat area is lower than Plan elevation by more than 0.25-in., center and connect steel plate shims with length and width dimensions at least 0.625-in larger than the bearing area to both the bearing and the steel member by a 0.25-in all-around fillet weld to bring the seat area to the proper elevation.

B. Elastomeric Bearings

After making final connection to structure, the following tolerances apply (See Figure 516.07-B-11):

1. The bearing's marked centerline shall be within ± 0.125 -in of the substructure's marked centerline.
2. After deck placement, a line drawn through the bottom and top corners of the bearing shall be plumb to within an angular tolerance of 0.20-rad. (1-degree) at 60°F.
3. The bearing's marked centerline shall be within ± 0.125 -in of the punch marked bearing centerlines on the steel beam/girder.

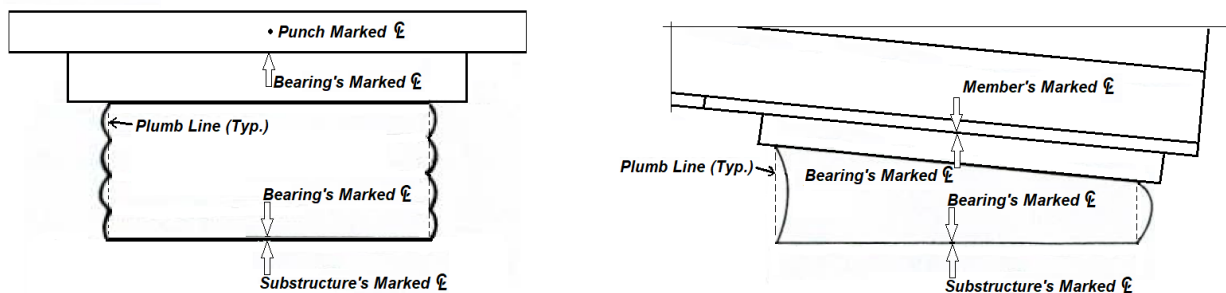


Figure 516.07-B-2

Set elastomeric bearings directly on the concrete surface. If the beams seats are to be sealed with an epoxy or non-epoxy sealer prior to setting the bearings, do not apply sealer to the concrete surfaces under the proposed bearing locations. If these locations are sealed, or membrane cured, remove the

sealer or membrane cure to the satisfaction of the Engineer before setting the bearings. Perform this removal at no expense to the Department.

Set elastomeric bearings on bridge seat areas that are flat with a smooth level surface measured using a level placed across the entire bearing area with a tolerance of $\pm 1/8$ inch. This tolerance is not applicable to adjacent box beams. The elastomeric bearing shall be in contact with the bridge seat for a minimum of 95 percent of the outside perimeter of the bearing prior to and after beam/girder erection. If the bridge seat area is high or uneven measured $\pm 1/8$ inch using a straight edge across the entire bearing area, use a bushhammer or grinder followed by thin film of trowelable mortar per Supplemental Specification 843 to fill the pitted surface to bring the seat area to the proper elevation and provide a level, even surface. If the bridge seat area is lower than Plan elevation by $1/4$ -in ~~0.25-in~~ or less, use trowelable mortar per Supplemental Specification 843 to level the surface. Provide a Corrective Work Plan according to C&MS 501.05.C for bridge seat locations that are greater than $1/4$ -in ~~0.25-in~~ below Plan elevations.

Position elastomeric bearings so that, when the completed bridge is at 60°F (16°C), the elastomeric bearings are vertical. If the bridge is erected at an ambient temperature higher than 80°F or lower than 40°F and the bearing shear deflection exceeds $1/6$ of the bearing height at $60^{\circ}\text{F} \pm 10^{\circ}\text{F}$, raise the beams or girders to allow the elastomeric bearings to return to their undeformed shape at $60^{\circ}\text{F} \pm 10^{\circ}\text{F}$.

Reject bearings according to 106.07 as unacceptable material that exhibit the following:

- 1) Three or more separate surface cracks greater than $1/16$ " wide or a single crack greater than $3/16$ " deep or wider than $1/4$ " in.
- 2) Bearings exhibiting bulging patterns implying out of tolerance cover or layer thickness or bulges spanning two or more layers.
- 3) Bearings that do not return to original shape after resetting.
- 4) Bearings that are not completely vulcanized to the load plate or masonry plate.

Where the load plate of an elastomeric bearing is to be connected to the structure by welding, control the welding so that the plate temperature at the elastomer bonded surface does not exceed 300°F as determined by use of pyrometric sticks or other temperature monitoring devices.

C. Anchor Bolts

Set anchor bolts for bearing devices that are clear of the beam or girder flanges, in the concrete after erecting the main structural steel, except as specified below for bearing devices at abutments. Place reinforcing steel in the bridge seat to not interfere with the drilling of anchor holes. Accurately set anchor bolts in the holes and embed the anchor bolts in non-shrink, non-metallic grout. Until the anchors are installed, prevent water from entering and or freezing in the anchor bolt holes.

If structural steel interferes with the setting of the anchor bolts, set the anchor bolts before erecting the steel. The Contractor may determine the location of the bolts by using a template and form holes or embed the bolts when placing concrete or, drilling holes in the hardened concrete.

Install anchor bolts to project at least $1/4$ inch beyond the nut when tightened. Damage or burr the threads on the projecting end of the bolt after the nut is tightened. The bolt threads shall not extend to the planes of the contact surfaces between the connected parts. Include the length of two additional threads to the specified thread length of the bolt to allow for thread runout. Washers no thicker than $1/4$ inch are permitted under the nut.

Permanently fasten bearing devices to the abutments, steel beams, or girders after backfilling the abutments to within 2 feet of the top of the bridge seat.

516.09

On Page 440, **Revise** the section as follows:

516.09 Basis of Payment. The Department will pay for accepted quantities at the contract prices as follows:

Item	Unit	Description
516	Foot or Pound	Structural Steel Expansion Joints
516	Foot	Structural Expansion Joints Including Elastomeric ____ Seals
516	Foot	Elastomeric Compression Seals for Structural Steel Joints, ____ Width
516	Foot	Vertical Extension of Structural Expansion Joints
516	Square Foot	____ Preformed Expansion Joint Filler
516	Foot	Joint Sealer
516	Each, Foot, Square	Bearing Foot, Devices Pound
516	Each, Square Foot	____ inch Preformed Bearing Pad, Type PEP
516	Each	Elastomeric Bearing with Internal Laminates Only
516	Each	____ × ____ × ____ Elastomeric Bearing and with Internal Laminates
516	Square Foot	Load Plate ____ × ____ × ____ 1/8-inch Preformed Bearing Pads, Type CDP

519.06

On Page 448, **Replace** the last sentence of the second paragraph with the following:

Apply membrane curing according to 511.13, Method B, immediately after rubbing the surface.

520.13

On Page 454, **Replace** the third sentence of the first paragraph with the following:

If the Engineer determines that the above curing procedures are impractical because of the inaccessibility of isolated repair areas, the Contractor may cure the final shotcrete surface according to 511.13, Method B, using twice the manufacturer's recommended coating rate for formed concrete surfaces (equal to a white sheet of typing paper) at the time of application.

524.09

On Page 463 continuing to Page 464, **Replace** the second paragraph as follows:

Tie and support the reinforcing steel so it remains within the required tolerances. Securely tie spacers at quarter points around the cage perimeter and space at intervals not to exceed 5 feet along the length of the cage. If the size of the longitudinal reinforcing steel equals or exceeds 1 inch in diameter, the Contractor may increase the distance between the spacing devices to a maximum of 10 feet. Use the following spacer size to ensure a minimum annular space between outside of cage and side of hole.

A. 3.0 inches for shafts $\leq 3'-0''$ diameter.

B. 4.0 inches for shafts $> 3'-0''$ but $< 5'-0''$ diameter.

C. 6.0 inches for shafts $\geq 5'-0''$ diameter.

The Contractor may use round plastic spacers.

524.10

On Page 464, **Add** the following sentence to the end the first paragraph:
Provide a Concrete Cylinder Cure Box as per 511.04.

526.04

On Page 468, **Add** the following sentence to the end of 526.04:
Provide a Concrete Cylinder Cure Box as per 511.04.

526.05

On Page 468, **Replace** the second sentence of the first paragraph with the following:
Cure approach slabs according to 511.13.A.

601.02

On page 469, **Replace** the second listed item with the following:
Concrete, Class QC -Misc, QC 1.....499, 511

601.04.D.

On page 471, **Replace** the heading and the first sentence with the following:

D. Type D – Reinforced Concrete Slab. Construct a 6-inch (150 mm) reinforced concrete slab according to the plans and the standard construction drawing.

606

On page 481, **Add** “Cable Barrier” and “Noise Barrier” to the title:
Item 606 Guardrail, Cable Barrier and Noise Barrier.

606.02

On page 481, **Delete** the following from the listing:
Guardrail Post.....710.16

606.02

On page 481, **Add** the following to the listing:
Wood Guardrail Post.....710.12
Ground Rods.....725.16

606.02

On page 482, **Replace** the first and second paragraphs as follows:
For guardrail, use deep beam rail Type MGS, 5, or 5A.

Both steel and rectangular wood posts shall be 72” (+3”, -0”) in length.

When using round wood posts, construct type MGS using posts 68” (+3”, 0”) in length.

MGS Long Posts shall be 96” (± 3 ”) steel or 90” (± 3 ”) rectangular wood. Round wood posts are not to be used for Long Posts.

606.03

On page 482, **Add** this following at the end of the section:

Steel and rectangular wood posts shall be embedded to a depth of 40". Round wood posts shall be embedded to a depth of 36".

606.055

On Page 482, **Add** the following new section:

606.055 Anchor Assembly Rebuilt. Rebuild existing anchor assemblies as shown or described in the plans. Refer to the shop drawings, product manuals, and information posted to ODOT's Approved Products list (found on ODOT Roadway Engineering website) for the repair of proprietary anchor assemblies.

Damaged impact heads shall not be reused when rebuilding Type E anchor assemblies.

606.06

On page 483, **Revise** the last paragraph in the section as follows:

Cover the face of the impact head with solid fluorescent yellow Reboundable retroreflective sheeting conforming to 730.191.

606.07

On Page 483, **Revise** 606.07 to now be 606.09 as follows:

606.09 Method of Measurement. The Department will measure Guardrail, new or rebuilt, and Cable Barrier, of the type specified by the number of feet (meters) from center-to-center of end posts, excluding anchor assemblies. If, however, end connections are made to masonry or steel structures, the Department will measure to the center of the normal post bolt slot. If rail element is used across a bridge, the Department will measure to the first post off the bridge.

The Department will measure Anchor Assembly of the type specified by the number each assembly furnished and erected complete.

The Department will measure Bridge Terminal Assembly of the type specified by the number of each assembly furnished and erected complete.

The Department will measure Impact Attenuator of the type specified by the number of each furnished and erected complete.

The Department will measure Guardrail Post of the kind specified by the number of each furnished and erected.

The Department will also measure Noise Barrier assemblies by the number of each assembly furnished and erected complete.

606.07

On Page 483, **Add** a new 606.07 with the following:

606.07 Cable Barrier Elements. Cable barrier is a proprietary product to be selected from ODOT's Approved Products list (found on ODOT Roadway Engineering website). Cable barrier shall be installed in accordance with the manufacturer's recommendations and installation videos.

606.08

On Page 483, **Revise** 606.08 to now be 606.10 as follows:

606.10 Basis of Payment. ~~The additional costs associated with furnishing and installing extra-length posts instead of standard length guardrail posts are incidental to Guardrail Post, 8 foot (2.44 m) or Guardrail Post, 9 foot (2.75 m).~~

~~For the extra costs associated with furnishing and installing extra length posts in lieu of standard length guardrail posts, payment for 9 foot (2.75 m) guardrail posts is considered full compensation. The Department will pay for accepted quantities at the contract prices as follows:~~

Item	Unit	Description
606	Foot (Meter)	Guardrail, Type ____
606	Foot (Meter)	Guardrail, Barrier Design, Type ____
606	Foot (Meter)	Guardrail, Rebuilt, Type ____
606	Each	Anchor Assembly, Type ____
606	Each	Anchor Assembly, Barrier Design, Type ____
606	Each	Anchor Assembly Rebuilt, Type ____
606	Each	Bridge Terminal Assembly, Type ____
606	Each	Impact Attenuator, Type ____
606	Each	Guardrail Post Type ____
606	Each	Guardrail Post, 8 foot (2.44 m)
606	Each	Guardrail Post, 9 foot (2.75 m)
606	Foot (Meter)	Cable Barrier, Type ____
606	Each	Cable Barrier, Type ____
606	SF	Noise Barrier, Type ____
606	Lump Sum	Noise Barrier, Type ____

606.08

On Page 483, **Add** a new 606.08 with the following:

606.08 Noise Barriers. Noise barrier is a proprietary product to be selected based on the ODOT Environmental Services Noise Program and project requirements. The Noise Wall supplier shall be selected from ODOT’s Approved Noise Wall Suppliers List (See ODOT Materials Management website). Noise barrier shall be installed in accordance with the manufacturer’s recommendations and installation videos.

607.02

On page 484, **Add** the following to the listing:

Ground Rods.....725.16

608.02

On page 486, **Replace** the third item with the following:

Concrete, Class QC Misc. or QC 1^{[1][2]}499

608.02

On page 487, **Replace** the asterisked note with the following:

[1] Replacing Coarse aggregate in the concrete mixes with Recycled Concrete Aggregate conforming to Supplement 1117 is an option.

[2] Provide Concrete Cylinder Cure Box according to 511.04.

609.02

On page 489, **Replace** the first item with the following:

Concrete, Class QC Misc. or QC 1^{[1][2]}499

609.02

On page 489, **Replace** the asterisked note with the following:

- [1] Replacing Coarse aggregate in the concrete mixes with Recycled Concrete Aggregate conforming to Supplement 1117 is an option.
- [2] Provide Concrete Cylinder Cure Box according to 511.04.

609.02

On Page 489, **Replace** the second paragraph after the list of materials with the following:
Furnish asphalt concrete curb conforming to 441 Type 1 intermediate course.

611.02.A.

On page 495, **Delete** the following materials references from the Type A Conduit – Culverts list:
~~Aluminum coated Steel Conduits with precoated galvanized smooth steel interior liner.....707.19~~
~~Galvanized Coated Steel Conduits with precoated galvanized smooth steel interior liner....707.20~~

611.02.B.

On page 495, **Delete** the following materials references from the Type B Conduit – Storm or sanitary sewers under pavement list:

~~Bituminous lined corrugated steel pipe.... 707.13 or 707.14~~
~~Aluminum coated Steel Conduits with precoated galvanized smooth steel interior liner..... 707.19~~
~~Galvanized Coated Steel Conduits with precoated galvanized smooth steel interior liner....707.20~~

611.02.C.

On page 496, **Delete** the following materials references from the Type C Conduit – Storm or sanitary sewers not under pavement list:

~~Bituminous lined corrugated steel pipe.... 707.13 or 707.14~~
~~Aluminum coated Steel Conduits with precoated galvanized smooth steel interior liner..... 707.19~~
~~Galvanized Coated Steel Conduits with precoated galvanized smooth steel interior liner....707.20~~

611.02.J.

On page 499, **Replace** the second paragraph with the following:

If a precast reinforced concrete 3-sided flat topped culvert (706.051), a reinforced concrete arch section (706.052), or a precast reinforced concrete round section (706.053) is specified, the Engineer may allow the Contractor to substitute one for the other. Refer to 611.04 for submittal requirements.

611.04.A.

On page 500, **Replace** the first sentence of the paragraph with the following:

Prepare and submit shop drawings for C&MS items 706.05, 706.051, 706.052, 706.053.

611.04.A.1.

On page 501, **Replace** the first sentence of the paragraph with the following:

1. Submit load rating reports for C&MS items 706.051, 706.052 and 706.053 in accordance to the most current version of ODOT's Bridge Design Manual along with one copy of the shop drawings and one copy of the calculations to the Office of Structural Engineering for all structures with a 10 foot or larger span.

611.04.A

On page 501, **Delete** sections 611.04.A.4 and 611.04.A.5.

4. ~~To substitute a precast reinforced concrete 3-sided flat topped culvert (706.051), a reinforced concrete arch section (706.052), or a precast reinforced concrete round section (706.053) for one another, the submittal shall include hydraulic calculations. The proposed culvert shall meet or exceed the same hydraulic requirements as the specified culvert and minimum cover requirements. If the specified culvert is on pedestal walls, include the shop drawings for the pedestal wall design in the submittal because 3-sided flat topped culverts, arch culverts, and round sections require different pedestal wall designs.~~

5. ~~To substitute either a precast reinforced concrete 3-sided flat topped culvert, a precast reinforced concrete arch section, or a precast reinforced concrete round section (706.051, 706.052, or 706.053) placed on a precast or cast in-place slab bottom for a precast reinforced concrete box culvert (706.05), the submittal shall include hydraulic calculations. The proposed culvert shall meet or exceed the same hydraulic requirements as the specified box culvert and minimum cover requirements. The Department may allow the bottom slab to be cast in place but will not issue a time extension for any delays resulting from the use of a cast in place bottom slab.~~

611.08.B.3.a.

On page 507, **Replace** paragraph with the following:

a. For joints in precast reinforced concrete box culverts (706.05), fill the top exterior joint gap with nonshrink mortar. Provide a smooth transition between exterior joint sections for all exterior surface elevations that deviate by more than 0.25 inches. Ensure a smooth surface for placement of the exterior joint wrap. Next, cover all exterior joints with a 12 inch wide strip of joint wrap, centered on the joint, in accordance with the joint wrap manufacturer's recommendations. Apply additional water proofing membrane, as specified in the contract documents, directly over the joint wrap.

611.10.C.3.

On page 510, **Add** the following sentence to the end of the third listed item:

Reset the existing casting in mortar, with a flush joint, to the new grade.

611.10.D.

On page 510, **Replace** the entire section with the following:

D. Adjustment to grade. When adjusting an existing manhole, catch basin, or inlet to match grade, follow the procedure(s) below:

1. Carefully remove and clean the existing casting and adjust the height of supporting walls to the new grade. Provide an adjusting device on file with the Office of Materials Management, or as approved by the Engineer. Reset the existing casting in mortar, with a flush joint, to the new grade.

2. Carefully remove the existing cover or grate and install a casting or an acceptable adjusting device on file with the Office of Materials Management or as approved by the Engineer. Install the adjusting device according to the adjusting device manufacturer's recommendations. Reset the cover or grate to the new grade.

611.11

On page 510, **Add** the following sentence to the end of the second paragraph:

Prepare the conduit surface by cleaning and removing all debris and obstructions.

613.03

On page 519, in Table 613.03-1 in column “Type 3”, **Replace** the 297 lb/yd³ of Fly Ash, Class C ^[4] with 500 lb/yd³.

614.03.B

On page 523, **Revise** the fourth paragraph as follows:

Use Type IV, IX, XI or Reboundable retroreflective sheeting complying with 730.19, 730.193, 730.194, or 730.191, respectively, for faces of construction signs, vertical panels, object markers, and stripes on glare screen panels. Use Type XI retroreflective sheeting complying with 730.194 for faces of barricades.

614.03.B

On page 523, **Revise** the fifth paragraph as follows:

Use fluorescent orange retroreflective sheeting for all orange construction signs, object markers, and stripes on glare screen paddles. Use standard orange or fluorescent orange retroreflective sheeting for the orange portions of drums, cones, barricades and vertical panels.

614.03.B

On page 523, **Revise** the first sentence of the sixth paragraph as follows:

Furnish orange drums with Reboundable retroreflective sheeting complying with the requirements of 730.191 and in conformance with the OMUTCD.

614.03.B

On page 523, **Revise** the first sentence of the seventh paragraph as follows:

Furnish traffic cones consisting of a highly visible orange predominant color with Reboundable retroreflective sheeting complying with the requirements of 730.191 and in conformance with the OMUTCD.

614.03.B

On page 523, **Revise** the ninth paragraph as follows:

Furnish object markers that are a minimum size of 6 x 12 inches and that consists of retroreflective sheeting adhered to an aluminum or plastic plate.

614.03.C

On page 524, **Revise** the fifth paragraph as follows:

Conspicuity tape: Use red and white, Type IV, IX or XI retroreflective sheeting that complies with 730.19, 730.193 or 730.194 respectively.

614.03.C.1

On page 524, **Revise** the first sentence as follows:

Apply one 2 inch wide (minimum) horizontal stripe of Type IV, IX, or XI retroreflective sheeting to a minimum of 50 percent of the length of each side of the payload portion of the vehicle, rearward from the back of the cab, NCHRP 350 Category IV equipment and trailers.

614.03.C.2

On page 524, **Revise** the first sentence as follows:

Outline the lower rear facing area of the vehicle, NCHRP 350 Category IV equipment, and trailers with 2 inch wide (minimum) horizontal stripe of Type IV, IX or XI retroreflective sheeting.

614.03.C.3

On page 524, **Revise** the first sentence as follows:

Outline the upper rear facing area with two pairs of strips of 2-inch wide (minimum) retroreflective Type IV, IX or XI sheeting, each pair consisting of strips 12 inches long, must be positioned horizontally and vertically on the right and left upper corners of the rear of the body of each vehicle or trailer, as close as practicable to the top of the vehicle or trailer and as far apart as practicable.

614.08

On page 528, **Revise** the fourth sentence of the second paragraph as follows:

Ensure that each face of the paddle is made of Type XI retroreflective sheeting meeting the requirements of 730.194.

614.10 Work Zone Traffic Signals

On page 529, **Revise** the section as follows:

614.10 Work Zone Traffic Signals. If shown on the plans, furnish, erect, maintain, and subsequently remove signal equipment conforming to Items 632 and 732, and signal controller equipment of a proper type and capacity to provide the required operation. Furnish and install Uninterruptible Power Supplies (UPS) conforming to 733.09. Subject to the Engineer's approval, the Contractor may use new equipment that is to be installed later on the project, or may install used equipment in good condition provided such used equipment meets current Department specifications. The following requirements are waived:

- a) Working drawing requirements of 632.04 and 633.04
- b) Performance test in 632.28
- c) Wiring diagram and service manual requirements of 633.05
- d) Remote monitoring and control requirements of 733.09
- e) Testing and prequalification requirements of SS 809.10

Recondition used equipment as necessary to ensure proper operation. Operate work zone traffic signals conforming to the requirements of the OMUTCD and subject to the approval of the Engineer.

Procure and pay for electric power for work zone traffic signals. Do not alter the operation of an approved work zone traffic signal without the Engineer's approval. Correct any malfunctions or failures within two hours. Cover or remove work zone traffic signals not in use. Covering of one or more permanent or temporary vehicle or pedestrian signal head(s) shall be according to 632.25, except payment shall be included in Item 614 Maintaining Traffic.

Energized signal covers shall block light from being visible.

614.11.B.

On page 530, **Replace** Table 614.11-1 with the following:

Type of Pavement Marking	Line Width (inch)				
	4	6	8	12	24
	Gallon per Mile of Line				
Solid Line	22	33	44	66	132
10-foot Dashed Line	5.5	8.25	--	--	--
4-foot Dashed Line	2.2	3.3	--	--	--
Dotted Line	7.3	10.95	14.6	21.9	--
Arrows, Symbols, and Words	1.4 gallons per 100 square feet				
Glass Beads: 740.09, Type A	45 10 pounds per 100 square feet				

614.11.B.

On page 530, **Replace** Table 614.11-1M with the following:

Type of Pavement Marking	Line Width (mm)				
	100	150	200	300	600
	Liter per Kilometer of Line				
Solid Line	52	78	105	157	314
3.0 m Dashed Line	13	19.5	--	--	--
1.2 m Dashed Line	5.2	7.8	--	--	--
Dotted Line	17.3	25.95	34.6	51.9	--
Arrows, Symbols, and Words	0.6 liters per square meter				
Glass Beads: 740.09, Type A	7.3 4.9 kg per square meter				

614.11.J.

On page 534, **Add** new section 614.11.J.:

J. Clean Up. Disperse remaining loose glass beads or wet reflective optics from the non-marked roadway surface in areas where the glass beads or wet reflective optics are applied by hand, are loaded into the striping apparatus, or are applied along the radii of intersections.

614.115

On page 538, **Replace** Table 614.115-2 with the following:

Line Type	Normal Spacing Feet (Meter)	Segment Length Feet (Meter)	Normal No. Contained In Segment	Maximum No. Permitted To Fail
Edge	10 (3.0) 20 (6.0)	50 (15) 100 (30.0)	6	3
Center, Double/Solid	20 (6.0) 10 (3.0)	100 (30.0) 50 (15.0)	12	6
Lane or Dashed Center	40 (12.0) 5 (1.5)	200 (60.0) 2-Stripe	6	3
Channelizing	20 (6.0) 10 (3.0) 5 (1.5)	100 (30.0) 50 (15.0) 25 (7.5)	6	3

615.05

On page 542, **Replace** the table and footnotes with the following:

MINIMUM COURSE THICKNESS REQUIRED

Pavement Type	Course Make-Up	Class A	Class B
Rigid	452	9 in (230 mm)	7 in (180 mm)
Flexible ^[6]	441 Type 1 ^[1]	1-1/4 in (32 mm)	1-1/4 in (32 mm)
	441 Type 2 ^{[2] [5]}	1-3/4 in (45 mm)	1-1/2 in (38 mm)
	302 ^{[3] [5] [7]}	5-1/2 in (140 mm)	3-1/2 in (90 mm)
	304 ^{[4] [5]}	6 in (100 mm)	6 in (100 mm)

[1] Meet surface course requirements.

[2] Meet intermediate course requirements.

[3] The Contractor may use 301 or 441 Type 2 intermediate course.

[4] The Contractor may use 2-1/2 inches (65 mm) 301, 302, or 441 Type 2 intermediate course in lieu of 6 inches (150 mm) of 304.

[5] The Engineer may waive maximum placement lift thicknesses if quality control testing conforming to Supplement 1055 is performed and a final density between 93 and 96.5 percent is achieved.

[6] The Contractor may use 442 in lieu of 441.

[7] The use of anti-segregation equipment according to 302 is not required for pavement constructed under this Item. IF the pavement will be part of the final pavement build up, anti-segregation equipment is required according to 302.

615.05

On page 542, **Revise** the fifth sentence in the seventh paragraph as follows:

Use Class QC 1 or QC 1P concrete.

619.02

On page 549, **Replace** footnotes [2], [4] and [5] of Table 619.02-1 FIELD OFFICE with the following:

[2] Copier must meet minimum specifications provided for each field office type. Contractor responsible for paper supplies, copier supplies, and maintenance of copier.

Type A, B and C: (Check with ODOT IT Support to approve non-preferred print unit)

Copy/Print Speed: 20 Pages Per Minute (Letter), 15 Pages Per Minute (Legal), 12 Pages Per Minute (Ledger) or higher

Duplex printing support

Automatic document feeder with 40 sheet duplexing document feeder

Copier Memory: 256 MB

Data Security Kit

Paper Capacity - 250 sheet × 2 trays, 50-sheet Bypass tray

Network Interface: Ethernet port 10/100Base-TX, 1000Base-TX

Color Scanning with following requirements:

Up to Up to 600 × 600 dpi

Scan Area up to 11" × 17"

Scanning Protocol Support - TCP/IP, SMTP, SMB, FTP, POP3, NCP

File Scan Types Supported: Single Page TIFF, JPEG, PDF, Multi- Page TIFF, PDF, and

Scanning Support for Scan-to-Email, SMB (Folder), URL, and TWAIN

Network protocol support for TCP/IP

Support Kerberos Authentication

Support TLS 1.2

Support SNMPv3
 Supports at least the below Web Encryption Ciphers
 AES256-GCM-SHA384
 AES256-SHA256
 AES256-SHA
 AES128-GCM-SHA256
 AES128-SHA256
 AES128-SHA
 Supports FIPS 140 Compliance Library
 Client and Server Print Driver Support for PCL Print Drivers
 Server Operating System Support for Windows Server 2016 and later (32 Bit/64 Bit)
 Client Print driver support for Windows 10 and later (Both PCL/(32 Bit and 64 Bit))
 Minimum print/copy resolution of 600 × 600 dpi
 Preferred print unit: one of the following MFC machines/series:

- M776dn - #T3U55A
- Flow M776z - #3WT91A
- Flow M776zs - #T3U56A

- [4]Capable of handling the breakdown of 22 × 34-inch (559 × 864 mm) sized plans into ten sections.
- [5]Provide a broadband internet connection capable of minimum download speeds as follows:
 30 Mbps download 5 Mbps upload - Network Latency less than 50 milliseconds. If speeds are not available through an individual or singular circuit, provide the highest speed available in the area and install multiple circuits to achieve the specified speeds. When multiple broadband services are available the following is the preferred order: Cable, DSL, Cellular, and Wireless Radio (Satellite Communication is not compatible with ODOT VPN connection and will not be accepted). Supply modems capable of being configured in Bridge Mode. If a cellular network is used, provide the cellular equipment, including software and router equipment to connect to the ODOT provided Cisco ASA 5505 firewall. Supply ODOT with all documentation for the broadband circuit including all username/user ids, passwords and account information. Verify that the broadband internet connection is active and working as specified. ODOT IT personnel will confirm that bandwidth and network latency are compliant with the required field office specifications. All field office Internet connections are for ODOT use only.

620.02
 On page 550, **Revise** the seventh line of the table and the second following sentence as follows:
 Retroreflective sheeting.....730.191, 730.194
 Delineators consist of reflectors mounted on flexible posts or brackets. Reflectors are retroreflective sheeting adhered to either a flexible post or an aluminum plate.

- 621.03**
 On page 552, **Replace** A through D as follows:
- A.** Within 1 foot of active signal detector loop wires. Exercise care to ensure that detector lead-in cables are not cut.
 - B.** Over pavement markings except with the Engineer’s approval.
 - C.** Closer than 2 inches to a pavement construction (transverse or longitudinal) joint or

within an intersection.

D. Within 3 feet of a bridge expansion joint.

621.03

On page 552, **Delete** subsection E.

621.03

On page 552, **Delete** the words “(50 mm)” in the first sentence in the eight paragraph.

621.03

On page 552, **Delete** the words “(25 mm)” and the words “(50 mm)” in the second sentence in the eight paragraph.

621.03

On page 552, **Delete** the words “(50 mm)” in the third sentence in the eight paragraph.

621.03

On page 552, **Delete** the words “(0.9 m)” in the ninth paragraph.

621.04

On page 552 continuing to page 553, **Revise** the subsection as follows:

621.04 Installation RPM Casting. Cut parallel slots with 1/16 to 1/8 inch clearance on each side for installing RPM castings.

Pavement cuts should be inspected prior to adding casting adhesive.

Test for a proper fit by inserting the casting in the center of the cut without casting adhesive. While sitting untouched in the cut, ensure all four leveling lugs contact the pavement surface at once, all four keel-ends lie below the pavement surface, and there is a 1/16 to 1/8 inch clearance between pavement cut and casting edge on each side for casting adhesive to bond properly. Only the leveling lugs should be in contact with the pavement surface after insertion of casting in pavement so that a minimum of 1/16 inch of casting adhesive is the bonding adhesive between the casting and pavement.

Ensure the pavement cut is completely dry and free of dust, dirt or any other material that will interfere with the adhesive bond to the casting and the pavement. Ensure that the RPM casting is free of dirt, dust, oil, grease, rust, moisture, or any foreign matter that impairs adhesion to the pavement.

Do not cut RPM casting slots if adjacent pavement markings are not completely dry.

Install the RPM casting within 24 hours after cutting the RPM casting slots.

Install RPM castings when the pavement surface temperature and the ambient air temperature are at least 40°F and the pavement is dry. Heat both parts of the RPM casting adhesive to 100° ± 10 °F during installation when either the pavement surface or ambient air temperature is between 40°F and 50°F.

Ambient Air Temperature	Minimum Period Protected from Traffic
°F	Minutes

100	15
90	20
80	25
70	30
60	35
50	45
40	60

Do not allow traffic on the RPMs until the adhesive has cured.

Using approved two component casting adhesive, mix according to the manufacturer's recommendations. Fill the pavement cut to within approximately 3/8 inch of the top of the pavement cut. The casting adhesive should ooze out from under the casting from all sides filling all voids around the casting and be level with the pavement surface and without any build-up on the casting lips in front of the reflector. Casting adhesive on the casting lips or on the active reflector face must be removed immediately.

Complete the mixing operation and placing of the RPMs rapidly. Do not use any mixed batch that becomes so viscous that it cannot be readily extruded from under the RPM with light pressure.

621.08

On page 554, **Revise** the third sentence of the section as follows:

Remove all standing water from the hole, clean the hole, and coat with 407.02 asphalt material before filling.

622.02

On page 555, **Add** the following footnotes:

622.02 **Materials.** Furnish materials conforming to:

Concrete,	
Class QC ^{[1][2]}	499
Reinforcing steel and	
wire fabric	509.02
Forms	515.14
Preformed filler	705.03
Curing materials.....	705.05, 705.06,
.....	or 705.07 Type 2
Precast concrete	706.13
Dowel bars	709.01 thru 709.05
Steel	711.01

^[1]Replacing Coarse aggregate in the concrete mixes with Recycled Concrete Aggregate conforming to Supplement 1117 is an option

^[2]Provide a Concrete Cylinder Cure Box per 511.04.

622.04

On page 555, **Revise** the subsection as follows:

622.04 Portable Barrier. Furnish individual sections not less than 10 feet (3 m) long. If intending to use the barrier at one location on the project, the Contractor may slip-form barriers in place without joints, or with grooved or sawed joints to facilitate removal. As directed by the Engineer, repair or

replace barrier sections damaged during handling or by traffic, for the life of the project. The Contractor may substitute ODOT's generic portable concrete barrier with an approved alternate portable barrier system in accordance with the Roadway Approved Products List, which can be found on the Office of Roadway Engineering's website. Ensure substitutions are utilized within the plan design limitations while still complying with all applicable crashworthy requirements, manufacturer specifications, and other ODOT standards. Obtain the Engineer's written approval (for bridge deck punctures) before substituting an approved alternate portable barrier system that requires anchoring for an unanchored portable barrier on a bridge deck. All barrier segments are to be marked on the top, PCB-XX-MASH-TL-3, where XX indicates the year cast. If the barrier is cast using welded wire fabric instead of the rebar, add "WWF" to the end of the notation. Permanently impress these markings in the barrier using a minimum of 2" high lettering.

If any portable barrier is inappropriately substituted within the context of the plan design, not installed in an applicable crashworthy compliant configuration, not installed per the manufacturer's specifications, and/or a substitution has been made that impacts the ability to comply with other ODOT standards, then the portable barrier system shall be removed and replaced within 3 days at no expense to the Department. Prior to placing anchored portable barrier sections on a concrete bridge deck, the contractor shall locate and mark the approximate location of the top mat of reinforcing near the limits of the proposed alignment of portable barrier. The Engineer may direct the contractor to shift the location of the alignment to avoid anchors puncturing the top reinforcing mat if determined feasible.

Greasing or lubricating anchors prior to installation of anchored portable barrier sections is not allowed. When anchors are removed from a bridge deck or pavement, fill the holes with a material conforming to 705.20. All barrier segments are to be marked on the top, PCB-XX-MASH-TL-3, where XX indicates the year cast. If the barrier is cast using welded wire fabric instead of the rebar, add "WWF" to the end of the notation. Permanently impress these markings in the barrier using a minimum of 2" high lettering. With the exception of previously approved PCB tested under NCHRP 350, all portable barriers must be MASH compliant for freestanding, anchored in asphalt and anchored in concrete conditions.

622.07

On page 556, **Replace** the section with the following:

622.07 Curing. Cure concrete according to ~~511.14~~ 511.13, Method B and the following additional requirements. Apply the curing compound using an approved mechanical sprayer equipped with a shield to protect the spray from wind. For small areas, the Engineer will allow the use of other acceptable methods.

Do not apply any load or conduct any work that will damage newly placed concrete. Allow a minimum of 36 hours of cure time to elapse on any concrete placed first at a horizontal construction joint. The Contractor may cure precast sections according to 515.15. With the Engineer's approval, the Contractor may also use radiant heated forms for curing.

The Contractor may use ~~511.14~~ 511.13, Method A for curing of short sections of barrier (leave-outs); however, before the curing is completed for any leave-outs, apply material conforming to 705.07, Type 2 at the normal rate specified in ~~511.14~~ 511.13, Method B.

The Contractor may cure horizontal construction joints between the foundation and the upper portion of the barrier, and between portions of the upper barrier placed separately according to ~~511.14~~ 511.13, Method A or B. Do not remove the membrane before placing the next portion of the concrete barrier.

622.08

On page 556, **Replace** the last paragraph with the following:

The Department will not measure repaired or replacement barrier sections damaged during handling.

622.09

On page 556, **Revise** the second sentence in the first paragraph to the following:

Anchoring required for approved alternate portable barrier systems when substituted for Portable Barrier, Unanchored, is incidental to the pay item.

624

On page 562, **Replace** entire Item 624 Mobilization with the following:

ITEM 624 MOBILIZATION

624.01 Description

624.02 Limitation

624.03 Method of Measurement

624.04 Basis of Payment

ITEM 624 MOBILIZATION

624.01 Description. This work consists of the preparatory work and operations including, but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to the project site; for the establishment of all field offices, buildings, and other facilities necessary for work on the project; for all other work and operations that must be performed or costs incurred before beginning the Work on the other contract items; and for demobilization.

If Mobilization is not included as a pay item in the Contract, the Department will not pay for this work separately but will consider it incidental to the other Contract Items.

624.02 Limitation. The Department will limit the sum of the partial payments specified in 624.04.A and 624.04.B to 5% of the original contract amount. The Department will pay the balance of the lump sum amount bid, as specified in 624.04.C.

If the lump sum amount bid for Mobilization exceeds 5% of the original contract amount, the Department will pay the excess upon completion of the project.

624.03 Method of Measurement. The Department will measure Mobilization as a unit, acceptably performed.

624.04 Basis of Payment. The Department will make partial payments according to 109.09 and as modified by the following schedule:

A. The Department will release 50 percent of the lump sum amount bid for Mobilization or 50 percent of 5% of the original contract amount, whichever is less, to the Contractor with the first estimate payable, but not sooner than 15 days after the start of work at the project site.

B. The Department will release an additional 40 percent of the lump sum amount bid for Mobilization or 40 percent of 5% of the original contract amount, whichever is less, with the first regular estimate after 10 percent of the original total contract amount, including payments for delivered materials but excluding Mobilization, is earned.

C. Upon completion of all work on the project, including final cleanup, the Department will release payment of the remaining 10 percent of the lump sum amount bid for Mobilization and any amount of the lump sum price bid for Mobilization, in excess of 5% of the original contract amount for partial payment. Final cleanup includes but is not limited to the removal of construction layout stakes and sediment and erosion control items.

The Department will pay for accepted quantities at the contract price as follows:

Item	Unit	Description
624	Lump Sum	Mobilization

625.05

On page 564, **Add** the following footnote:

625.05 Materials. Furnish materials conforming to:

Concrete QC Misc or QC 1 ^[1]	499, 511
Reinforcing steel	509.02
Sand	703.06
Cable	725.02
Unit type duct-cable systems	725.03
Conduit	725.04, 725.051, 725.052
Pull boxes	725.06, 725.07, 725.08, 725.12
Junction boxes	725.10
Luminaires	725.11
Lamps	725.11
Cable connectors and connector kits	725.15
Cable splicing kits	725.15
Ground rods	725.16
Power service components	725.19
Wood service poles	725.19
Anchor bolts and nuts	725.21
Light poles	725.21
Light towers	725.21
Portable power units	725.21
Underground warning / marking tape	725.22

^[1]Provide a Concrete Cylinder Cure Box per 511.04.

625.06

On page 565, **Add** the following sentence to the end of 625.06:

Shop drawings shall include the AASHTO criteria and loads for which the support was designed.

625.10

On page 567, **Replace** the first sentence with the following:

Excavate for each foundation in accordance with 524 to the dimensions given.

625.10

On page 567, **Replace** the seventh paragraph with the following:

Place concrete for the foundation in accordance with 524 except that forms will not be required for portions of foundations extending more than 6 inches (150 mm) below the ground line, unless the soil does not have sufficient stability to stay in place during the placing of the concrete.

625.10

On page 567, **Add** the following to the end of the last paragraph:

After 14 days, erect and load supports on anchor base foundations. The Contractor may erect and load supports after 7 days if the tests of two beam specimens of concrete yield an average modulus of rupture of not less than 650 pounds per square inch.

625.12

On page 568, **Replace** the eighth paragraph with the following:

Securely fasten onto or build into the structure each conduit. Support conduit using no less than the minimum spacing for the conduit Type in Chapter 3 of the NEC. Use clamps of the same material and finish as the conduit. For plastic conduit, use stainless steel clamps. Secure clamps to concrete with stainless steel concrete tapping screws.

625.16

On page 572, **Add** the following to the end of the second paragraph:

Align the ground rods with the conduit run to reduce the chance of the cable being severed.

625.18

On page 572, **Revise** the second paragraph as follows:

Make each cable connection below grade (i.e. pull boxes, junction boxes in retaining walls, etc.) with a cable splicing kit. Three-way butt splices may be constructed using two copper E-crimp tap connectors inside the splice enclosure.

625.22

On page 577, **Add** the following paragraph to the end of the section:

Service to Underpass lighting will be measured to include all underpass lighting electrical components, such as raceway, wire, connectors, junction boxes, and attachment hardware as detailed in the Plans, originating at and including each disconnect and any conduit from the pull box to the disconnect; pull box and luminaires are not included in this item.

626.04

On page 580, **Replace** the Barrier Reflectors Color & Direction table and footnotes with the following:

BARRIER REFLECTORS COLOR & DIRECTION	Divided Highway		Undivided Highway		Interchange Ramp	
	Median	Right Shoulder	Right Shoulder		Median	Right Shoulder
			2-lane	Multilane		
Barrier Type						
Concrete Barrier/Parapet	Yellow/Red	White/None	White/White	White/None	Yellow/Red	White/Red
Guardrail	Yellow/Yellow	White/None	White/White	White/None	Yellow/Yellow	White/Red
Cable Rail	Yellow/Yellow	Not Used				

630.02

On page 581, **Replace** the second paragraph with the following:

Transfer manufacturers' guarantees or warranties on all traffic sign material, including required guarantees for sign sheeting in accordance with Supplement 1049, to the Department or other maintaining agency upon completion and acceptance of the project.

630.02

On page 582, **Add** the following to "Other materials":

Other materials:

Retroreflective sheeting, Type I.....	730.18
Retroreflective sheeting, Type IV.....	730.19
Retroreflective sheeting, Type IX.....	730.193
Retroreflective sheeting, Type XI.....	730.194
Nonreflective acrylic opaque sheeting.....	730.20
Silk screen inks.....	730.22
Transparent acrylic electronic cuttable films.....	730.23
Digital Printing.....	730.24

630.02

On page 581, **Add** On page 564, **Add** the following footnote:

Furnish materials conforming to:

Concrete, Class QC Misc or QC 1^[1].....499, 511

Steel:

Structural steel.....	711.01
Reinforcing steel	509.02
U-channel posts.....	730.015
Square posts	730.016
Wooden Box Beam.....	730.017
Tube and pipe.....	730.01
Anchor bolts and nuts	730.02
Poles and arms	730.03
Base and arm plates.....	730.04
Handhole covers.....	730.05
Pole caps.....	730.06
Arm caps	730.07
Hardware.....	730.08
Stainless steel	730.09
Stainless steel hardware	730.10
Messenger wire	732.18

Aluminum:

Sheet and plate	730.11
Extrusions.....	730.12
Tube and pipe.....	730.13
Castings.....	730.14
Forgings	730.15
Welding rods	730.16
Hardware.....	730.17

Other materials:

Decals.....	725.21
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Reflective sheeting, Type F.....	730.18
Reflective sheeting, Type G.....	730.19
Reflective sheeting, Type H.....	730.192
Reflective sheeting, Type J.....	730.193
Nonreflective acrylic opaque sheeting	730.20
Silk screen inks	730.22
Transparent acrylic electronic cuttable films	730.23

^[1]Provide a Concrete Cylinder Cure Box per 511.04.

630.04

On page 582, Delete the word “temporary” form the first sentence of the first paragraph.

630.04

On page 582, Delete the word “Temporary” form the fifth sentence of the first paragraph.

630.04

On page 582, **Revise** the first sentence of the second paragraph as follows:

Prior to retroreflective sheeting application, clean aluminum sign surfaces either by total immersion in a tank containing an alkaline solution of the manufacturer’s specification or by steam cleaning with an alkaline solution of the manufacturer’s specification, followed by a thorough rinsing with running water.”

630.04

On page 583, **Revise** the second paragraph as follows:

For flat sheet fluorescent yellow and fluorescent yellow-green warning signs, use type XI retroreflective sheeting. For other flat sheet sign types and colors, double faced mile marker, and double faced street name signs, use Type IV, IX or XI retroreflective sheeting for background and retroreflective legends.

630.04

On page 583, **Replace** the third paragraph with the following:

For extrusheet signs, use Type IV or Type XI retroreflective sheeting for the background, and use Type XI retroreflective sheeting for retroreflective legends, shields and symbols (including hazardous material plaque, airport symbol, arrows and borders). Use the same sheeting type to cover the entire background surface. Use the same sheeting type for the entire legend. Apply retroreflective sheeting to the surface according to the manufacturer's recommendations, with no blisters, wrinkles, tears, or blemishes. Do not use Reboundable sheeting for permanent signs.

For retroreflective legends on flat sheet, double faced mile marker and double faced street name signs, use reverse silk screen transparent ink, digital printing, transparent acrylic electronic cuttable film, or direct applied retroreflective sheeting copy. When using direct applied retroreflective sheeting copy, apply all legend on a sign with the same rotation angle orientation. For nonreflective legends, use direct silk screen black ink or direct applied nonreflective acrylic opaque black sheeting copy. For double faced mile marker signs, use flat sheet aluminum and apply retroreflective sheeting and legend to both sides. For double faced street name signs, use extruded aluminum blanks with minimum thickness of 0.063 inch (1.6 mm) and thicker, stiffened edges, and apply retroreflective sheeting and legend to both sides.

630.04

On page 583, **Revise** the fourth paragraph as follows:

Extrusheet panels consist of flat sheet aluminum reinforced with aluminum extrusions attached by spot welding. Panels extruded in a single operation may be used in lieu of spot welded panels. Do not use extruded panels and spot welded panels in the same sign. Bolt together the minimum number of full length, sheeted panels to achieve the sign height, using aluminum bolts, washers, lock washers and nuts. For retroreflective legends, shields and symbols (including hazardous material plaque, airport symbol, arrows and borders) use direct applied retroreflective sheeting. Apply all retroreflective legend on a sign with the same rotation angle orientation. For nonreflective legends, use direct applied nonreflective acrylic opaque black sheeting copy. Use sheeting from the same manufacturer for both the legend and background.

630.04

On page 583, **Delete** the word “temporary” form the first sentence of the fifth paragraph.

630.04

On page 583, **Delete** the word “temporary” form the third sentence of the fifth paragraph.

630.04

On page 583, **Revise** the last paragraph as follows:

Use fluorescent yellow-green Type XI retroreflective sheeting for the following signs and plaques: School (S1-1), School Bus Stop Ahead (S3-1), SCHOOL BUS TURN AHEAD (S3-2), SCHOOL ENTRANCE (S3-H3), SCHOOL (S4-3P), School Speed Limit Ahead (S4-5, S4-5a), yellow portions of School Speed Limit (S5-H1), Pedestrian Crossing (R1-6, R1-6b, R1-9), Bicycle (W11-1), Pedestrian (W11-2), Handicapped (W11-9), Bicycle/Pedestrian (W11-15), Trail Crossing (W11-15a), Playground (W15-1), and SAFETY ZONE (W15-H2). Fabricate supplemental warning plaques [such as Advisory Speed (W13-1P), SHARE THE ROAD (W16-1P), Distance (W16-2P, W16-2aP, W16-3P, W16-3aP), Supplemental Arrow (W16-5P, W16-6P, W16-7P) and AHEAD (W16-9P)] from fluorescent yellow green Type XI retroreflective sheeting when used with a sign above.

630.04

On page 584, **Revise** the second paragraph as follows:

Use fluorescent yellow Type XI retroreflective sheeting for all yellow signs, yellow portions of multi-colored signs, and yellow sign post reflectors, except for signs and portions of signs required to be fabricated with fluorescent yellow-green Type XI retroreflective sheeting.

630.04

On page 584, **Revise** the fourth paragraph as follows:

Furnish 4 x 2.5 inch (100 x 62 mm) sign identification labels of Type I retroreflective sheeting as shown in Figure 1. For signs fabricated in English based sizes, use white labels with red ink legend. For signs fabricated in hard metric based sizes, regardless of the sign message units contained on the sign face, use yellow labels with red ink legend. Place the label on the back side of the sign in the lower right corner of rectangular signs, or in an equivalent location for other sign shapes, approximately 3 inches (75 mm) from side and bottom sign edges (for smaller signs, these dimensions may be reduced). Position the label so it can be read horizontally and is clearly visible, not near bolt holes or rivets, and not obstructed by the sign support when erected.

630.04

On page 584, **Revise** the first sentence of the fifth paragraph as follows:

Silk screen or digitally print the fabrication data onto the face of the label, and include the month and year of fabrication, state project number, sign manufacturer name, the sign process (silkscreen, digital, cut vinyl), and the sheeting manufacturer brand.

630.04

On page 584, **Revise** the Figure 1 heading as follows:

FIGURE 1
LABEL DESIGN

630.04

On page 585, **Revise** the first sentence of the first paragraph as follows:

Fabricate sign post reflectors with flat sheet aluminum and match the retroreflective sheeting type to the sheeting type used for the corresponding sign.

630.06.B

On page 586, **Revise** the first sentence of the fourth paragraph as follows:

When specified, furnish sign support identification stickers of Type I retroreflective sheeting listing the support type, design number, span/arm length, county, route, and section number (example: TC15.116, design 1, 80 ft span, CUY-90-17.58).

630.12

On page 588, **Delete** the word “temporary” form the paragraph.

630.14

On page 589, **Replace** the fifth paragraph with the following:

The Department will measure Ground Mounted Wooden Box Beam Support by the number of feet (meters), and will include u-channel post, sheet metal cap, stabilizers, hardware for sign attachment, solid concrete block, excavation, backfilling, disposal of surplus material, and installation of breakaway feature.

630.15

On page 592, **Delete** the word “temporary” form the twenty-fourth line of the page.

630.15

On page 592, **Delete** the word “temporary” form the twenty-eighth line of the page.

632.03

On page 598, **Revise** the sixteenth line of the table as follows:

Signal heads 732.01, 732.02, 732.05

632.03

On page 598, **Add** the following footnotes:

Furnish materials and equipment conforming to:

Concrete, Class QC Misc or QC 1^[1]499, 511
Steel^[2]:

Poles, supports, arms, appurtenances
and anchor bases730.02, 730.03, 730.04,
.....730.05, 730.06, 730.07,
.....732.12, 732.11
Pedestals732.15

Backplates	732.22
Hardware	730.08
Stainless steel hardware	730.10
Other Items:	
Conduit, rigid	725.04, 725.051, 725.052
Ground rod	725.16
Pull boxes	725.06, 725.07, 725.08, 725.12
Identifying tags or bands	725.02
Signal heads	732.01, 732.02, 732.03, 732.05
Lamps	732.04
Pushbuttons	732.06
Detectors	732.07
Wood poles	732.13
Down guys	732.14
Conduit risers	732.16
Cable supports	732.17
Messenger wire	732.18
Cable and wire	732.19
Power service	732.20
Disconnect Switch with enclosure	732.21
Backplates	732.22
Tether Wire	732.18
[1] Provide a Concrete Cylinder Cure Box per 511.04.	
[2] Acceptance of materials and products is based on certified test data, furnished in triplicate, or on test results of samples according 106.04, as required by the Laboratory.	

632.05

On page 600, **Replace** Table 632.05-1 with the following:

Table 632.05-1 Cable and Wire Identification

Cable	Tag
Ground	GND
Power (2 wire) 1Ø 120 volt	AC +AC- or ACN
Power (3 wire) 1Ø 120/240 volt Neutral wire	AC + 1, AC + 2 AC- or ACN
Phase A	Ø A
Phase 1	Ø 1
Phase 1 northbound left turn lanes	Ø 1 NBLT
Phase A, pedestrian signal	Ø A PD
Radar, Advance Detection Phase, Direction	RAD-Adv Ø2, NB
Radar, Stop Line Detection Phase, Direction	RAD-SL Ø1, SBLT
Overlap, phase A + C	Ø A + C
Overlap, phase 1 + 6	Ø 1 + 6
Detector lead-in, phase A	DET A
Detector lead-in, phase 1	DET 1
Detector lead-in, phase 1 northbound left turn lanes	DET 1 NBLT
Detector lead-in, phase A (call type)	DET A CALL
Detector lead-in, phase 1 (call type) northbound thru lanes	DET 1 CALL NB-THRU
Detector harness ^[1]	DET A
Interconnect	IC
Preemption, fire	PE FIRE
Preemption, railroad	PE RR
[1] Place the tag next to the MS plug at the detector amplifier.	

632.08

On page 601, **Revise** the first sentence of the first paragraph to the following:
Furnish heads with LED lamps.

632.30

On page 610, **Delete** the following from the subsection:

~~632 Each Pedestrian Signal Head, (Aluminum or Polycarbonate) (Countdown), Type~~

632.30

On page 610, **Delete** the following from the subsection:

~~632 Each Detector Loop~~

632.30

On page 610, **Add** the following to the subsection:

632 Each Pedestrian Signal Head (LED), Type D2, Countdown

632.30

On page 610, **Add** the following to the subsection:

632 Each Detector Loop (Wound or Prefabricated)

633

On page 611, **Delete** the subsection title “**633.13 Controller, Master, Traffic Responsive**”.

633.03

On page 612, **Add** the following footnote:

Furnish material and equipment conforming to:

Concrete (cabinet foundations and work pads)

QC Misc or QC 1^[1]499, 511

Conduit725.04, 725.051, 725.052

Cabinet and auxiliary equipment733.03

Cabinet riser733.04

Flasher controller733.05

Remote monitoring station733.07

Uninterruptible Power Supply 733.09

[1] Provide a Concrete Cylinder Cure Box per 511.04.

633.15

On page 614, **Delete** all of section 633.15 **Communications**.

633.18

On page 614, **Replace** the last sentence of the first paragraph with the following:

A ground rod (paid for separately) shall be provided for freestanding UPS cabinets.

641.03

On page 628, **Add** the following paragraph between the fourth and fifth paragraphs:

Disperse remaining loose glass beads or wet reflective optics from the non-marked roadway surface in areas where the glass beads or wet reflective optics are applied by hand, are loaded into the striping apparatus, or are applied along the radii of intersections

641.05

On page 631, **Replace** the first paragraph with the following:

Before applying marking material, the pavement surfaces must be completely dry. In the presence of the Engineer, test for moisture using the following test procedure, when rainfall has occurred within 24 hours prior to the start of the pavement marking operations or as directed by the Engineer.

641.08.E

On page 632, **Revise** the first paragraph as follows:

Place stop lines as solid 24-inch (600 mm) wide white stripes. Place transverse crosswalk lines as solid 12-inch (300 mm) wide white stripes. Place longitudinal bar crosswalk lines as solid 24-inch (600 mm) wide white stripes.

641.12

On page 633, **Insert** the following after the second sentence of the first paragraph:

The Department will measure Crosswalk Line as the total length of all individual transverse or longitudinal crosswalk lines.

641.12

On page 633, in the third sentence of section 641.12, **Delete** the hyphen from the word “TwoWay”.

641.12

On page 633, **Add** the following after the fourth sentence of the paragraph:

641.12 Method of Measurement. The Department will measure pavement markings complete in place in the units designated. The Department will measure line quantities as the length of completed marking, including the gaps, intersections, and other sections of pavement not normally marked. The Department will measure Crosswalk Line as the total length of all individual transverse or longitudinal crosswalk lines. The Department will measure Two-Way Left Turn Arrow as one pair of two opposing left turn arrows. The Department will measure Speed Measurement Marking as a 24-inch-wide by 4 feet long marking including the surveying work. The Department will measure the removal of pavement markings using the same method of measurement as completed markings in the units designated.

642.04

On page 636, **Replace** the second sentence in the first paragraph with the following:

Apply glass beads at a minimum rate of ~~15~~ 10 pounds per 100 square feet (~~7.3~~ 4.9 kg per 10 m²) for Type 1 traffic paint.

642.05

On page 636, **Add** the following item between the “Lane Arrow” and “Word on Pavement” items:

642	Each	Two Way Left Turn Arrow
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643.05

On page 639, **Add** the following item between the “Lane Arrow” and “Word on Pavement” items:

643	Each	Two Way Left Turn Arrow
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644.04

On page 641, **Revise** the third full paragraph inclusive of the paragraph’s subsections as follows:

The Department will consider materials unsatisfactory if at least one of the following conditions is met:

- A. Deficiency of glass beads is 20 percent or more.
- B. Variance of thermoplastic marking material is +/- 20 percent
- C. Materials applied outside the temperature or application requirements in 644.04 without written approval of the Engineer.
- D. Markings not meeting the performance parameters contained in Supplement 1047, Appendices C, D, E, and G.
 - 1. Numerical rating of 8 or lower for Daytime Color (Appendix C)
 - 2. Composite rating of 8 or lower for Night Visibility (Appendix D)
 - 3. Numerical rating of 9 or lower for Durability (Appendix E)
 - 4. Less than the initial measurement for Retroreflectivity (Appendix G)

644.06

On page 642, **Add** the following item between the “Lane Arrow” and “Word on Pavement” items:

644	Each	Two Way Left Turn Arrow
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645.02

On page 642, **Replace** the first item in the list with the following:
Type A (permanent markings), Type A1, A2, A3 or A4740.05

645.05

On page 643, **Add** the following item between the “Lane Arrow” and “Word on Pavement” items:
645 Each Two Way Left Turn Arrow

646.07

On page 648, **Add** the following item between the “Lane Arrow” and “Word on Pavement” items:
646 Each Two Way Left Turn Arrow

659.03

On page 662, **Replace** the entire second paragraph with the following:
The Contractor may provide other lime grade materials. The lime grade materials provided will meet Table 3-5 “Total Neutralizing Power, Fineness, Moisture, and Effective Neutralizing Power of Various Liming Materials That Can be Found in Ohio” found in Bulletin 472, *Ohio Agronomy Guide*, published by the Cooperative Extension Service, The Ohio State University. Based on the type of lime grade material provided, determine the increase or decrease in the standard application rate from Table 3-6 according to the “Adjustments for the Type of Liming Material” section.

661.09

On page 676, **Replace** the title of the section to the following:
Item 661.09 Soil Recipe.

661.09

On page 676, **Replace** the section with the following:

Soil Recipe

Till soil with backhoe or chisel plow to 2 feet deep. Topdress 10% of the vertical tillable inches (see chart below) to at least an eight (8) foot diameter (50 ft²) around where each plant will be located. Vertical tillable inches will vary with equipment availability and constraints as well as soil composition. Rototill EPA rated Class IV compost (preferably pine compost) into the soil to appropriate depth. Disking may be necessary to level soil and to incorporate compost.

SOIL AMMENDMENTS

DEPTH OF TILLABLE SOIL (INCHES)	AMOUNT OF COMPOST (INCHES TOPDRESS)
8	0.8
9	0.9
10	1.0
11	1.1
12	1.2

TOPDRESS

Topdress with EPA rated Class IV compost (preferably pine compost) at one inch depth to at least an eight (8) foot diameter (50 ft²) around each plant.

661.10.A.

On page 677, **Replace** the first paragraph with the following:

- A. Planting Holes:** Dig planting holes that have sloping side walls and are ‘bowl shaped’. Slope the side walls to approximately 45 degrees. Dig the planting hole so that the diameter at the top is at least two times the diameter of the root ball. Dig the planting hole to the same depth as the root ball structure. Planting hole depth shall result in the base of the tree flare being at or slightly above final grade. The soil directly beneath the root ball should be undisturbed or prepared to minimize settling.

661.10.C.

On page 677, **Replace** the second paragraph with the following:

Backfill the planting hole with similar soil. Fill the hole gradually and settle the backfill with water to the top of the root structure. Do not place backfill in direct contact with the trunks or stems. Add backfill around the root structure up to the plant’s root collar at the soil surface.

661.11

On page 678, **Replace** the section with the following:

661.11 Mulch.

A. Tree Mulching. Use composted bark / wood mulch with various sized pieces of wood and bark. Finely ground or dyed mulches are unacceptable. Do not use ground pallets or processed wood. Provide mulch that is free of soil, rocks, weeds, and that has been aged at least six months to one year.

Mulch should be 2-4 inches deep with a 3–4-foot radius around newly planted trees. Do not volcano mulch around the tree. Mulch should be in a doughnut shape leaving four inches adjacent to the tree trunk free of mulch.

B. Plant Mulching. Provide plant mulch that consists of shredded bark and shredded wood. The length of any individual component cannot exceed 2 inches (50 mm). Ensure that at least 75 percent of the mulch can pass a 1 inch (25 mm) screen. Landscape mulch may contain up to 50 percent shredded wood. Wood chips are not acceptable. Provide mulch that is free of soil, rocks, and weeds, and that has been aged at least one year before installation.

Smooth and shape the backfill mix to form a shallow basin slightly larger than the planting hole. Mulch these areas with a 4 inch (100 mm) layer of landscape mulch uniform in texture and size. Do not place mulch in direct contact with the trunks of any trees. Rake and smooth all planting beds upon completion of work.

661.12

On page 678, **Delete** section 661.12 in its entirety.

662.02

On page 680, **Replace** the first and second paragraphs with the following:

Watering. Furnish the water used in watering landscape plants. Thoroughly water all plant material at the time of planting regardless of soil moisture content. Continue to water throughout the period of establishment. Watering shall be weekly throughout the growing season.

Saturate the root zone and mulched area of each plant without causing run-off according to Table 662.03-1. During fall planting, continue to water until the ground is frozen and recommence watering after the spring thaw. Furnish a rain gauge approved by the Engineer, unless noted otherwise. A rain gauge is not needed for trees.

666.02

On page 681, **Delete** section 666.02 in its entirety.

666.03

On page 681, **Replace** the second, third and fourth paragraphs with the following:

Remove all dead wood and dead branches 1 inch (25 mm) or more in diameter. Remove all branches interfering with or hindering the healthy growth of the tree. A branch removal cut shall be made without cutting into the branch bark ridge or branch collar or leaving a stub. Remove all diseased branches. For branches that may be partly dead yet have a good healthy lateral branch between the dead part and the base, cut off the branch with a good clean slanting cut close to and beyond the healthy lateral branch.

Remove low hanging, unsound, or unsightly branches on trees or shrubs designated to remain. Remove all branches or growth interfering with the free traffic movement on the highway. Prune branches of trees extending over the roadbed to provide a clear height of 20 feet (6 m) above the roadbed surface.

Prune off all stubs or improper cuts resulting from former pruning or limbs that have been broken flush with the trunk or limb of the tree in order to ensure proper healing.

666.04

On page 681, **Delete** section 666.04 in its entirety.

700.00

On page 687, **Replace** 511 with the following:

511	Concrete for Structures	<p>NON QC/QA SPECIFICATIONS</p> <p>Make one set of cylinders each 50 yd³ or less.</p> <p>Document in AWP.</p> <p>Field or Standard Cure according to ACI/ODOT specifications.</p> <p>QC/QA SPECIFICATIONS</p> <p>Follow requirements of Item 455 for quality assurance sampling and testing.</p> <p>Document in AWP.</p>	<p>Once initial set has occurred, but no more than 48 hours after sampling, ship cylinders to District Testing with required documentation.</p> <p>Once initial set has occurred, but no more than 48 hours after sampling, ship quality assurance cylinders to District Testing with required documentation.</p>
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700.00

On page 687, **Delete** 610 from 700 table.

700.00

On page 701, **Revise** the row for 710.12 as follows:

Spec No.	Material	Material only Inspection or Sampling Requirements	Additional Instructions
710.12	Rectangular and Round Wood Guardrail Posts	Products will be supplied by a source on the Certified List for S 1042 maintained by OMM. Receive with DSR. Check dimension, markings and condition. Document in AWP.	Notify District Testing and OMM Structural Welding and Metals section if rejecting material because material non-performs or looks defective during use.

700.00

On page 701, **Delete** the row for 710.16.

700.00

On page 707, **Add** the following row:

Spec No.	Material	Material only Inspection or Sampling Requirements	Additional Instructions
725.22	Underground Warning / Marking Tape	Verify type and brand name of material is on QPL at the time of use. Inspect for condition and defect. Verify color and markings conform to plan requirements. Document in AWP.	Notify District Testing if rejecting material.

700.00

On page 709, **Delete** the line for 730.192 and make revisions to the chart as highlighted below:

Spec No.	Material	Material only Inspection or Sampling Requirements	Additional Instructions
730.18	Retroreflective Sheeting Type I	Use if certification provided. Document in SM.	Notify District Testing if rejecting material. If material non-performs or looks defective during use notify District Testing and OMM.
730.19	Retroreflective Sheeting Type IV	Verify type and brand name of material is on QPL at the time of use. Inspect for conformance to dimension and condition. Document in SM.	Notify District Testing if rejecting material. If material non-performs or looks defective during use notify District Testing and OMM.

730.191	Retroreflective Sheeting Reboundable	Verify type and brand name of material is on QPL at the time of use. Inspect for conformance to dimension and condition. Document in SM.	Notify District Testing if rejecting material. If material non-performs or looks defective during use notify District Testing and OMM.
730.193	Retroreflective Sheeting Type IX	Verify type and brand name of material is on QPL at the time of use. Inspect for conformance to dimension and condition. Document in SM.	Notify District Testing if rejecting material. If material non-performs or looks defective during use notify District Testing and OMM.
730.194	Retroreflective Sheeting Type XI	Verify type and brand name of material is on QPL at the time of use. Inspect for conformance to dimension and condition. Document in SM.	Notify District Testing if rejecting material. If material non-performs or looks defective during use notify District Testing and OMM.
730.20	Nonreflective Sheeting	Verify type and brand name of material is on QPL at the time of use. Inspect for conformance to dimension and condition. Document in SM.	Notify District Testing if rejecting material. If material non-performs or looks defective during use notify District Testing and OMM.

700.00

On page 710, **Delete** the line for 732.03.

700.00

Starting on page 686 through page 714, Section 700 Material Details, MINIMUM REQUIREMENTS FOR SAMPLING MATERIALS, **Replace** all instances of “TE-24” with “DSR”.

700.00

Starting on page 686 through page 714, Section 700 Material Details, MINIMUM REQUIREMENTS FOR SAMPLING MATERIALS, **Replace** all instances of “SM” with “AWP”.

700.00

On page 689, **Add** the following row after 701.13:

701.15	Portland-limestone Cement, Type IL	Verify manufacturer on Concrete Plant Batch Ticket is on Certified List for Supplement 1028 maintained by OMM. Verify material against bill of lading description. Document in AWP.	
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700.00

On page 692 **Replace** row 705.10 with the following:

705.10	Air Entraining Admixtures	Verify type and brand name of material listed on Concrete Plant Batch Ticket is on QPL at the time of use. Document in AWP.	Storage: Admixtures should be stored at concrete producer in such a manner to permit easy access for proper identification in weather resistant units. If an issue is suspected to be present with any material, collect one (1) QA sample. Minimum sample size one (1) quart.
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700.00

On page 692 **Replace** row 705.12 with the following:

705.12	Chemical Admixtures for Concrete	Verify type and brand name of material is on QPL at the time of use. Document in AWP.	Storage: Admixtures should be stored at concrete producer in such a manner to permit easy access for proper identification in weather resistant units. If an issue is suspected to be present with any material, collect one (1) QA sample. Minimum sample size one (1) quart.
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701.00

On Page 715, **Replace** the first sentence of the paragraph with the following:

Provide cements meeting 701.01, 701.02, 701.04, 701.05, 701.07, 701.09 and 701.15 and certified according to Supplement 1028; fly ash or natural pozzolan meeting 701.13 and certified according to Supplement 1026; slag cement meeting 701.11 and certified according to Supplement 1034; and micro silica meeting 701.10 and certified according to Supplement 1045, without prior sampling, testing and approval by the Department.

701.11

On Page 715 **Replace** the section with the following:

701.11 Slag Cement. Provide slag cement according to ASTM C 989, meeting the Grade 100 slag activity index minimum.

701.13

On Page 715, **Replace** the paragraph with the following:

701.13 Fly Ash or Natural Pozzolan for Use in Portland Cement Concrete. Provide fly ash or natural pozzolan according to ASTM C618, Class C, F, or N, except ensure a maximum loss on ignition (LOI) of 5.0 percent. ~~for fly ash and 5 percent for natural pozzolan.~~

701.13

On Page 715, Delete the second paragraph.

701.15

On Page 715, **Delete** the second sentence in the paragraph.

701.16

On page 715 **Add** after 701.15 the following:

701.16 Portland-limestone Cement, Type 1L HE. Provide portland-limestone cement according to ASTM C 595, Type 1L HE. ~~The maximum allowable limestone content is fifteen percent by mass.~~

701.17

On page 715 **Add** after 701.16 the following:

701.17 Portland-limestone Cement, Type 1T. Provide Portland-limestone cement according to ASTM C 595, Type 1T(S<25). Ternary blended cements containing pozzolans will not be allowed.

702

On page 716 **Replace** the last sentence in the first paragraph with the following:

The remaining materials may be acceptable for shipment to and immediately used in construction projects based on meeting the requirements of Department QPL and certified test data based on what each material requires.

702.09

On page 722 **Replace** the last sentence of Section 702.09 with the following:

Furnish materials according to the Department's QPL. Provide Certified Test Data to the Engineer for each shipment of material corresponding to the batch of material being used.

704.04

On page 749, **Add** the following new subsection:

704.04 Brick Made from Recycled Materials. Furnish brick made from recycled materials conforming to ASTM C 67, with the following modification:

4.1 Furnish materials according to the Department's QPL.

4.2.1 Furnish bricks of such size and shape as to allow their incorporation in the structure in conformance with the specified dimensions of the structure. Furnish bricks that have a rectangular cross-section with square corners. Ensure that the ends, edges, and one face are plain surfaces.

705.04

On page 749 **Add** the following paragraph after the first paragraph of Section 705.04:

Furnish materials according to the Department's QPL. Provide Certified Test Data to the Engineer for each shipment of material corresponding to the batch of material being used.

705.10

On page 750, **Replace** the first sentence as follows:

Provide air-entraining admixtures conforming to ASTM C260.

705.20.A.

On Page 752, **Replace** the table and footnote with the following:

Test Description	Specification	Requirements	Notes
Bond Strength (dry)	ASTM C882 ^[2]	2 day, Min. 1800 psi	Average of three samples ^[1]
Bond Strength after subjected to 300 cycles freeze/thaw testing	Specimens cast according to ASTM C882 should be subjected to ASTM C666 Procedure B prior to testing Bond Strength according to ASTM C882	Min. 1600 psi	Average of three samples ^[1]
Heat Deflection	ASTM D648	7 day, Min. 130 °F	
Linear Coefficient of Shrinkage	ASTM C531	% Max. 0.005	
Pullout Strength Test (dry)	See procedure below	24 hours, Min. Load 22,500 lbs	Average of three cylinders in dry condition
Pullout Strength Test (wet)	See procedure below	24 hours, Min. Load 22,500 lbs	Average of three cylinders in wet condition

[1] A total of six samples will be made under ASTM C882. Three of the specimens cast according to ASTM C882 should be subjected to ASTM C666 Procedure B prior to testing the Bond Strength according to ASTM C882.

[2] Cure according to each of the Classes specified in the product based on the requirements below:

- if the product specifies Class A, Curing Temperature to be at minimum temperature specified in the product.
- if the product specifies Class B, Curing Temperature to be at 40°F. **Note: If product is also listed as a Class A and the minimum temperature is >30 °F & < 40 °F, then cure at 50 °F.**
- if the product specifies Class C, Curing Temperature to be at maximum temperature specified in the product.

705.23.A.5.

On Page 755, **Replace** A.5. of 705.23 with the following:

5. Volatile Organic Compounds (VOC) maximum, OAC 3745-113 Coating Type

705.23.A.

On Page 755, **Replace** the second to last paragraph of the subsection with the following:

Furnish the test data, a one quart sample, and product literature, including data sheets, label and coating type, to the Office of Materials Management (OMM). OMM will determine material acceptance.

705.23.B.5.

On Page 756, **Replace** B.5. of 705.23 with the following:

5. Volatile Organic Compounds (VOC) maximum, OAC 3745-113 Coating Type

705.23.B.

On Page 756, **Replace** the second to last paragraph of the subsection with the following:

Furnish the test data, a one quart sample, and product literature, including data sheets, label and coating type, to the Office of Materials Management (OMM). OMM will determine material acceptance.

706.05

On page 774, **Add** the following sentence to the end of second paragraph:
Prepare and submit Shop Drawings according to 611.04 A.

706.10

On page 789, **Replace** the entire section with the following:

706.10 Bituminous Pipe Joint Filler. Provide cold applied, mineral filled, joint sealing compound for joints of bell and spigot, or tongue and groove sewer; or drain pipe conforming to the following:

A. Composition. Provide an asbestos-free steam-refined petroleum asphalt or a refined coal tar, dissolved in a suitable solvent, and containing an appropriate stiffener.

B. General Requirement. Provide a bituminous plastic cement that has a smooth, uniform mixture, not thickened or livered, and that shows a separation easily overcome by stirring. Ensure that the material is of such consistency and properties that it is readily applied with a trowel, a putty knife, or with a caulking gun without pulling or drawing. Provide a material that when applied to metal, concrete, or vitrified clay surfaces, exhibits good adhesive and cohesive properties and has only slight shrinkage after curing. Provide a material that is not damaged by exposure to below freezing temperatures.

C. Detail Requirements. Provide materials conforming to the following requirements:

1.	When applied in a layer 1/16 to 1/8-inch (1.6 to 3.2 mm) thick on a tinned metal panel and cured at room temperature for 24 hours, the bituminous plastic cement shall set to a tough, plastic coating, free from blisters.		
		Minimum	Maximum
2.	Grease Cone Penetration (unworked, 150 grams, 25 °C, 5 sec, ASTM D217, mm/10	175	250
3.	Weight, kg/L, ASTM D6511.6 ^[i]	1.17	--
4.	Non-volatile, 10 g, 105 to 110 °C, %, ASTM D6511.7 ^[ii]	75	--
5.	Ash, by ignition, %, ASTM D6511.9 ^[iii]	25	45

Notes:

- i. Convert lb/gal to kg/L by multiplying by 0.11983
- ii. Apply in a thin layer. A crucible meeting ASTM D6511.9 may be used and applied in a thin layer to the inner wall.
- iii. Use a minimum of 3.0 grams of the sample after the non-volatile test. If a crucible is used in the non-volatile test, then the crucible and sample (mass of dry residue) can be used for this test.

Furnish materials according to the Department's QPL.

707.12

On page 797, **Add** the following lines to the bottom of the **Pipe** chart

96	0.138		2400	3.51
102	0.138		2550	3.51
108	0.138		2700	3.51
117	0.138		2929	3.51
120	0.138		3000	3.51

707.13

On Page 797, **Delete** the entire section.

707.13 Bituminous Lined Corrugated Steel Pipe [1/2-inch (13 mm) Corrugations]. Provide pipe according to 707.01 and AASHTO M 190, Type D.

707.14

On Page 797, **Delete** the entire section.

707.14 Bituminous Lined Corrugated Steel Pipe [1-inch (25 mm) Corrugations]. Provide pipe according to 707.02 and AASHTO M 190, Type D.

707.19

On Page 799, **Delete** the entire section.

707.19 Aluminum Coated Steel Conduits with precoated galvanized smooth steel interior liner. Provide Type IA pipe which has a corrugated exterior with a smooth interior liner. Ensure that the interior liner conforms to 707.04. Ensure that the corrugated exterior conduit material conforms to AASHTO M274. Provide corrugated exterior conduits per 707.01 or 707.02 with the following modifications to AASHTO M36:

7.7.1 Provide Aluminum Coated Steel Conduits with precoated galvanized smooth steel interior liner pipe with plain cut helical ends. Match mark ends. Install conduit so that match marks align and are in accordance with the layout drawings supplied by the manufacturer.

9.2 Provide external flat sheet coupling bands with a minimum wall thickness (coated) of .064 inch and that are a minimum of 12" wide. Ensure coupling bands are aluminum coated steel.

9.5 Ensure a soil tight joint by the use of a flat gasket conforming to ASTM D1056 2B1 that is a minimum of 12" wide and centered over the joint.

707.20

On Page 799, **Delete** the entire section.

707.20 Galvanized Coated Steel Conduits with precoated galvanized smooth steel interior liner. Provide Type IA pipe which has a corrugated exterior with a smooth interior liner. Ensure that the interior liner conforms to 707.04. Ensure that the corrugated exterior conduit material conforms to AASHTO M 218. Provide corrugated exterior conduits per 707.01 and 707.02 with the following modifications to AASHTO M36:

7.7.1 Provide Galvanized Coated Steel Conduits with precoated galvanized smooth steel interior liner pipe with plain cut helical ends. Match mark ends. Install conduit so that match marks align and are in accordance with the layout drawings supplied by the manufacturer.

~~9.2 Provide external flat sheet coupling bands with a minimum wall thickness (coated) of .064 inch and that are a minimum of 12" wide. Ensure coupling bands are galvanized coated steel.~~

~~9.5 Ensure a soil tight joint by the use of a flat gasket conforming to ASTM D1056 2B1 that is a minimum of 12" wide and centered over the joint.~~

707.35

On page 805, **Replace** the section as follows :

707.35 Polyethylene Profile Wall Pipe. Provide polyethylene profile wall pipe, coupling and fittings conforming to ASTM F894 with the following modifications:

1.1 Provide pipes with inside diameters from 12 to 132 inches.

6.5 Delete.

10.1 Provide a letter of certification to cover each shipment of material verifying that it meets specification requirements.

707.65

On Page 807, **Replace** the subsection with the following:

707.65 Corrugated Polypropylene Smooth Lined Pipe. Provide smooth lined corrugated polypropylene pipe, closed profile polypropylene pipe, couplings, and fittings according to AASHTO M 330, Type S or Type D.

Provide materials from manufacturers certified according to Supplement 1066 or material supplier vendors according to Supplement 1140.

708.01

On Page 808, **Add** the following paragraph after the second paragraph:

Provide an inorganic zinc silicate primer with a maximum Volatile Organic Compounds (VOC) meeting OAC 3745-113 Coating Type.

708.02.B.1.

On Page 809, **Add** the following after 708.02.B.1.g.:

h. Volatile Organic Compounds (VOC), maximum, ASTM D 3960. meet requirements of OAC 3745-113 Coating Type.

708.02.C.1.g.

On Page 810, **Replace** 708.02.C.1.g. with the following:

g. Volatile Organic Compounds (VOC), maximum, ASTM D 3960 meet requirements of OAC 3745-113 Coating Type.

708.02.D.1.

On Page 810, **Replace** section 708.02.D.1. with the following:

1. Physical Requirements.

a. Volume solids, ASTM D2697. 42 percent minimum.

b. Curing time, at 77 °F (25 °C) and 50% RH. Set-to-touch, ASTM D1640: 30 minutes, minimum; 4 hours, maximum.

c. **Pot life.** Follow the paint manufacturers recommendations for applying the coating within the pot life specified with no evidence of gellation. The coating shall be in a free-flowing condition and easily sprayed

d. **Volatile Organic Compounds (VOC), maximum, ASTM D3960.** Meet requirements of OAC 3745-113 Coating Type.

e. **Colors.**

(1) **Specified.**^[2]

Brown	AMS-595A, 10324
Green	AMS-595A, 14277
Blue	AMS-595A, 15526
Gray	AMS-595A, 16440
^[2] If not defined in the plans, the Engineer will specify from the list	

(2) **Elective.** As specified on the plans.

f. **Gloss requirements, ASTM D523.**

Full gloss	minimum 80% unless specified on the plans
Semi-gloss	30 to 45%
Lusterless (Matte)	maximum 6%

708.02. D.2.C.

On Page 811, **Replace** section 708.02.D.2.C. with the following:

C. Weathering Resistance Test. Test the panels according to ASTM D 4587, ~~Method D~~ Cycle Number 4, using Ultra Violet A 340 bulbs. Place the panels on test at the beginning of a wet cycle. After 3000 hours of continuous exposure, examine the panels to verify that they show no rusting and that the coating shows no blistering or loss of adhesion. Perform the 60 degree specular gloss and color measurements on the sprayed panels utilized for this test. Average the three initial measurements (one per panel) together. Also, average the three final measurements together. Specular gloss, ASTM D523, shall be 70 % minimum after 3000 hours weathering resistance. Color change shall be $\leq 2.0 \Delta E^*$, (C.I.E 1976 L*a*b*) ASTM D 2244.

708.02. D.2.F.

On Page 812, **Replace** the second paragraph of 708.02. D.2.F. with the following:

Prequalification. Before approval, submit copies of the manufacturer's certified test data showing that the coating system, using AMS-595A-16440 Gray for the urethane finish coat, complies with the performance requirements of this specification to the Laboratory. Ensure that the certified test data also states the following physical properties for each coating: Density, pounds per gallon (~~g/mL~~); Solids, percent by weight; Solids, percent by volume; Viscosity; Drying time; and VOC content, pounds per gallon (~~g/mL~~).

710.12

On Page 822, **Rename** the subsection as follows:

710.12 Rectangular and Round Wood Guardrail Posts.

710.12

On Page 822, **Revise** the first sentence of the first paragraph as follows:

Furnish pressure treated rectangular posts of a timber grade in accordance with AASHTO M 168, 710.14, and 712.06.

710.12

On Page 822, **Delete** the last sentence of the fifth paragraph.

~~The diameter of the Douglas Fir posts shall be 184 mm (7¼ in.) at the ground line with a upper limit of 203 mm (8 in.).~~

710.12

On Page 822, **Delete** the last sentence of the seventh paragraph.

~~The diameter of the Southern Pine posts shall be 190 mm (7½ in.) at the ground line with a upper limit of 210 mm (8¼ in.).~~

710.12

On Page 822, **Delete** the last sentence of the ninth paragraph.

~~The diameter of the Ponderosa Pine posts shall be 203 mm (8 in.) at the ground line with an upper limit of 222 mm (8¾ in.).~~

710.16

On Page 823, **Delete** the entire subsection **710.16 Guard Posts**.

711.03

On Page 824, **Replace** 711.03 with the following:

711.03 Steel for Piling. Furnish steel for H-piling conforming to ASTM A 572 Grade 50. Furnish steel for sheet piling according to ASTM A572 Grade 50. Furnish steel for cast-in-place reinforced concrete piles conforming to ASTM A 252, Grade 2 or 3.

711.21

On Page 828, **Replace** the subsection with the following:

711.21 Preformed Bearing Pads. Furnish Type CDP (Cotton Duck Pads) or Type PEP (Plain Elastomeric Pads) as follows:

A. Type CDP. Preformed Type CDP shall be composed of multiple layers of 8-oz/yd² cotton duck impregnated and bonded with new unvulcanized natural and/or synthetic rubber compressed into resilient pads of uniform thickness. A lot shall consist of a single sheet that is continuously formed to the manufacturer's specified thickness not to exceed 2500 pounds of material. Test a minimum of two samples from a lot as follows: The samples shall be 2-in x 2-in with the full sheet thickness. Cure the test specimens for 4-hours at room temperature (70°F ± 10°F). Load each specimen in compression, perpendicular to the direction of lamination. Set the origin of deflection and compressive strain measurements at a compressive stress of 5-psi. Increase the load at a steady rate of 500-lbs/min and record deflection measurements to a maximum load of 10,000-psi. Between 30 and 60 seconds after the maximum load is released, measure the loss in thickness from the origin of deflection thickness as a percentage of the origin of deflection thickness. The lot average thickness loss at 10,000-psi shall not exceed 13%. Test specimens shall show no indications of fracture throughout the duration of the loading sequence. The lot average compressive strain of the specimens at an average compressive stress of 2000-psi shall fall between 7.5% and 17.5%. The lot average surface hardness, expressed in standard rubber hardness figures, is 90 ± 5 Shore Durometer.

Provide Certified Test Data verifying material compliance (i.e. 2000-psi compressive strain, 10,000-psi compression set and Shore Durometer averages), and include product name; manufacturer's name, address, phone number, and Certified Test Data for each thickness of Type CDP.

B. Type PEP. The elastomer compound used in the construction of these bearings shall contain only virgin crystallization resistant polychloroprene (neoprene) or virgin natural polyisoprene (natural rubber) as the raw polymer. All materials shall be new with no reclaimed material incorporated in the finished bearing. The elastomer compounds shall be low-temperature Grade 3. Perform testing of the elastomer compound at the manufacturer's discretion with all test reports retained according to the manufacturer's documented retention policy. The Durometer Hardness shall be 55 ± 10 in accordance with ASTM D2240 Type A.

Provide Certified Test Data verifying Shore Durometer and include product name; manufacturer's address, phone number, and Certified Test Data for each thickness of Type PEP.

711.23

On page 828, **Replace** the section with the following:

711.23 Elastomeric Bearings. Furnish steel laminated bearings from fabricators certified according to Supplement 1081.

The fabricator or an independent laboratory approved by the Department shall perform elastomer material testing and elastomeric bearing quality control testing on a lot basis as defined in the Quality Control Plan accepted according to Supplement 1081. If the sampled material or bearing fails to meet any requirement, the Department will consider the lot to be unacceptable material according to 106.07. Provide certification of all component materials, and steel laminated bearings, according to 501.06.B.

A. Elastomer Compound. The elastomer compound used in the construction of these bearings shall contain only virgin crystallization resistant polychloroprene (neoprene) or virgin natural polyisoprene (natural rubber) as the raw polymer. All materials shall be new with no reclaimed material incorporated in the finished bearing. The elastomer compounds shall be low-temperature Grade 3. Testing of the elastomer compound shall be performed at the fabricator's discretion with all test reports retained with certification documentation.

B. Elastomer Material Testing. Sample, test and accept elastomer to the requirements defined in Table 711.23-1. Elastomer test samples shall be taken from fabricated bearings according to ASTM D3183. All material tests shall be conducted at $73^{\circ}\text{F} \pm 3^{\circ}\text{F}$ unless otherwise noted. The Department will consider costs for additional sample test bearings as incidental to the unit bid price.

Table 711.23-1

Test Parameter		Requirement	
		Polychloroprene	Polyisoprene
1	Durometer Hardness, Points	50±5 or 60±5	50±5 or 60±5
2	Secant Shear Modulus at 50% Strain, PSI	Plan Specified ±15%	Plan Specified ±15%
3	Tensile Strength, Minimum PSI	2250	2250
4	Ultimate Elongation, Minimum %	400	450
5	Low Temperature Brittleness at -40°F	No Failure	No Failure
References:			
1. ASTM D2240 Type A – Applies only to steel reinforced bearings designed according to AASHTO LRFD 14.7.6 (Method A)			

2. ASTM D4014 Annex A1 modified per AASHTO M251 Section 8.8.4 – Applies to steel reinforced bearings designed according to AASHTO LRFD 14.7.5 (Method B) unless otherwise noted in the Plans
3. ASTM D412
4. ASTM D412
5. ASTM D746 Procedure B

C. Steel Laminates. Steel for laminates shall be according to ASTM A 709, Grade 36 or ASTM A1011 Grade 36. Minimum nominal steel laminate thickness shall be 12 Gauge (0.1046-in; +/- 0.006-in). A maximum of one, 1/4 in diameter hole will be allowed for fabrication. Blast clean steel laminates to a condition matching that of SSPC-VIS 1-01, Pictorial Standard BSP6 or CSP6, and clean steel of oil or grease before bonding. Plates shall be free of sharp edges and burrs.

D. Load Plates, Masonry Plates and Structural Shapes. Steel material for load plates, masonry plates and structural shapes shall be according to 711.01. Steel load plate surfaces in contact with structural steel flanges and masonry plate surfaces in contact with the beam seat shall not exceed an out-of-flatness value of 0.01-in. Steel load plate and masonry plate surfaces vulcanized to the elastomeric bearing shall not exceed an out-of-flatness value of 0.06-in. Blast clean steel plate surfaces vulcanized to the elastomeric bearing to a condition matching that of SSPC-VIS 1-01, Pictorial Standard BSP6 or CSP6, and clean steel of oil or grease before bonding. Steel fabrication shall be in accordance with 513. When welding to plates vulcanized to elastomeric bearings, control welding according to 516.07. Coat plates according to 516.03.

E. Steel Laminated Bearings. Cast bearings with steel laminates as a unit in a mold. Bond and vulcanize bearings under heat and pressure. The molds shall have standard shop practice mold finish. Load plates and masonry plates in contact with the elastomeric bearing shall be hot bonded to the bearing during vulcanization. Bearings with steel laminates that are designed to act as a single unit shall be manufactured as a single unit. Only at locations where steel laminate alignment devices produce grooves or indentions on the exterior surface, repair the surface with a vulcanized patch or by a silicon caulk conforming to Federal Specifications TT-S-001543A or approved equal. Vulcanized patches shall not be larger than the size of the surface indentation or groove plus 1/2-in.

Flash tolerance, finish, and appearance of bearings shall meet the requirements of the latest edition of the Rubber Handbook as published by The Association for Rubber Products Manufacturers (ARPM).

F. Quality Control.

1. Short-term Load Test. Perform a short-term load test on every steel reinforced bearing delivered to the project. All test apparatus shall be calibrated annually in accordance with ASTM E4. The Quality Control Plan shall include the method for obtaining the applied load. The short-term load test consists of applying a minimum compressive load equal to 1.5 times the unfactored dead plus live load specified in the Plans. The load shall be held for 5-min, removed, and reapplied for a second period of 5-min. The bearing shall be visually examined during the second load application. Bearings exhibiting three or more separate surface cracks greater than 1/16-in wide or a single crack greater than 3/16-in deep or wider than 1/4-in are unacceptable material according to 106.07. Bearings exhibiting bulging patterns implying out-of-tolerance cover or layer thickness or bulges spanning two or more layers is unacceptable material according to 106.07.

Documentation for Short-term Load Test:

a) For Bearings Designed according to AASHTO LRFD 14.7.6 (Method A) – During second load application, document maximum applied bearing load for each load application. Document the visual examination with reference to any cracks and statement the bulging is not

exhibiting out of tolerance cover or layer thickness or bulges spanning two or more layers. Document final test result as pass or fail.

b) For Bearings Designed according to AASHTO LRFD 14.7.5 (Method B) – During second load application, document all four sides of the loaded bearing with digital color photographs at a minimum image resolution of 300-dpi. Every photograph shall include a 6-in minimum length black and white imperial rule scale with 1/8-in markings. It is the responsibility of the user to establish appropriate safety and health practices. Certified Test Data for the short-term load test shall include date of test; load versus time graphs with 15 second maximum intervals; maximum applied bearing load for each load application; photographs; and test result (i.e. Pass or Fail).

2. Tolerances. Tolerances for furnished plain and steel laminated bearings shall be in accordance with Table 711.23-2. The minimum elastomer cover thickness over a steel laminate shall be 0.125-in. Bearings with any tolerance outside the specified limits are unacceptable material according to 106.07.

Table 711.23-2

Description	Tolerance
Bearing length & width	-0.000", +0.250"
Bearing design thickness	-0.000", +0.125"
Individual layer thickness – at any location	-0.125", +0.125"
Laminate cover thickness	-0.000", +0.125"
Parallelism – top & bottom surfaces	±0.005 Radians
Parallelism - sides	±0.020 Radians
Load plate thickness	-0.0625", +0.0625"
Load plate length & width	-0.250", +0.250"
Load plate bevel	±0.002 Radians
Load plate position	-0.125", +0.125"

G. Marking. Using indelible ink or flexible paint at a location on the bearing that is clearly visible with the supported structure in its erected position, mark each bearing delivered to the project with a unique alphanumeric designation and identify the up-station direction. Each bearing's unique designation shall be included in the packing list for every delivered bearing.

The following marking information shall also be included on the top surface of every delivered bearing: project number, bridge number, substructure designation, beam line designation and heat number (if applicable).

711.29

On page 831, In the fifth line of the Physical Properties table **Replace** 200 psi with 2000 psi:

Tensile strength (machine direction) ASTM D 882 Modified ^[1]	275 lb/in (48.1 N/mm) 2000 psi (13.8 MPa)
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712.09

On page 834, **Replace** the first paragraph of 712.09 with the following:

712.09 Geotextile Fabrics. Furnish fabric composed of strong rot-proof polymeric fibers formed into a woven or non-woven fabric. Products must be tested by the AASHTO Product Evaluation and Audit Solutions process. The Department will determine acceptance of Type A, B, C and D fabric according to data obtained in the most current AASHTO Product Evaluation and Audit Solutions report – Laboratory Results of Evaluations on Geotextiles and Geosynthetics. The AASHTO

Product Evaluation and Audit Solutions testing results must meet or exceed the requirements listed in Table 712.09-1. For all tests except Ultraviolet Exposure, the products Minimum Average Roll Values (MARV), as published in the AASHTO Product Evaluation and Audit Solutions report, must also meet or exceed the requirements listed in the table. If no MARV value is published in the AASHTO Product Evaluation and Audit Solutions report, the manufacturer must submit to the Department certified test data showing the MARV values for the product will meet or exceed the requirements listed in Table 712.09-1.

712.09

On page 834, **Delete** the second paragraph of 712.09.

712.09

On page 835, **Replace** Table 712.09-1 with the following, and **Delete** Note 1 in its entirety:

TABLE 712.09-1Property	Test Method	Required Value
Type A: Underdrains and Slope Drains		
Minimum tensile strength	ASTM D 4632	80 lb
Minimum puncture strength	ASTM D 6241	140 lb
Minimum tear strength	ASTM D 4533	25 lb
Apparent opening size	ASTM D 4751	
Soil Type-1: Soils with 50% or less passing No. 200 (75 μ m) sieve		AOS \leq 0.6 mm
Soil Type-2: Soils with 50 to 85% passing No. 200 (75 μ m) sieve		AOS \leq 0.3 mm
Minimum permittivity	ASTM D 4491	0.5 sec ⁻¹
Type B: Filter Blankets for Rock Channel Protection		
Minimum tensile strength	ASTM D 4632	200 lb
Minimum elongation	ASTM D 4632	15%
Minimum puncture strength	ASTM D 6241	440 lb
Minimum tear strength	ASTM D 4533	50 lb
Apparent opening size	ASTM D 4751	AOS \leq 0.6 mm
Minimum permittivity	ASTM D 4491	0.2 sec ⁻¹
Type C: Sediment Fences		
Minimum tensile strength	ASTM D 4632	120 lb
Maximum elongation	ASTM D 4632	50%
Minimum puncture strength	ASTM D 6241	275 lb
Minimum tear strength	ASTM D 4533	40 lb
Apparent opening size	ASTM D 4751	AOS \leq 0.84 mm
Minimum permittivity	ASTM D 4491	0.01 sec ⁻¹
Ultraviolet exposure strength retention ^[2]	ASTM D 4355	70%
Type D: Subgrade-Base Separation or Stabilization		
Minimum tensile strength	ASTM D 4632	180 lb
Maximum elongation	ASTM D 4632	50%
Minimum puncture strength	ASTM D 6241	385 lb
Minimum tear strength	ASTM D 4533	70 lb
Apparent opening size	ASTM D 4751	Same as Type A
Minimum permittivity	ASTM D 4491	0.05 sec ⁻¹

[2] Provide certified test data to the Department. Include strength retention data at 0, 150, 300, and 500 hours

712.11.G.5

On page 838, **Remove** the language “[check spelling]” from the section.

720.01

On page 842, **Revise** the first three paragraphs of this section as follows:

For bridge parapet bracket or bridge rail bracket, furnish rectangular reflectors that are a minimum size of 3 × 6 inches (75 × 150 mm) and that consist of Type XI retroreflective sheeting according to 730.194 adhered to an aluminum plate. Furnish white, yellow, or red reflectors as specified. Furnish aluminum plate for reflectors according to ASTM B 209 (B 209M), 6061-T6 with a minimum thickness of 0.060 inch (1.5 mm).

For ground mounted delineators, furnish rectangular Reboundable retroreflective sheeting according to 730.191 that is a minimum size of 3 × 6 inches (75 × 150 mm) adhered to a flexible post. Furnish white, yellow or red reflectors as specified.

For surface mounted delineators, furnish a 3-inch (75 mm) wide band of Reboundable retroreflective sheeting according to 730.191 adhered completely around a flexible post. Furnish white or yellow reflectors as specified.

721.03

On page 843, **Revise** the first sentence of this section as follows:

Furnish casting adhesives that conform to Supplement 1062.06 - Raised Pavement Marker Casting Adhesive Acceptance Procedure.

725.06

On page 844, **Add** the following sentence to the end of the first paragraph:

Ensure that the pull box lid has no concave areas that hold water; any lid with concave area(s) totaling more than 4 square inches will not be accepted by the Department.

725.15

On page 850, **Add** the following to the end of the second paragraph:

Ensure that all compression connectors are clearly marked as UL Listed for the application. The requirements of 725.15 apply to copper bonding connections as well. Do not tape bonding connections until after inspection; taped bonding connections will be removed prior to inspection and replaced afterward as directed by the Engineer

725.19.I.

On page 854, **Replace** the paragraph with the following:

I. Circuit Breakers. Ensure that circuit breaker assemblies for lighting control circuits are capable of full (24 hours per day) continuous (over 3 hours) operation with a pre-defined minimum enclosure size, and housed in an enclosure sufficient to achieve the 100% rating. Install standard (80%) breakers, except use 100% rated breakers if nuisance tripping occurs and no higher nominal current is available, or when they are specified by Plan Note.

725.22

On page 860, **Add** the following paragraph to the end of the subsection:

Furnish materials according to the Department's Qualified Products List (QPL).

726.01

On page 860, **Replace** the section with the following:

726.01 Barrier Reflectors. Permanently label each barrier reflector to provide product identification sufficient to determine the product type, manufacturer, and brand name. Place the label in such a location on the barrier reflector so that it can be read after installation. Furnish concrete barrier, cable barrier, retaining wall, bridge parapet, bridge rail or guardrail blockout reflector body housings according to the Department's QPL of the following Types:

A. Type 1, Barrier Reflector. Furnish concrete barrier, retaining wall, bridge parapet, or bridge rail reflector body housings that are made of acrylic or polycarbonate plastic. Ensure that the minimum retroreflective surface area of the reflector is 7 square inches (4400 mm²).

Furnish white reflectors that reflect the following minimum candela of light at the indicated observation angles for each 1 foot-candle (10.76 lx) of incident light at the indicated entrance angles. Furnish amber reflectors that reflect at least 60 percent of these values.

MINIMUM SPECIFIC INTENSITY, CD/10.76 LX

Entrance angle	Observation Angle	
	0.2°	2.0°
-4°	62	0.25
15°	52	0.18

The entrance angle is measured in the horizontal plane between the direction of incident light and normal to the face of the reflector. The observation angle is measured in the vertical plane between the observer's line of sight and the direction of light incident to the reflector face.

B. Type 2, Barrier Reflector. Furnish corrosion resistant metal guardrail blockout reflectors that are a minimum size of 4.5 × 10 × 0.125 inches (112.5 × 250 × 3.1 mm) with 1/4" (6 mm) predrilled mounting holes. One or both sides shall be covered with a minimum 4.5 × 5 inches (112.5 × 125 mm) of Type XI retroreflective sheeting.

C. Type 3, Barrier Reflector. Furnish acrylic or polycarbonate plastic guardrail blockout reflector housings with 1/4" (6 mm) predrilled mounting holes. Products shall be structurally reinforced to withstand the force of thrown plowed snow. New products will be tested by the Department for a minimum of one winter season before approval. One or both sides shall be covered with a minimum 4.5 × 5 inches (112.5 × 125 mm) of Type XI retroreflective sheeting.

D. Type 4, Barrier Reflector. Furnish spring loaded guardrail blockout reflector (reflector plate, holding arm and holding plate) made of plastic with UV protection.

The reflector plate shall have a minimum size of 5.33 x 6.33 x 0.150 inches. One or both sides of the reflector plate shall be covered with a minimum 5.0 x 6.0 inches of Type XI retroreflective sheeting.

The total height of the Spring Loaded Guardrail Blockout Reflector shall be 26.00 inches, which includes the reflector plate, holding arm and holding plate.

The holding plate shall have 2 predrilled holes for 5/11 x 1 1/4-inch long leg screw.

The spring shall be made of 0.135 phos-music wire conform to ASTM A228-07 standard specification requirements.

E. Type 5, Barrier Reflector. Furnish L-type guardrail blockout reflector 6.50" x 11.38" (retroreflective and mounting plate) made of durable, flexible high-density polyethylene (HDPE) plastic with UV protection.

The retroreflective plate shall have a minimum size of 6.50" x 4.25" inches. One or both side of the retroreflective plate shall be covered with a minimum of 26.0 square inches Type XI retroreflective sheeting.

The mounting plate shall have two (2) 1/2" (12.7 mm) predrilled mounting holes.

~~Furnish materials according to the Department's QPL.~~

F. Type 6, Cable Barrier Reflector. Furnish nylon, or polycarbonate plastic cable barrier reflectors. Products will have a minimum of 22.5 square inches of Type XI retroreflective sheeting visible to drivers traveling in both directions. Products will either be attached to the cable or ground mounted. Ground mounted products will meet the requirements of 720.03. ~~Use products that are structurally reinforced to~~

~~withstand the force of thrown plowed snow. New products will be tested by the Department for a minimum of one winter season before approval.~~

~~Permanently label each barrier reflector to provide product identification sufficient to determine the product type, manufacturer, and brand name. Place the label in such a location on the barrier reflector so that it can be read after installation.~~

~~Furnish materials according to the Department's QPL.~~

730.017

On page 863, **Add** the following to the end of the subsection:

730.017 Wooden Box Beams. Furnish wooden box beams fabricated from 1/10 or 1/8 inch (2.54 or 3.18 mm) thick laminated veneers with the grain oriented parallel to the length of the finished beam and the veneers glued together in a continuous process with lap or scarf joints connecting successive veneers in each layer staggered throughout the thickness of the beam. A 45 degree miter shall be used for the corner joints. The adhesive used shall be a phenol-formaldehyde which conforms to ASTM D2559. The beams shall be pressure treated with a preservative meeting AWWA Standard U1, Commodity Specification F: Composite Materials.

Furnish certified material according to Supplement 1072.

730.105

On page 864, **Add** the following subsection:

730.105 Banding to Poles. Install plain stainless steel banding for sign brackets on poles, 3/4" x 0.03" with minimum 2250 pounds break strength. Install matching permanent clips of stainless steel for closing of bands. Provide banded sign-mounting brackets and hardware made of stainless steel: flared-leg brackets for poles 3"-14" diameter and straight-leg brackets for poles greater than 14" diameter. Install plastic washers to protect all band-mounted signs on signal supports.

730.18

On page 865, **Revise** the section as follows:

730.18 Retroreflective Sheeting Type I. Furnish Type I retroreflective sheeting according to ASTM D 4956, Type I, including supplemental requirement S1.

730.19

On page 865, **Revise** the first sentence of the section as follows:

730.19 Retroreflective Sheeting Type IV. Furnish Type IV retroreflective sheeting of microprismatic construction according to Supplement 1049, and according to ASTM D 4956, Type IV, including supplemental requirement S1.

730.191

On page 865, **Revise** the first paragraph of the section as follows:

730.191 Retroreflective Sheeting Reboundable. Furnish Reboundable retroreflective sheeting according to Supplement 1049, and according to ASTM D 4956, Type III, IV, or VIII including supplemental requirements S1 and S2, with watermarks or other identification marks inconspicuously incorporated into the face of the sheeting on a repeating pattern if necessary to distinguish the sheeting from other similarly appearing sheetings.

730.192

On page 865, **Delete** the section.

730.193

On page 865, **Revise** the first paragraph of the section as follows:

730.193 Retroreflective Sheeting Type IX. Furnish Type IX retroreflective sheeting according to Supplement 1049, and according to ASTM D 4956, Type IX, including supplemental requirements S1.

730.194

On page 865, **Add** the new section as follows:

730.194 Retroreflective Sheeting Type XI. Furnish Type XI retroreflective sheeting according to Supplement 1049, and according to ASTM D 4956, Type XI, including supplemental requirements S1.

Furnish materials according to the Department's QPL.

730.22

On page 866, **Add** the following sentence to the end of the paragraph:

For all flat sheet signs and after all ink has fully cured, provide a clear UV overlamine protectant film applied to the entire sign surface, sticker surface, or both that the manufacturer of the reflective sheeting guarantees according to Supplement 1049.

732.05

On Page 874, **Revise** the first paragraph as follows:

732.05 Pedestrian Signal Heads. Furnish pedestrian signal heads that conform to the ITE specifications. Ensure that the signal heads alternately display the symbol of an upraised hand in Portland orange and the symbol of a walking person in white light. Do not furnish outline style symbols. Furnish housings of polycarbonate plastic. Adequately reinforce the housings. Ensure that the lens frames are polycarbonate. ~~Furnish material for housings that consist of cast or sheet, corrosion resistant, non-ferrous metal or polycarbonate plastic, as specified in the plans. Adequately reinforce the housings. Ensure that the lens frames are non-ferrous metal or polycarbonate material.~~

732.05

On Page 874, **Revise** the eighth, ninth, and tenth paragraphs as follows:

Signal exterior surfaces shall be black. ~~Finish signal exterior surfaces black with enamel coating.~~
Finish interior surfaces of visors flat black.

~~For polycarbonate signals, p~~ Proper exterior colors shall be obtained by use of colored plastic material.

~~Also for polycarbonate signals; p~~ Pipes, spacers and fittings constructed of polycarbonate plastic may be used in lieu of galvanized steel or aluminum.

732.05

On Page 874, **Revise** Table 732.05-1 as follows:

TABLE 732.05-1

Signal Head Type	Symbol Height, Inches, (mm)	Light Source
D2	9 (229)	LED

732.05.A

On Page 875, **Replace** 732.05.A as follows:

- A. Type D2.** Furnish a single housing signal head with a lens in one piece or in two sections, one for each message. Color and mask the lens to display in portland orange the symbol of an upraised hand from the left compartment and the symbol of a walking person in white from the right compartment. Install a lamp in each compartment. The upraised hand and the walking person symbols may be integral in the same compartment.

732.05.B

On Page 875, **Replace** 732.05.B as follows:

B. Countdown.

1. Operation.

- a. Display driver shall be designed to allow individual LED failures without affecting other LEDs in the same display.
- b. The countdown timer shall be of the “smart” type, which continuously samples the timing intervals presented by the pedestrian signal load switch driver(s) in order to “learn” the programmed timing being used by the controller.
- c. During interval sampling time, the countdown timer numerical display shall be blank.
- d. Sampling time to determine interval settings shall take a maximum of two complete signal cycles.
- e. The unit shall be capable of displaying a countdown commencing at the onset of the pedestrian clearance interval and reaching zero at the end of the pedestrian clearance interval.
- f. Any interruption of the flashing pedestrian clearance display, e.g., preemption, timing plan change, during a countdown display shall immediately cause blanking of the countdown numerals. The countdown timer shall “re-learn” the pedestrian clearance interval upon return to normal service after preemption or immediately following a change in walk clearance time associated with a timing plan change.

2. Type D2. The left side of the signal section shall consist of an integral hand/walking person display. The right side compartment shall contain the countdown display.

Furnish materials according to the Department’s QPL.

732.05.C

On Page 875, **Delete** 732.05.C.

732.05.D

On Page 875 continuing to Page 876, **Delete** 732.05.D.

732.06

On page 876, **Replace** the third paragraph with the following:

The pushbutton shall be a minimum of 2 inches across in at least one dimension. The force required to activate the pushbutton shall be no greater than 5.0 pounds (22.2N) and **should not require tight grasping, pinching, or twisting of the wrist.** There shall be a visible and audible indicator that the button press has occurred.

732.11

On page 877, **Add** the following to the end of the first paragraph:

Any support that differs from the ODOT Standard Construction Drawings for Traffic Supports shall include the word "NON_STANDARD" on the pole tag; examples of non-standard As-Per-Plan supports are those with aesthetic elements such as haunched arms, fluting, and clamp-on arms. Attach two Pole Identification Tags to supports with clamshell bases: one on the pole shaft near the base plate and another above the clamshell.

732.20

On page 881, **Replace** the first sentence with the following:

Furnish risers for power service that are 1 to 1½-inch (25 to 38 mm) diameter conduit and fittings according to 725.04.

732.22

On page 881, **Revise** the eighth, tenth and eleventh sentences of the section as follows:

A 2-inch (50 mm) wide continuous outside border of fluorescent yellow retroreflective sheeting shall be applied to the front of the backplate.

Retroreflective sheeting shall be Type XI.

Prepare backplate surfaces in accordance with 630.04 prior to applying the retroreflective material.

732.22

On page 881, **Add** the following to the end of the section:

732.22 Backplates. Furnish louvered backplates constructed of wrought sheet aluminum, according to ASTM B 209 (B 209M), 6061-T6, 0.050 inch (1.3 mm) minimum thickness. Louvers shall be at least 8 percent of the total backplate area. Backplate base metal shall be anodized to maximize paint adhesion according to Mil-A-8625, Type II or Type I. Furnish backplates painted on both sides with at least two coats of flat black alkyd enamel paint or polyester powder coat (no epoxy) closely matching FED-STD-595b-37038. Furnish a backplate that extends 5 inches (125 mm) beyond the outside of the signal assembly on all sides. The overall outside shape of the installed backplate shall be rectangular. The backplate shall allow no gaps between the backplate and the signal head or between signal sections. A 2-inch (50 mm) wide continuous outside border of fluorescent yellow retroreflective sheeting shall be applied to the front of the backplate. Border shall not be applied over the louvers. Retroreflective sheeting shall be Type XI. Prepare backplate surfaces in accordance with 630.04 prior to applying the retroreflective material. All assembly and mounting hardware shall be stainless steel conforming to 730.10. If used, machine nuts shall be thread-deforming or nylon locknuts. Rivets shall not be used for mounting the backplate to the signal head. A minimum of four mounting points shall be used on each signal section for attaching the backplate. Furnish all mounting hardware.

Provide backplates conforming to SS916.

732.23

On page 881, **Add** the following subsection:

732.23 Banding Install plain stainless-steel banding for signal support and pedestal attachments, 3/4" x 0.030" with minimum 2250 pounds break strength. Install matching permanent clips of stainless steel for closing of bands. Provide banded sign-mounting brackets and hardware made of stainless steel: flared-leg brackets for poles 3"-14" diameter and straight-leg brackets for poles greater than 14" diameter. Install plastic washers to protect all band-mounted signs on signal supports.

740.04

On page 906, **Replace** the second sentence in the first paragraph as follows:

Furnish material that includes a mixture of Alkyd resins-19% minimum by weight at least one of which is solid at room temperature, and contains premixed uncoated glass beads 740.09 Type C, 30% minimum by weight, with a 1.50 minimum index of refraction.

740.04.G

On page 906, **Replace** the section as follows :

G. Pigment Content. Furnish yellow material containing lead-free Pigment Yellow 83 produced to meet the requirements of AMS-STD-595A Color No. 13538. Furnish white material containing a minimum of 10 percent Titanium Dioxide-Rutile Type 2 by weight of white pigment.

740.05

On page 907, **Add** the new section as follows:

D. Type A4 Material. Furnish Type A4 material conforming to ASTM D 4505, Level 1, Classes 2 or 3, skid resistance level A, and that have a minimum thickness at the thinnest portion of the cross-section of not less than 0.020 inch (0.50 mm), including any pre-coated adhesive layer. Furnish material to meet minimum initial wet retro reflectance values for wet conditions in accordance with Table 740.05.D-1.

Table 740.05.D-1
Minimum Initial Retroreflective Values for Wet Conditions

ASTM Testing Condition	Color	
	White	Yellow
Wet Recovery (ASTM E 2177)	250	200
Wet Continuous (ASTM E 2832)	100	75

Prequalify materials according to Supplement 1047. Furnish materials according to the Department's Approved List.

740.09.C

On page 910, **Revise** the section as follows:

C. Type C. Furnish Type C glass beads for thermoplastic material conforming to Supplement 1008 and meeting the following specification.

Ensure that the glass beads have the following gradation when tested according to Supplement 1008.

Sieve Size	Percent Retained
No. 16 (1.18 mm)	3 maximum
No. 20 (850 µm)	5 to 20
No. 40 (425 µm)	65 to 95
No. 50 (300 µm)	0 to 5

Reflective Media: Ensure that the glass beads are smooth, clear, free from any air inclusions, and scratches that might affect their functions as a retro-reflective media, and that have the characteristics listed below.

Roundness (Percent by Weight): Ensure that not more than 20 percent of the glass beads are irregular or fused spheroids and that at least 80 percent of the beads are true beads.

Index of Refraction: Ensure that the refractive index of the beads is a minimum of 1.50 as determined by the liquid immersion method at 77 °F (25 °C). Ensure that the silica content of glass beads is not less than 60 percent.

Coating (Drop-on Beads Only): Furnish glass beads that, at a minimum, have a moisture-proof coating to enhance its embedment in the applied binder film. Ensure that the beads show no tendency to absorb moisture in storage and remain free of clusters and lumps. Ensure that they flow freely from the dispensing equipment at any time when surface and atmosphere conditions are satisfactory for marking operations.

Determine the moisture-resistance of the glass beads based on AASHTO T 346 section 9.

Ensure the glass bead packaging is clearly marked "THERMO"

Use materials certified according to Supplement 1089. Furnish materials according to the Department's Approved List.

**STATE OF OHIO
DEPARTMENT OF TRANSPORTATION**

**SUPPLEMENTAL SPECIFICATION 804
FIBER OPTIC CABLE AND COMPONENTS**

January 16, 2026

804.01 Description
804.02 General
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804.04 Warranties
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804.07 Reserved for Future Use
804.08 Fan-Out Kit
804.09 Drop Cable
804.10 Fiber Optic Patch Cable
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804.14 Splice Enclosure, Butt Style and In-Line
804.15 Reserved for Future Use
804.16 Testing
804.17 Packaging and Shipping
804.18 Fiber Optic Training
804.19 Method of Measurement
804.20 Basis of Payment

804.01 Description. This work consists of furnishing and installing fiber optic cable and components. This specification describes the requirements for communication system cables, splicing, associated interface devices, and power cables.

804.02 General. Furnish new materials and equipment, being of first quality, of latest design, and completely free of defects in material and poor workmanship.

Furnish materials, cables, fiber, and hardware of the same type and manufacturer to ensure uniformity, interchangeability of components, single responsibility, and most satisfactory service.

Permanently attach to each major component, the manufacturer's name, the type or style, model number, and serial number on a weatherproof decal or tag.

Furnish cable with all fibers usable and free of surface imperfections, material and inclusions in order to meet at least 100 percent of the optical, mechanical, and environmental requirements.

Provide work that meets at least the applicable provisions of the following industry documents:

- A.** U.S Department of Agriculture, Rural Electrification Administration Specification for Totally Filled Optical Fiber Cable, PE-90.
- B.** EIA/TIA-455-a, Standard Test Procedure for Fiber Optic Fibers, Cables, Transducers, Sensors, Connecting and Terminating Devices, and Other Fiber Optic Components.
- C.** EIA/TIA-455-25a, Repeated Impact Testing of Fiber Optic Cables and Cable Assemblies.
- D.** EIA-455-28b, Method for Measuring Dynamic Tensile Strength of Optical Fibers.
- E.** EIA-455-33a, Fiber Optic Cable Tensile Loading and Bending Test.
- F.** EIA-455-34, Interconnection Device Insertion Loss Test.
- G.** EIA-455-41, Compressive Loading Resistance of Fiber Optic Cables.
- H.** EIA/TIA-455-81a, Compound Flow (Drip) Test for Filled Fiber Optic Cable.
- I.** EIA/TIA-455-82b, Fluid Penetration Test for Fluid-Blocked Fiber Optic Cable.
- J.** EIA-455-89a, Fiber Optic Cable Jacket Elongation and Tensile Strength.
- K.** EIA-455-95, Absolute Optical Power Test for Optical Fibers and Cables.
- L.** EIA-455-104, Fiber Optic Cable Cyclic Flexing Test.
- M.** EIA/TIA-598, Color Coding of Fiber Optic Cables.
- N.** EIA/ANSI-472 Generic Requirement for Optical Fiber and Optical Fiber Cables.
- O.** ANSI/ICEA S-87-640.
- P.** ANSI/TIA/EIA-526-7: OFSTP-7 Measurement of Optical Power Loss of Installed Single-Mode Fiber Cable Plant.

804.03 Materials. Furnish materials conforming to 904 and as listed on the Department's Traffic Authorized Products (TAP) List. Provide all materials required for the installation and splicing of the specified communications cables, power cables, and associated interface devices. Furnish materials, cables, fiber, and hardware that is commercially-available items.

804.04 Manufacturer Warranties. Provide a three year manufacturer's warranty to all items contained in this specification with the exception of fiber optic cable, that is warranted by the manufacturer for a period of 25 years. This 25 year transferrable warranty covers the cable against significant degradation of the fiber caused by cable defects incurred only during the manufacturing process and does not cover connectivity to other fiber cable or components. In order to guarantee the

ability of the manufacturer to provide the required warranty the contractor shall be a certified installer of the manufacturer and be listed on ODOT's prequalification list for Work Type 55, Fiber Optic Installation, Splicing, Termination and Testing.

804.05 Fiber Optic Cable. Furnish fiber optic cable that conforms to 904.01 or 904.02 and is listed on the Department's TAP.

Provide written manufacturer certification that the offered cable complies with all optical, electrical and mechanical requirements set forth in this and all referenced specifications.

Ensure any deviation of the offered cable from the requirements is conspicuously noted by colored highlights, callout bubbles, or both in the submitted material documentation.

Provide cables are free of material or manufacturing defects and dimensional non-uniformity that would:

5. Interfere with the cable installation using acceptable installation practices.
6. Degrade the transmission performance and environmental resistance after installation.
7. Inhibit proper connection to interfacing elements.
8. Otherwise yield an inferior or inoperative installation.

804.05.A. Cable Wraps. Furnish and install cable wraps (markers) on the fiber optic cable installed in each pull box (median and round).

Provide wraps that:

1. Are 4 in (101.6 mm) long "snap on type", UV stabilized, and solid color throughout.
2. The wording includes no advertising logo or message.

Provide wraps with color and text as follows:

3. For ODOT cable: yellow background with black print text "ODOT fiber optic cable – ITS 614-387-4113".

Include the fiber count of the appropriate fiber that the cable wraps are placed upon.

804.05.B. Cable Installation. The cable shall be installed in continuous lengths from splice point to splice point as per the plans. Exercise extreme caution when ordering cable in order to ensure that no additional splicing, beyond that indicated by the plans, is required.

If it is believed that additional splices are required, immediately notify the Engineer for resolution.

Certification is required by the cable manufacturer to perform installation with the cable manufacturers recommended procedures including at least the following:

1. Proper attachment to the cable strength elements for pulling during installation.
2. Cable tensile limitations and the tension monitoring procedures.
3. Cable bending radius limitations.

Submit documentation to the Engineer showing that one of the following certifications is held at the time of the contract letting date:

4. Building Industry Consulting Service International (BICSI) – All fiber installers must be Installer 2, Optical Fiber certified and at least one installer BICSI Technician certified and the BICSI Technician designated to oversee all fiber optic cable operations.

5. Electronics Technician Association (ETA) – All fiber installers must be FOI certified and at least one installer FOT-OSP certified and all fiber optic cable operations overseen by the FOT-OSP Technician.

6. Fiber Optic Association (FOA) – All fiber installers must be CFOT certified and at least one installer shall be CFOS certified and the CFOS assigned to oversee all fiber projects.

Furnish certification to the Engineer prior to installing any cable.

Comply with the cable manufacturer's specifications at all times.

Do not exceed the pulling tension and bending radii limitation for optical fiber cables under any circumstances.

Use large diameter wheels, pulling sheaves, and cable guides to maintain the appropriate bending radius.

Provide tension monitoring at all times during the pulling operation by using commercial dynamometers, load cell instruments, or shearing pins.

804.05.B.1. Air-blown/Pushable Fiber Optic Cable Installation. Follow all manufacturer recommended procedures when performing installation of air-blown fiber. Have a manufacturer representative present for the installation of the first two complete runs of the air-blown fiber optic cable from pull-box to pull-box.

804.05.B.2. Slack Installation. The Department will require proper storage of slack cable, both long term and short term.

Do not leave slack cable lying free on the ground or floor of a building except during the actual pulling process.

Neatly coil the cable, adhering to the bend radius requirements as directed by the Engineer.

Submit certified shop drawings of the materials and installation of the aerial hardware conforming to 625.06.

The fiber optic cable used in the slack installation (both aerial and underground) and mounting hardware is included with the quantity for the fiber optic cable.

804.05.B.2.A. Underground Slack Installation. In underground installations, coil 150 ft (45.72 m) of fiber slack in each 48 in or 32 in (1.22 m or 0.81 m) pull box. The slack coil should be easily removed from the pull box and not have other cables passing through the coil. If the Engineer determines the slack is not stored properly, remove and reinstall the fiber, other cables, or both in conflict to the satisfaction of the Engineer at no cost to the Department. Notify the Engineer if this amount of slack is not capable of being stored and the Engineer will provide direction.

804.05.B.2.B. Aerial Slack Installation. Where slack installation is designated, but a splice enclosure is not designated, provide a 150 ft in-line aerial mounted slack cable installation.

Where an aerial splice enclosure is shown, provide 150 ft (75 ft prior, 75 ft after) of aerial mounted slack for trunk cable entering the splice enclosure. Provide 75 ft of slack for the drop cable.

Where the fiber cable is being brought aerially into an underground installation, provide 150 ft of slack for each cable run entering the designated pull box, or as directed by the Engineer. The slack coil should be easily removed from the pull box and not have other cables passing through the coil. If the Engineer determines the slack is not stored properly remove and reinstall the fiber, other cables, or both in conflict to the satisfaction of the Engineer at no cost to the Department.

804.08 Fan-Out Kit. Fan out and apply connectors to all drop cable fibers as specified in the termination details, or as directed by the Engineer, and insert them into the termination panel. Color coded, Pre-connectorized, pre-tested pigtails may also be used.

Connectors attached to fibers from the fan-out kit are incidental to the fan-out kit.

804.09 Drop Cable. Drop cables are used to connect the fiber trunk cable to termination point.

Leave unused drop cable buffer tubes and fibers for future use.

Place spare drop cable fibers at the splice enclosure end inside of the enclosure with sufficient excess to provide at least two service loops. Remove at least 10 ft (3.05 m) of outer jacket to accomplish this.

Terminate drop cable fibers and buffer tubes at the termination panel or leave coiled for future use as detailed in the fiber termination drawings, or as directed by the Engineer.

Provide strain relief (cable support assembly) for drop cables routed down through/on a pole from aerial interconnect.

Cost of the cable support assembly is incidental to the bid item price of the drop cable.

Store all drop cable slack underground in the nearest pull box.

To provide strain relief for the termination panel, and to help protect the cable from accidental pulling, secure drop cable to the rack, cabinet, or wall using a tie wrap, or as directed by the Engineer.

Ensure any means of securing the cable does not apply stress to the drop cable.

804.10 Fiber Optic Patch Cable. Provide patch cables for connections to the fiber termination panels from optical equipment.

Provide patch cable connectors that match the connectors of the termination panel and optical equipment.

Use patch cables that are duplex unless otherwise directed by the Engineer.

Furnish patch cable connector polish that is UPC unless otherwise directed by the Engineer.

Furnish patch cords that are 9.84 ft (3 m) in length unless otherwise directed by the Engineer.

804.11 Fiber Termination Panel. Use a termination panel listed on the TAP. House in the termination panel all fiber optic pigtails, fiber optic connectors/connector modules, fiber optic patch cords, and splice trays.

All fiber optic pigtails, fiber optic connectors, fiber optic patch cords, splice trays, external strain relief, pigtails, and fusion splices are incidental to the unit cost of the fiber optic termination panel.

Provide pigtails that are 13.12 ft (4 m) in length unless otherwise directed by the Engineer.

Provide duplex 9.84 ft (3 m) patch cables of the appropriate fiber type and fiber connector in a quantity that is half of the number of fiber optic connectors available on the termination panel, or as directed by the Engineer.

Install fiber and splice trays in the following manner:

1. Secure fiber entering the termination panel to an external strain relief bracket.
2. Route buffer tubes as they enter the termination panel to ensure no kinks, binds, pinches, or extreme bends are introduced.

3. The Department considers the termination panel unacceptable if any buffer tube is kinked or damaged. Correct, at no cost to the Department, as directed by the Engineer.

4. Ensure all buffer tubes and pigtails enter the splice tray on the same side.

5. Remove at least 10 ft (3.05 m) of outer jacket from the fiber optic cable entering the termination panel. Remove at least 2 ft (0.61 m) of buffer tube to expose the bare fibers inside that will be contained by the splice tray. Coil the remaining buffer tube inside the termination panel to provide service loops for future maintenance.

6. Remove at least 2 ft (0.61 m) of outer jacket from the pigtail(s) to expose the bare fibers inside that will be contained by the splice tray. Coil the remaining pigtail inside the termination panel to provide service loops for future maintenance.

7. Protect all fusion splices by a heat shrink splice sleeve with a stainless steel rod and secure in the splice tray in a splice sleeve holder

Install the termination panel in the cabinet as described below:

804.11.A. NEMA Cabinet. Utilize a termination panel listed on the TAP. Attach termination panel to the inside wall of the cabinet.

804.11.B. Caltrans Signal Cabinet (332, 336). Utilize a 19-inch rack mount termination panel listed on the TAP

804.11.C. Caltrans (334) or AASHTO/ITE/NEMA ITS Cabinet. Utilize a 19-inch rack mount termination panel listed on the TAP for Cabinet use.

Mount the termination panel per the ITS Standard Construction Drawings.

Install all fiber optic cable, buffer tubes, pigtails, patch cords, and splice trays in a neat and orderly fashion and secure to eliminate any interference with the removal, replacement, operation, and maintenance of all other items located in the cabinet.

Perform all splicing based on fiber termination drawings found in the plan set, or as directed by the Engineer.

804.11.D. Data Center. Utilize a 19-inch rack mount termination panel listed on the TAP for Data Center use.

Install all fiber optic cable, buffer tubes, pigtails, patch cords, and splice trays in a neat and orderly fashion and secure to eliminate any interference with the removal, replacement, operation, and maintenance of all other items located in the rack.

Perform all splicing based on fiber termination drawings found in the plan set, or as directed by the Engineer.

804.12 Fusion Splicing. All splices shall be performed using a core aligning fusion splicer or a mass (ribbon) fusion splicer. Use of single fiber cladding alignment splicers is not permitted.

Splice only at locations identified in the plans, or as directed by the Engineer.

Splice fibers as specified in the termination details, splice enclosure details, or as directed by the Engineer.

Ensure all splicing equipment is in good working order, properly calibrated, and meets all industry standards and safety regulations. Provide calibration data to the Engineer upon request.

Perform cable preparation, closure installation, and splicing in accordance with accepted and approved industry and manufacturer standards in addition to the Department's standards.

Upon completion of the splicing operation, deposit all waste material in suitable containers, removed from the job site, and disposed of in an environmentally acceptable manner.

Ensure compliance with TIA-568.3-D. Additionally, no individual splice loss measured in a single direction shall exceed 0.2 dB. Do not exceed 0.05 dB for the estimated loss as read by the fusion splicer.

804.13 Fiber Optic Connectors.

Provide optical fiber connectors as required for the equipment and termination panel.

Connectors shall be pigtailed or splice on style. The Engineer may allow the use of other style connectors in unique cases where pigtailed or splice on style connectors are not suitable.

804.14 Splice Enclosure, Butt Style and In-Line. Use a splice enclosure listed on the TAP. Perform cable preparation as described below.

1. Use ring cut methodology.
2. Cut back trunk cable jacketing at least 20 ft (6.1 m) to allow buffer tubes to be stored uncut/unopened with at least two service loops inside the enclosure.
3. Open the trunk cable buffer tube that is to be spliced and expose at least 4 ft (1.22 m) of the bare fibers. Cut the bare fibers at the midpoint (at least 2 ft (0.61 m) on each side after the cut) to splice on to the drop cable.
4. Provide drop cable(s) that have at least 10 ft (3.05 m) of outer jacket removed and 2 ft (0.61 m) of buffer tube removed to expose the bare fibers.
5. Ensure all buffer tubes enter the splice trays on the same side.

6. Ensure the remaining trunk cable fibers in the opened tube remain uncut and stored in the splice tray.

7. The only trunk cable fibers that are to be cut are the trunk cable fibers being spliced to the drop cable.

8. Cost for the splices, splice trays, and other materials are incidental to the fiber optic cable being spliced. If all fiber optic cable is existing, then splices will be itemized separately.

The Engineer may allow a full cut of the trunk cable at the splice enclosure location. Obtain written permission from the Engineer before proceeding with this method. The additional splices, splice trays, and other materials are incidental to the cost of the splice enclosure.

804.15 For future use

804.16 Testing. All testing listed below is incidental to the cost of new fiber optic cable and completed and approved, prior to acceptance of the fiber optic cable by the Engineer.

The testing listed below may also be used to check if existing cable is still suitable for use. If this is the case, the item will be paid as a lump sum (Item 804E38000).

804.16.A. Pre-Installation Testing (Factory and Reel Testing). Obtain factory test data sheets for each reel of optical fiber cable delivered.

Test each reel using an Optical Time Domain Reflectometer (OTDR) to prove no damage was incurred during shipping / transportation and all fibers meet the applicable specifications.

If requested provide the factory test results and the pre-installation reel test results to the Engineer prior to installation as part of final acceptance of the section of cable for payment.

804.16.B. Post-Installation Testing. Test all fibers with an Optical Time Domain Reflectometer (OTDR).

Coordinate with the Engineer for specific locations for the testing.

Provide the Engineer written notification at least 14 calendar days before testing the fiber optic cable.

Do not begin testing until written authorization and fiber locations and test points have been received from the Engineer.

Perform tests as described below:

1. Post-Installation Testing when splicing and terminating was performed

Test all single mode fiber cables at both 1310 nm and 1550 nm after installation. Perform bidirectional testing. Use a launch cable of at least 100 meters.

Fibers will be considered acceptable if the OTDR trace for that fiber shows an end to end loss of less than:

$$xx \text{ dB} + yy (0.2) \text{ dB}$$

yy = the number of splices

$$xx = (\text{length of run}) * (\text{fiber attenuation at the specified wavelength})$$

In addition to the requirements of TIA-568.3-D no individual splice may show a loss of greater than 0.2 dB regardless of the total accumulated attenuation of the fiber.

Perform any additional tests required by the ANSI/TIA/EIA standard and include in the written test report.

2. Post-Installation Testing when no splicing and terminating was performed (Bare fiber testing)

Test all single mode fiber cables at both 1310 nm and 1550 nm after installation. Unidirectional testing is acceptable. Use a launch cable of at least 100 meters. Provide actual cable footage marks for beginning and end of each cable run to verify lengths given by OTDR.

Fibers will be considered acceptable if the OTDR trace for that fiber verifies the cable footage marks provided for the run, the attenuation matches the intrinsic attenuation of the fiber for the tested wavelengths and length of run, and no attenuation is shown that correlates to bending losses (improper installation with bend radius exceeded) or other cable damage from installation.

Perform any additional tests required by the ANSI/TIA/EIA standard and include in the written test report.

Test each fiber strand as specified above. Overall, the OTDR test results are made up of the wavelength of the conducted test, the link length, attenuation, cable identification, and the locations of the near end, the far end and each splice point or points of discontinuity. Test names for near end and far end shall be descriptive and clear to the test reviewer. Names shall include a site name as provided by the Engineer, stationing or mile marker of test location, and cardinal direction of the test.

Submit electronic format results for each fiber strand as part of the final documentation, prior to acceptance. Each test result must clearly identify which fiber was tested using the naming conventions above.

Submit to the Engineer all test results in electronic format provided by the manufacturer of the test equipment used to perform the tests.

Provide the results so they can be viewed without the use of special software or additional equipment, unless the software or equipment is also delivered to the Engineer.

If software is provided, a separate pdf document showing all fiber test results must be submitted to be placed in the project file.

Any software or equipment delivered will become the permanent property of the maintaining agency and will not be returned.

If a fiber or cable fails to meet the above requirements, replace or correct at no expense to the Department.

Test results include a record of wavelength, fiber type, fiber and bundle number, test equipment and model number, date reference setup, and operator (crew members).

In the event that test results are not satisfactory perform corrective work as directed by the Engineer. After corrective work is completed perform additional tests as directed by the Engineer.

The Engineer will require the permission and presence of the Contractor prior to allowing tests related to connected equipment of others. Perform only that testing required to prove that the fiber connections are correct.

804.17 Packaging and Shipping. Package the completed cable for shipment on wooden reels.

Wrap the cable and reel in a water resistant covering.

Securely fasten each end of the cable to the reel to prevent the cable from coming loose during transit.

At least 6 ft (1.83 m) of cable length on each end of the cable shall be accessible for testing.

Seal both ends of the cable to prevent the ingress of moisture.

Provide on each cable reel a durable weatherproof label or tag showing the manufacturer's name, the cable type, and the actual length of cable on the reel, the Contractor's name, the contract number, and the reel number.

Include a shipping record in a weatherproof envelope showing the above information and also include the date of manufacture, cable characteristics (size, attenuation, etc.), cable identification number and any other pertinent information.

Furnish a reel with at least a diameter of thirty times the diameter of the cable.

Furnish the optical fiber cable in one continuous length per reel with no factory splices in the fiber.

Mark each reel to indicate the direction the reel and rolled to prevent loosening of the cable.

Furnish installation procedures and technical support information at the time of delivery.

804.18 Fiber Optic Training. Provide both formal classroom and "in-field" operations and maintenance training for up to 20 designated personnel on the fiber optic cable system and its components. Coordinate all training at a mutually agreed upon time and location. Provide training material generated for each course with "hand-outs" for each attendee. Provide hand-outs that serve not only as subject guidance, but as quick-reference material for future use. Deliver all course material, in reproducible form, to the Engineer immediately following course completion. Provide two DVD copies of the training program.

Submit for Engineer's approval at least two weeks prior to the proposed starting date, the schedule for such training.

804.18.A. Classroom Training. Train personnel to install, splice, and test fiber optic cable. Provide training of at least 32 hours. Provide 32 hours of fiber optic training in a four day course taught by personnel from the manufacturer of the fiber optic cable. Include at least the following topics in the course: safety, theory, fiber types, cable placement techniques, fiber optic sheath removal, hardware types, fault location with an Optical Time Domain Reflectometer (OTDR), Dense Wave Division Multiplexing (DWDM), splicing and termination methods and applications, theory and principles of splicing, fusion splicing, mechanical splicing, cable preparation procedures for installing optical connectors, installing connectors, mocking up a typical traffic control system, cable system testing and documentation, attenuation test procedures, and overall cable system maintenance. Include lectures, demonstrations, and hands-on experience with the equipment. Provide students hand-outs to use as guides for field applications.

804.18.B. Field Training. Provide field training. Provide training consisting of at least the following: eight hours of fiber optic communications plant trouble shooting including fault location using an optical power meter/light source and using an Optical Time Domain Reflectometer (OTDR) cable tester, four hours of field splicing (that includes re-enterable rotary mechanical splicing (for emergency temporary repair) and fusion splicing techniques), and four hours of training on the installation, maintenance, and replacement of fiber interconnect centers.

804.18.C. Course Outline and Workbooks. For both types of training, submit four copies of all proposed training material for approval, and include course curriculums, draft manuals, and resumes of instructors. Furnish submittals to the Engineer at least four weeks prior to the scheduled starting date. For the classroom training, provide for each participant a course workbook in loose-leaf format in a three ring binder.

804.19 Method of Measurement. The Department will measure Fiber Optic Cable by the number of feet, including slack, and will include the costs for equipment, fusion splices, labor and miscellaneous materials.

The Department will measure Fiber Optic Cable, Airblown / Pushable by the number of feet, including slack, and will include the costs for equipment, fusion splices, labor and miscellaneous materials.

The Department will measure Fan-Out Kit by the number of each, and will include all costs for material, equipment, tools and labor to provide and install the fan-out kit.

The Department will measure Drop Cable by the number of each or by the number of feet, depending on the pay item used, and will include all slack, costs for material, equipment, tools and labor to provide and install the drop cable.

The Department will measure Fiber Optic Patch Cable by the number of each and will include supplying and installing connectors on all ends of the patch cable.

The Department will measure Fiber Termination Panel by the number of each, and will include all materials, MTP Module, splice trays, pre-terminated MTP cables, patch cables, tools and labor to provide and install a termination panel.

The Department will measure Fusion Splice by the number of each, and will include all costs for equipment, material and labor to provide a permanent fused splice including splice protection.

The Department will measure Fiber Optic Connector by the number of each.

The Department will measure Splice Enclosure by the number of each and will include fusion splices and aerial or pull box wall mounting brackets as required.

The Department will measure Fiber Optic Training by the number of each.

804.20 Basis of Payment. The Department will pay for accepted quantities at the contract prices as follows:

Item	Unit	Description
804	Foot	Fiber Optic Cable, _____ Fiber
804	Foot	Fiber Optic Cable, Airblown / Pushable, _____ Fiber
804	Each	Fan-Out Kit, _____ Fiber
804	Each	Drop Cable, _____ Fiber
804	Foot	Drop Cable, _____ Fiber
804	Each	Fiber Optic Patch Cable, _____ Fiber
804	Each	Fiber Termination Panel, _____ Fiber
804	Each	Fusion Splice
804	Each	Fiber Optic Connector
804	Each	Splice Enclosure
804	Each	Fiber Optic Training

Designer Note: This specification shall be used for any project that contains Intelligent Transportation System (ITS) Devices and Components.

**STATE OF OHIO
DEPARTMENT OF TRANSPORTATION**

**SUPPLEMENTAL SPECIFICATION 809
INTELLIGENT TRANSPORTATION SYSTEM (ITS) DEVICES AND COMPONENTS**

January 16, 2026

- 809.01 Description**
- 809.02 Materials**
- 809.03 Electrical Equipment**
- 809.04 Variable Speed Limit Signs (VSL)**
- 809.05 CCTV IP-Camera Systems**
- 809.06 CCTV Poles**
- 809.07 CCTV Lowering Units**
- 809.08 Dynamic Message Signs**
- 809.09 ITS Cabinets**
- 809.10 Traffic Signal Equipment**
- 809.11 Ramp Metering**
- 809.12 Detection**
- 809.13 Communications**
- 809.14 ITS Device Downtime**
- 809.15 ITS Pull Boxes and Junction Boxes**
- 809.16 GPS Coordinates / As-Built Plans**
- 809.17 Maintaining ITS During Construction**
- 809.18 Wrong Way Detection Equipment**
- 809.19 Emergency Vehicle Preemption**
- 809.20 ITS Communication Conduit and Accessories**
- 809.21 Training**
- 809.22 Method of Measurement**
- 809.23 Basis of Payment**

809.01 Description. This work consists of furnishing and installing ITS devices and components for Freeway Management Systems (FMS) and Traffic Signal Systems (TSS), including Electrical Equipment, Variable Speed Limit signs, Closed-Circuit Television (CCTV) Camera Systems, Poles and Lowering Units, Dynamic Message Signs (DMS), ITS Cabinets, Ramp Metering, Detection, Communication, Emergency Vehicle Preemption, Traffic Signal Equipment, Wrong Way Detection Equipment, and Emergency Vehicle Preemption and inclusive of software licenses, controllers, cable, testing, and warranty for each device.

809.02 Materials. Furnish materials and equipment in accordance with 909.02 and the following:

CCTV Camera Systems _____	909.03
CCTV Poles _____	909.04
CCTV Lowering Units _____	909.05

DMS _____	909.06
ITS Cabinets _____	909.07
Ramp Metering _____	909.08
Detection _____	909.09
Communication _____	909.10
Emergency Vehicle Preemption _____	909.11
Wrong Way Detection Equipment _____	909.12
Traffic Signal Equipment _____	909.13
Multiple Cell Conduits, Micro-Duct Pathways, and Micro-Duct Innerducts _____	909.14
ITS Pull Boxes and Junction Boxes _____	909.15
Electrical Equipment _____	909.16
Variable Speed Limit Signs _____	909.17

Furnish products listed on the Department's Traffic Authorized Products (TAP) list as shown on the Office of Materials Management and Office of Traffic Operations website at the time of bid.

Provide electronic submittals containing vendor part numbers and all materials included with project bid items and reference numbers to the Engineer and the Office of Traffic Operations by the time of the pre-construction meeting. The Department will not consider any submittal not on the TAP list at the time of bid.

Attach a permanent weatherproof decal or tag to each major component of the equipment that includes the manufacturer's name, type or style, model number, and serial number.

Install all materials in accordance with the manufacturer's recommendations. The Engineer will notify CEN.ITS.Lab@dot.ohio.gov when materials are installed and available for inspection.

809.02.A. Material Warranty. Provide a written warranty at the pre-construction meeting to warrant all equipment parts covered within this specification for a minimum of five years from time of original project completion date, at the time of bid, against manufacturer's defects or failure in design, materials, workmanship, or a combination. Include in the written warranty documentation, project number and description, date of original completion date of project, and warranty end date. Provide labor to make warranty repairs while the project is active. The Department will assume labor responsibility once the project is closed.

Ensure that each device has one permanent, weatherproof label indicating vendor, date of shipment, and warranty end date. The Department will not pay for any item missing this label. Attach the label in a location not in direct contact with the outdoor environment.

Furnish an electronic copy of all warranty documentation to the Department.

Upon notification from the Department to make warranty repairs while the project is active, provide personnel on site to diagnose and make the site operational within the downtime requirements in section 809.14 and maintaining ITS during construction requirements in section 809.17. If the device does not have downtime requirements in section 809.14, make the site operational within 3 business

days. If additional parts are required to repair in the correct manner as installed, an additional 20 business days may be given to receive the parts and completely resolve the issue in the correct manner. If the problem is not resolved within the downtime requirements, the Department may assess disincentives per 809.17. The Department will accept a written letter from the part manufacturer on the manufacturer's letter head stating estimated lead time on the parts for a time extension for the complete repair of the unit.

This warranty responsibility to the Department may be transferred to the manufacturer or third party vendor if written documentation is provided and accepted by the Department.

809.03 Electrical Equipment. Furnish products in accordance with 809.02.

809.03.A. Step-Down Transformer. Furnish and install a step-down transformer and support per standard construction drawing ITS-50.11. Include all components of the transformer and support, including the transformer, support, support foundations, ground rods, conduit and all other items required to provide, test and accept a functional step-down transformer and support.

Step-down transformers shall be 240/ 480V primary and 120/ 240V secondary.

Conduit connections to the transformer shall be watertight and shall use the hubs listed on the enclosure UL labels. Duct seal shall be installed on each conduit connection.

809.03.B. Disconnect. Furnish disconnect switches with the fuse size and service rating as specified in the plan. Disconnect safety switch enclosures shall be sized appropriately to fit the number and size of conduit connections required. Apply a durable, permanent and weatherproof label with "ODOT ITS" on the enclosure.

Conduit connections to the disconnect switches shall be watertight and shall use the hubs listed on the enclosure UL labels. Duct seal shall be installed on each conduit connection.

809.03.C. Power Service. Furnish and install all equipment necessary to provide complete electrical service to each signal installation as shown on the plans. Make all necessary arrangements with the local electrical power company for connections to establish electrical service. Charges made by the power company for establishing of the account, extension of company facilities, connection of customer equipment to the power company facilities and energy will be borne by the maintaining agency. This compensation is for invoiced cost without mark-up.

Power service consists of equipment to provide a pole attached wiring raceway and disconnect switch for use with power cable routed from the service entrance to the controller cabinet. The power service installation includes a weatherhead, conduit and fittings, a disconnect switch with enclosure per 809.03.B, meter base and attachment clamps. Apply a durable, permanent and weatherproof label with the power service address above the meter on the enclosure.. Apply a durable, permanent, weatherproof adhesive arc and shock hazard warning label to the outside of each electrical enclosure that contains applicable voltage and/or arc hazard levels. When an apparatus enclosure contains circuits above the 600-volt class, mark the enclosure in white letters on a red plastic placard with the warning "DANGER-HIGH VOLTAGE" on each enclosure door.

Bend the conduit away from the pole at the top and bottom of the riser to allow the conduit to enter straight into the enclosure or meter base hub, and to provide space for the weatherhead when the riser is pulled tight against the pole. Furnish watertight conduit connections between the meter base and enclosure by using conduit hubs listed on the enclosure UL label.

Paint conduit risers mounted on painted poles to match the poles.

809.04 Variable Speed Limit Signs (VSLs). Furnish and install a monochromatic LED VSL sign in accordance with 809.02. An LED VSL sign contains display pixels constructed solely of high-intensity discrete LEDs.

The manufacturer of the VSL must utilize a documented certified welding procedure.

The manufacturer of the VSL must have a customer service department that provides technical support and services for the manufacturer's VSL systems. The customer service department must have technical support help desk that may be contacted via telephone, e-mail or fax.

The manufacturer of the VSL shall provide verifiable documentation to support compliance to the required qualifications.

809.04.A. Legibility

Illuminated digits displayed on the VSL shall be legible within a distance range of 150 feet to 1000 feet from the display face under the following conditions:

- When the VSL is mounted so its bottom side is positioned between five feet and 20 feet above a level roadway surface.
- Whenever the VSL is displaying numbers that are 18-inches high.
- 24 hours per day and in most normally encountered weather conditions.
- During dawn and dusk hours when sunlight is shining directly on the display face or when the sun is directly behind (silhouetting) the VSL.
- When viewed by motorists and travelers that have 20-20 corrected vision.
- When the motorist eye level is 3 feet to 12 feet above the roadway surface.

809.04.B Materials.

The sign housing shall be constructed to have a neat, professional appearance. The housing shall protect internal components from rain, ice, dust, and corrosion in accordance with NEMA enclosure Type 3R standards. The sign housing shall be designed to prevent accumulation of moisture on the exterior.

The VSL housing bottom side shall contain small weep holes for draining any water that may accumulate due to condensation. Weep holes and ventilation ports shall be screened to prevent the entrance of insects and small animals.

LED display modules shall be mounted parallel to the front wall, such that the LED viewing area is optimized.

Each VSL shall be controlled and monitored by its own sign controller. The sign controller shall be a microprocessor-based system, which does not require continuous communication with VSL control software to perform most VSL control functions.

Coordinate with ODOT to integrate each VSL into the ODOT ATMS software allowing full remote access and control by ODOT TMC staff.

809.04.C Wiring and Grounding.

Power and signal entrances shall be located on the rear or bottom wall of the VSL housing. The signal and power cable shall terminate into terminal blocks mounted inside the housing.

Wiring inside the VSL shall be installed in a neat and professional manner. Wiring shall not impede the removal of display modules, power supplies, environmental control equipment, and other sign components. Wires shall not contact or bend around sharp metal edges. All wiring shall conform to the National Electrical Code.

One earth ground lug that is electrically bonded to the VSL housing shall be provided inside the VSL housing. The lug shall be installed near the power entrance location on the rear wall of the VSL housing. The contractor shall provide the balance of materials and services needed to properly earth ground the VSL. All earth grounding shall conform to the National Electrical Code.

The VSL shall be equipped with TVSS (transient-voltage surge suppressor) on all power, signal and communications cable entering the VSL housing. The TVSSs shall be of type and voltage ratings appropriate for the related voltage and frequency.

809.05 CCTV IP-Camera Systems. Furnish products in accordance with 809.02. Provide all CCTV camera assembly components warranted by a single manufacturer or vendor.

Furnish all tools, equipment, materials, supplies, manufactured articles, labor, workmanship, testing, documentation, and incidental items and perform all operations and equipment integration necessary to provide a complete and fully operational IP-Camera site.

Provide the IP-Camera with unpressurized dome or other type housing, pan/tilt/zoom (PTZ) unit, all necessary connectors, and cables of appropriate length.

Provide the Engineer with a written inventory, by location, including serial numbers of items and the condition that they were received. The Department will not take ownership of the equipment when it is received.

Provide all labor and equipment necessary to move inventory out of the designated storage facility and to transport it to the installation location.

Install all items according to the manufacturer's directions or as directed by the Engineer.

Place the CCTV IP-Camera system at roadside locations meeting NEMA Type 4X and IP66 environmental standards.

The Department will furnish the network equipment and install, configure, and test the video and network equipment.

Mount the CCTV IP-Camera a maximum height of 100 ft (30.5 m). Install composite single jacket cable compatible with the camera lowering unit.

Equip all proposed conductive cables with surge suppression capable of withstanding a minimum 1 kA surge current. The cost of this surge suppression is incidental to the unit bid price of the camera.

In addition to the camera, provide Power-over-Ethernet (PoE) injector conforming to the camera manufacturer's requirements including power, temperature, and humidity. Provide PoE injector with grounding prong and conductor in the power cord. Cameras shall be bonded to ground by a continuous grounding conductor to either the cabinet ground, the pole ground, the pole ground by bonding to the pole, or directly to a ground rod. Furnish and install grounding conductors as needed. All bonds to ground shall be tested to be less than 25 ohms.

Furnish appropriate power and communication cables required by the manufacturer. Size power cables to meet the applicable National Electrical Code (NEC) requirements. Furnish appropriate communication cables from the IP-Camera assembly to the network communication devices (e.g. fiber optic, twisted pair) and meet the manufacturer's minimum size, bandwidth, or both requirements. Furnish outdoor NEC rated CAT 5e or composite cable for exterior camera.

Base the length of the cables on the CCTV pole length and necessary distance to be routed into the ITS cabinet.

Notify the Department at least five working days prior to installation of the CCTV IP-Camera assembly. The Department may be present to establish the appropriate settings for the camera and Pan/Tilt/Zoom (PTZ) positions.

Furnish messenger wire for all overhead wiring of CCTV IP-Camera cable. Attach cables to messenger wire as in accordance with Standard Construction Drawing TC-85.22.

Provide documentation detailing the technical and operational aspects of the completed system. Documentation includes system diagrams, cabling diagrams, all field engineering notes specific to each installed IP-Camera assembly, and any other documentation as required by the Department.

809.05.A. Unit Testing. Provide one complete CCTV IP-Camera unit, including software, to the Department for testing of firmware in advance of installation. Obtain the Department's approval prior to ordering additional units.

The testing process will include IP-Camera cable testing and IP-Camera local control testing. Notify the Department at least five working days in advance of the proposed date for cable testing and local control testing.

1. Cable Testing. Furnish all equipment, appliances, and labor necessary to test the installed cable between the CCTV IP-Camera assembly and the network communication device. Prior to making any connections:

a. Verify exterior CCTV IP-Camera Category 5e (CAT 5e) or greater shielded twisted-pair cable is outdoor National Electrical Code (NEC) rated and is compliant to Telecommunications Industry Association (TIA).

b. Perform a cable analysis to ANSI/TIA-568-C.2 standards of CAT 5e or greater cabling and a continuity test on the CCTV IP-Camera cable, that must not exhibit any discontinuities, including openings, shorts, crimps, or defects.

c. Replace any cable that fails to meet these parameters, or if any testing reveals defects in the cable, and retest new cable as specified in 809.05.A.1.a and 809.05.A.1.b.

2. Local Control Testing. Perform local field operational tests at the CCTV IP-Camera assembly site conforming to the test plans, after the IP-Camera assembly installation that includes the camera hardware, power supply, and connecting cable.

a. Verify installation has been completed according to the Contract Documents.

b. Verify the quality and tightness of ground and surge protector connections.

c. Verify all power supply voltages and outputs meet 909.03.A.4

d. Connect devices to the power source.

e. Verify installation of specified cables and connections between the IP-Camera and the cabinet.

f. Verify presence of RJ45 connectors on Ethernet cables and Bayonet Neill-Concelman (BNC) compression fitting on coaxial camera cables.

g. Connect to the IP-Camera through a laptop Ethernet connection and establish communication with the IP-Camera using Transmission Control Protocol/Internet Protocol-HyperText Transfer Protocol (TCP/IP-HTTP).

h. Set the IP-Camera address.

i. Verify the presence of industry compliant video image (i.e. H.265 with local or remote laptop computer).

j. Exercise the pan, tilt, zoom, focus, iris opening, manual iris control selection, operation, preset positioning, and power on/off functions.

k. Observe the video picture on a laptop computer.

l. Demonstrate IP-Camera sensitivity at low light levels to meet 909.03.A.2.

m. Demonstrate the pan/tilt speed and extent of movement to meet 909.03.A.6.

809.05.B. CCTV IP-Camera System, PTZ. Provide the CCTV IP-Camera with unpressurized housing.

809.05.C. CCTV IP-Camera System, Wall/Tunnel. Mount the CCTV IP-Camera vertical (upright or upside down from a lowering unit), or adapted wall mount.

Contact the Engineer for activation of modem and provide modem model, serial number, and IMEI number.

809.05.D. CCTV IP-Camera System, Portable. Where multiple systems are to be provided, deploy systems on a staggered schedule so that the systems do not require recharging at the same time.

Provide units in working condition capable of streaming video over an IP cellular connection. The Department will provide the IP cellular connection and the Engineer will determine areas to be monitored. The Engineer will be the sole determining party for the placement of these cameras. Change the camera locations as directed by the Engineer. Operate and maintain the portable camera units for the duration of the project.

Provide proper operation of the CCTV IP-Camera System, Portable unit for the duration of the project. Use a CCTV IP-Camera System Portable unit that meet the requirements of 909.03.C

Provide cameras capable of being viewed simultaneously and PTZ control of selected camera through the use of Department ITS camera control software. Provide a test camera to ensure functionality with Department ITS camera control software.

Alternate systems will not be accepted.

809.05.E. CCTV IP-Camera System, Enhanced. Provide the CCTV IP-Camera with enhanced features and any software and/ or licenses required.

809.05.F. CCTV IP-Camera System, Quad Multi-View Fixed with PTZ. Provide alternate or mixed combinations of lenses in accordance with the Contract Documents or as directed by the Engineer. Furnish and install a CCTV IP-Camera system that establishes desired views with physical locks. Ensure the IP-Camera system does not move after installation due to vibration or weather events.

Obtain the Engineer's approval for alternate or mixed combinations of lenses.

809.05.G. CCTV IP-Camera System, Multi-View. Provide alternate or mixed combinations of lenses in accordance with the Contract Documents or as directed by the Engineer. Furnish and install a CCTV IP-Camera system that establishes desired views with physical locks. Coordinate with Engineer and adjust views as requested. Ensure the IP-Camera system does not move after installation due to vibration or weather events.

Obtain the Engineer's approval for alternate or mixed combinations of lenses.

809.05.H. CCTV IP-Camera System, Fixed-View. Provide and install the CCTV IP-Camera with enhanced analytic features and any software and/ or licenses required, with physical locks, in accordance with the Contract Documents or as directed by the Engineer.

The enclosure for the CCTV IP-Camera System, Fixed-View shall be of rugged design for outdoor applications and housed in either a barrel or dome type housing. Provide and install all mounting hardware such that no camera control wiring is exposed or only a small amount is exposed with a drip loop from the bottom of the camera enclosure to a weatherhead conduit body. Install appropriate gaskets and hardware to maintain a weatherproof seal to the camera.

Mount and adjust the IP-Camera system to get the desired view of the roadway. Verify that the IP-Camera system is locked on the desired view and ensure the IP-Camera system does not move after installation due to vibration or weather events.

809.05.I. CCTV IP-Camera System, Wrong Way Detection. Provide and install the CCTV IP-Camera conforming to the requirements of 809.05.H.

809.06 CCTV Poles. This work consists of furnishing and installing CCTV poles of specified height compatible with a camera and lowering system conforming to 809.02.

Install and orient the pole and lowering unit to allow viewing of all roadway directions in accordance with the plans or as directed by the Engineer. Orient the lowering unit camera arm at least 90 degrees away in each direction from the large handhole location on the pole where the lowering device winch is attached, to avoid lowering the camera over the lowering device operator for safety reasons.

Install the pole to be plumb vertically. The Department will consider the pole unacceptable if the pole is out of plumb by more than 1/2 in (12.7 mm) in any direction as measured with a manufacturer provided 5 foot level with a standoff on the top side to account for the pole taper and the bottom side held against the pole.

Furnish PVC coupling caps to cover all unused couplings on the pole. The Department will not accept rubber caps. Provide and install two 3 in (76.2 mm) Schedule 40 conduits each with 90 degree sweep elbows from the "TRAFFIC" pull box to the inside of the pole. Additionally, provide and install a 2" Schedule 40 conduit with 90 degree elbow sweeps from the "ELECTRIC" pull box if the plans call for a pole-mounted cabinet. All conduit entering the bottom of the pole is incidental to this item. Sweep conduit into the bottom of the pole and continue the conduit up the inside of the pole until approximately 3 in (76.2 mm) below the bottom of the large handhole.

The work pad surrounding the CCTV pole and adjacent cabinets or pull boxes is incidental to this item. Install 1/2" preformed joint filler per C&MS 705.03 where the pole abuts the work pad or other paved areas.

Ensure that the grounding connections for each pole have been made and that the resultant ground is within the earth resistance limit specified.

All pole and foundation designs and calculations shall be stamped/sealed by a registered Professional Engineer and submitted to the Engineer for acceptance.

Refer to Standard Construction Drawings ITS-10.10, ITS-10.11, ITS-11.10, ITS-12.10, ITS-12.11, ITS-12.12 and ITS-50.12 for additional details.

809.06.A. Concrete Pole. Furnish a pole of 50 or 70 ft (15.2 or 21.3 m) above ground level, as specified in the Plans, with a minimum 12 ft (3.7 m) embedment. Excavate for the foundation embedment in accordance with C&MS 524, install the pole within the excavation, and use an acceptable backfill material. Acceptable backfill materials are Polyurethane Expanding Foam backfill meeting the requirements of Supplemental Specification 864 or Low Strength Mortar Backfill conforming to C&MS 613, if the foundation excavation is dry or can be dewatered. Otherwise, use Class QC Misc or QC 1 concrete conforming to Items 499 and 511. The Department will not accept crushed aggregate for backfill material. The foundation is incidental to the pole.

Unless otherwise specified in the Plans, provide the Engineer procedures and calculations for embedment depth. Perform a geotechnical exploration in accordance with the Department Specifications for Geotechnical Explorations (SGE) at each site without adequate existing soils data. Adequate existing soils data consists of an exploratory boring disclosing soil and bedrock strength and classification data, performed within a radius of 100 feet of the proposed pole location, and within the same elevation range as the proposed foundation embedment ± 3 feet. Drill exploratory borings in accordance with SGE 303.7.5. Provide the exploration reports to the Engineer. Obtain the Engineer's acceptance of embedment depth prior to ordering poles.

809.06.B. Steel Pole. Furnish a pole of 50 or 70 ft (15.2 or 21.3 m) above ground level, as specified in the Plans.

Excavate for the drilled shaft foundation in accordance with C&MS 524.

Perform foundation concrete work according to C&MS 524. For foundations for anchor base type supports, provide the required reinforcing rods, and have anchor bolts and conduit ells accurately held by a template. Finish the top of each foundation smooth and level. After forms have been removed, backfill the excavated spaces around each foundation with suitable material placed and tamped in thin layers as directed by the Engineer. The foundation is incidental to the pole.

Unless otherwise specified in the Plans, provide the Engineer procedures and calculations for the foundation. Perform a geotechnical exploration in accordance with the Department Specifications for Geotechnical Explorations (SGE) at each site without adequate existing soils data. Adequate existing soils data consists of an exploratory boring disclosing soil and bedrock strength and classification data, performed within a radius of 100 feet of the proposed pole location, and within the same elevation range as the proposed foundation embedment ± 3 feet. Drill exploratory borings in accordance with SGE 303.7.5. Provide the exploration reports to the Engineer. Obtain the Engineer's acceptance of the foundation prior to ordering poles.

809.06.B. Tilttable Pole. Furnish a pole according to 809.06, except that a lowering unit is not required. Furnish a pole that is 60 ft (18.29 m) above ground level.

Neatly coil two lowering ropes with carabiners in the nearby ITS cabinet.

Apply Moly-Lit anti-seize compound and marine-grade anti-seize or equivalent to the pivot connection.

Attach a counterweight to the swing tube appropriate for the equipment weight.

Excavate for the drilled shaft foundation in accordance with C&MS 524.

Perform foundation concrete work according to C&MS 524. For foundations for anchor base type supports, provide the required reinforcing rods, and have anchor bolts and conduit ells accurately held by a template. Finish the top of each foundation smooth and level. After forms have been removed, backfill the excavated spaces around each foundation with suitable material placed and tamped in thin layers as directed by the Engineer. The foundation is incidental to the pole.

Unless otherwise specified in the Plans, provide the Engineer procedures and calculations for the foundation. Perform a geotechnical exploration in accordance with the Department Specifications for Geotechnical Explorations (SGE) at each site without adequate existing soils data. Adequate existing soils data consists of an exploratory boring disclosing soil and bedrock strength and classification data, performed within a radius of 100 feet of the proposed pole location, and within the same elevation range as the proposed foundation embedment ± 3 feet. Drill exploratory borings in accordance with SGE 303.7.5. Provide the exploration reports to the Engineer. Obtain the Engineer's acceptance of the foundation prior to ordering poles.

809.07 CCTV Lowering Units. This work consists of furnishing and installing CCTV lowering units compatible with CCTV poles of specified height and camera conforming to 809.02.

Install and orient the pole and lowering unit to allow viewing of all roadway directions in accordance with the plans or as directed by the Engineer. Orient the lowering unit camera arm 180 degrees away from the large handhole location on the pole where the lowering device winch is attached, to avoid lowering the camera over the lowering device operator for safety reasons.

809.07.A. Camera Lowering Device. Furnish and install a new CCTV lowering unit on top of a new or existing pole, up to 100 ft (30.48 m) tall, or remove an existing CCTV lowering unit prior to furnishing and installing a new CCTV lowering unit. This includes furnishing and installing a water penetration preventer in the lower junction box of the lowering unit. Install a lower junction box with raised neck so that moisture accumulating in the junction box does not flow into the camera. Provide a minimum of one lowering tool/winch and one for every ten pole-top lowering units installed rounded up to whole winches. Deliver the lowering tool to the Engineer upon project completion.

For existing pole installation, field verify the existing pole top adapter size to ensure that it is compatible with the new CCTV lowering unit. Include in the bid price any modifications or replacement pole top adapters for the lowering unit replacement. Position camera tenon arms as directed by the Engineer.

Furnish documentation to the Engineer certifying that personnel working on the equipment have been trained on the installation, operation, and safety features of the lowering unit. Only personnel with documentation are authorized by the Department to work on the camera pole and lowering unit

for the duration of the project and any warranty period. Submit a wiring diagram to show details of all wires that go up the camera pole, through the lowering unit, and connect to the camera to the Engineer. Detail wire number, colors, size, and exactly how they are mapped through the pole and lowering unit on the wiring diagram.

Furnish a representative **of the manufacturer** to assist with installation of the assembly and testing of the first lowering system onto the pole assemblies.

Furnish operational instructions to the Engineer.

1. Control Cabling. Furnish and install lowering units with continuous control cabling for power and Ethernet communications from the top lowering unit connector block at the top of the pole to the ITS Cabinet on the ground; no splicing or connections are permitted in between. Cabling shall also be continuous from the bottom lowering unit connector block to the lowering unit junction box and 3 feet of cable slack shall be provided within the junction box. Ensure each Ethernet cable end is crimped with an industry standard 8-point crimp tool to a RJ45 connector. **Replace the ethernet cable if ODOT testing shows the cable does not meet the 1000BASE-T Gigabit Ethernet standard and the TIA 568-2.E standard.**

Provide and install a minimum of 130 ft (39.62 m) of control cabling or up to the amount needed per to reach the ITS cabinet per the plans. The individual cables shall be ran alongside each other and taped or secured together every 10 feet at a minimum. The cable shall be routed neatly through the pole top tenon, pole, and all conduit/pull boxes into the ITS cabinet. Any cable nicks or damage shall not be acceptable and would require complete lowering unit replacement.

2. Materials. Provide and install weights or counterweights as necessary to ensure that the alignment of pins and connectors are proper for the camera support to be raised into position without binding. Furnish lowering unit of sufficient weight to disengage the camera and its control components to allow proper lowering.

Furnish and install a mounting flange sufficient for mounting the camera assembly to the bottom of the lower junction box.

809.08 Dynamic Message Signs. Furnish and install products conforming to 809.02. Coordinate with the manufacturer to install a complete and functional DMS. Schedule a commissioning test of the DMS by a manufacturer representative as part of the unit bid price for the DMS. Provide a copy of the complete commissioning report checklist to the Engineer.

Provide one complete DMS controller unit including software to the Department for testing of firmware in advance of installation. Obtain approval from the Engineer prior to ordering additional DMS units. Power all DMS cabinets directly, included as a separate bid item, with a load center located inside the DMS. Furnish and install the appropriate DMS control cable as listed on the TAP. Additionally furnish and install one outdoor-rated CAT 5e cable between the DMS cabinet and the DMS.

Install a work pad for the DMS catwalk ladder access that encompasses adjacent cabinets and pull boxes, and is incidental to this item. Refer to Standard Construction Drawings ITS-10.11, ITS-30.13 and ITS-35.13 for additional details.

Mount LED display modules parallel to the front face of the DMS enclosure, allowing for 3 degrees tilt forward toward the viewing motorists at the angle that the sign is installed and use of the legible LED viewing area is optimized.

Perform intensity sorting of the bins conforming to 909.06.A.3.c.6. Perform color sorting of the bins conforming to 909.06.A.3.c.7.

Verify the performance of the automatic intensity control conforming to 909.06.A.7.q by testing under real-world lighting conditions to the satisfaction of the Engineer.

1. Acceptance Testing. Furnish certification of NTCIP-compliance in the form of a comprehensive test plan and completed test report performed by the vendor or a third-party testing agency. Test using industry accepted test tools including the NTCIP Exerciser, Trevilon's NTester, Intelligent Devices' Device Tester, or Frontline's FTS for NTCIP. Furnish data capture files from the FTS software during the performance of the testing.

2. Test Procedures. Provide the DMS vendor's commissioning test procedures and test data forms at least 30 working days before the scheduled testing for review, and obtain approval from the Department. Develop test procedures in accordance with the Contract Documents. At a minimum, include the following in the test procedures and data forms:

a. A step-by-step outline of the test sequence to be followed, showing a test of every function of the equipment or system to be tested. For each test, clearly identify in the test procedure the specific function or requirement being addressed.

b. A description of the expected operation, output and test results.

c. An estimate of the test duration and a proposed test schedule.

d. A data form to be used to record all data and quantitative results obtained during the test.

e. A description of any special equipment, setup, manpower, or conditions required for the test.

3. Test Equipment and Software. As part of the testing requirements, unless otherwise specified, ensure the DMS vendor furnishes all test facilities, including software, required to complete the required testing. Ensure the DMS vendor provides documentation and user instructions for use of any required test equipment and test software unless otherwise directed by the Department.

809.08.A. Dynamic Message Sign (DMS) – Full-Size Walk-In. Furnish and install a Light Emitting Diode (LED) type of DMS with walk-in-cabinet. Install the DMS conforming to 809.02.

Install the main DMS sign controller and associated communication equipment inside a Department ITS cabinet. Install a local auxiliary control panel in the DMS enclosure.

Furnish off-site technical assistance to the Department during initial testing and configuration of the Department's software with the manufacturer's equipment.

Provide all the materials, software, and services necessary to install DMS controllers, auxiliary control panels, and associated equipment conforming to 909.06.

The cost of conductive cable surge suppression in 909.06.A.7.d is incidental to the unit bid price of the DMS.

Ensure two spare outdoor-rated, shielded, armored CAT 5e Ethernet cables are installed from the ITS cabinet to the sign enclosure as spares in case of damage inflicted by rodents. Provide 20 ft of slack at each location.

Provide 10 copies of the DMS control software to the Engineer on USB drive within thirty days of contract award.

809.08.B. Dynamic Message Sign (DMS) – Front-Access. Furnish and install a LED type of DMS that is front access and conforms to 809.02.

Install the main DMS sign controller and associated communication equipment inside a Department ITS cabinet.

Provide one controller unit to the Department for testing prior to Department equipment approval. Furnish off-site technical assistance to the Department during initial testing and configuration of the Department's software with the manufacturer's equipment.

809.08.C. Destination Dynamic Message Sign (DDMS) – Freeway. Furnish and install a DDMS travel-time system including a quantity, as specified in the Plans, of message boards on a ground-mounted extrusheet sign. Include all components of the DDMS travel-time system including pole mounted cabinet with brackets, power supplies, controller, auxiliary controller, terminal strips, and all other items needed to provide a functional DDMS system. The extrusheet sign, beams, underground conduit, pull boxes, power service, and other items will be separate bid items.

Provide the balance of materials and services needed to properly earth ground the DDMS.

Provide earth grounding conforming to the National Electrical Code.

Provide all the materials, software, and services necessary to install DDMS controllers and associated equipment that fully comply with the functional requirements specified.

809.08.D. Destination Dynamic Message Sign (DDMS) – Arterial. Furnish and install a DDMS travel-time system conforming to 809.08.C except as modified by 909.06.D.

809.08.E. Dynamic Message Sign (DMS) – 12’ Walk-In. Furnish and install a DMS conforming to the requirements of 809.08.A except that the sign shall be 12 feet wide.

809.09 ITS Cabinets. Furnish and install products on the TAP. Install work pads in accordance with C&MS 633.11. The work pad is incidental to the price of the cabinet. Install power wiring to energize the cabinet appropriately according to National Electric Code. Provide and apply antioxidant compound material to field landed power wire and lug connections. Seal unused conduits that enter the cabinet with a mechanical blocking plug or flexible rubber cap with hose clamp. **Occupied conduits that enter the cabinet shall be sealed with duct seal.**

Furnish cabinets that are constructed of aluminum and are supplied unpainted. An anodic coating is not required. For ground mounted cabinets, provide all necessary components required for secure connection to the foundation and riser including at least mounting brackets and mounting hardware. Use 12 in (304.8 mm) risers. Use a rodent proof riser vent that also allows water to escape the cabinet. Seal the joints between the controller cabinet and the cabinet riser, and between the cabinet riser and foundation with a quality, clear silicone caulk. Install foundations according to C&MS 633.10. Use galvanized anchor bolts, nuts, and 2 in by 2 in square washers with each cabinet. Use 3/4 in (19 mm) diameter by at least 16 in (0.4 m) long anchor bolts with an “L” bend on the unthreaded end.

Cabinets that have been removed for reuse should be stored indoors. Prior to reinstallation, ensure cabinets are clean and free of any damage sustained during storage.

809.09.A. ITS Cabinet – Ground-Mounted. Provide a total of six conduits entering the foundation. This includes four 2 in (50.8 mm) Schedule 40 conduits to be connected to the 32 in (812.8 mm) communications “TRAFFIC” pull-box, one 2 in (50.8 mm) Schedule 40 conduit to be connected to the 18 in (457.2 mm) power “ELECTRIC” pull-box, and one 3/4 in (19 mm) Schedule 40 conduit to service the ground rod. The cost of these conduits are incidental to the cost of the ITS cabinet. Refer to Standard Construction Drawing ITS-10.11. Stub conduits 3 in to 6 in above the foundation. **Unused ducts must be sealed by a mechanical blocking plug or flexible rubber cap with** hose clamp. Occupied ducts must be sealed with duct seal.

Furnish two keys with each cabinet.

Install field terminals within 22 in (560 mm) of the face of the cabinet and oriented for screwdriver operation from the door opening.

Ensure the cabinet is grounded per NEC requirements.

After completion of field wiring, ensure the conduit entering the cabinet is completely sealed with a removable sealing compound or a molded plastic or rubber device, that is compatible with the cable jacket, the insulation, and the conduit material.

809.09.B. ITS Cabinet – Pole-Mounted. Provide a total of three conduits entering the pole from the foundation. This includes two 3 in Schedule 40 conduits to be connected to the 32 in (812.8 mm)

communications “TRAFFIC” pull-box and one 2 in (50.8 mm) Schedule 40 conduit to be connected to the 18 in (457.2 mm) power “ELECTRIC” pull-box. One of the 3 in conduits shall enter the ITS cabinet. The other 3 in conduit shall enter the communication cabinet, if present. The cost of these conduits is incidental to the cost of the ITS cabinet. Refer to Standard Construction Drawing ITS-10.11. **Unused ducts must be sealed by a mechanical blocking plug or flexible rubber cap with hose clamp. Occupied ducts must be sealed with duct seal.**

Furnish and install a pole mounted cabinet with a 19 in (480 mm) rack frame assembly at locations specified by the Contract Documents.

809.09.C. ITS Cabinet – Power Distribution Cabinet (PDC). Provide a total of four conduits entering the foundation. This includes three 2 in (50.8 mm) Schedule 40 conduits to be connected to the 24 in (457.2 mm) power “ELECTRIC” pull-box, and one 3/4 in (19 mm) Schedule 40 conduit to service the ground rod. The cost of these conduits is incidental to the cost of the ITS cabinet. Refer to Standard Construction Drawing ITS-10.11. Stub conduits 3 in to 6 in above the foundation. Cap unused conduits with a flexible rubber compression coupling or fitting with a hose clamp.

Furnish and install a PDC rated NEMA 3R with at least dimensions of 50 in (height), 30 in (width), and 17 in (depth) (1.27 m, 0.76 m, and 0.43 m).

The loads must be landed appropriately to match the circuit breakers. Refer to the manufacturer’s wiring diagram to determine which terminal block ties to which breaker.

- **Land a full size DMS on the terminal block associated with the 60A breaker**
- **Land a 12’ DMS on the terminal block associated with the 40A or 60A breaker**
- **Land an ITS or DMS cabinet on the terminal block associated with a 30A breaker**
- **Land a VSL on the terminal block associated with a 30A breaker. A near and far side VSL may be landed on the same terminal block by using a 3-way splice in the pull box**

809.09.D. ITS Cabinet – Ramp Meter. Provide a total of eight conduits entering the foundation. This includes four 2 in Schedule 40 conduits(101.6 mm) to be connected to the 32 in (812.8 mm) communications “TRAFFIC” pull-box, one 3 in (76.2 mm) and two 4 in in (50.8 mm) Schedule 40 conduits to be connected to the 18 in (457.2 mm) power “ELECTRIC” pull-box, and one 3/4 in (19 mm) Schedule 40 conduit to service the ground rod. The cost of these conduits is incidental to the cost of the ITS cabinet. Refer to Standard Construction Drawing ITS-76.10. Stub conduits 3 in to 6 in above the foundation. Cap unused conduits with a flexible rubber compression coupling or fitting with a hose clamp.

1. General. Furnish and install Model 334L ramp meter cabinet listed on the TAP list in accordance with the California Department of Transportation specifications “Traffic Signal Control Equipment Specifications” and “Transportation Electrical Equipment Specifications”.

Use Table 809.09-1 for the input file information for the Model 334L Cabinet where highlighted sections typically apply on two-lane ramp or four lane mainline locations.

TABLE 809.09-1 MODEL 334L CABINET INPUT FILE INFORMATION

Upper Channel	ODOT Use	Ramp Lane 1 Demand Loop	Ramp Lane 1 Queue Loop										Ramp Lane 2 Demand Loop	Ramp Lane 2 Queue Loop	
	TEES Definition	DEM 1	QUE 1	MAIN 8	MAIN 9	MAIN 1	MAIN 3	MAIN 5	MAIN 11	MAIN 13	MAIN 15	RATE 2	DEM 2	QUE 2	DEM 3
	Pin Number	46	50	49	55	51	57	59	61	81	79	53	41	43	45
	Field Terminals	1-D,E	2-D,E	3-D,E	4-D,E	5-D,E	6-D,E	7-D,E	8-D,E	9-D,E	10-D,E	11-D,E	12-D,E	13-D,E	14-D,E
	Intelight Index #'s	25	22	OPEN	OPEN	11	12	13	14	OPEN	OPEN	OPEN	26	23	27
	Maxview Input Point	8	12	11	17	13	19	21	23	47	45	15	3	5	7
Slot Number		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Lower Channel	ODOT Use	Ramp Lane 1 Passage Loop											Ramp Lane 2 Passage Loop		
	TEES Definition	PAS 1	OFF 1	MAIN 7	MAIN 10	MAIN 2	MAIN 4	MAIN 6	MAIN 12	MAIN 14	MAIN 16	RATE 1	PAS 2	OFF 2	PAS 3
	Pin Number	39	47	48	56	52	58	60	62	80	82	54	40	42	44
	Field Terminals	1-J,K	2-J,K	3-J,K	4-J,K	5-J,K	6-J,K	7-J,K	8-J,K	9-J,K	10-J,K	11-J,K	12-J,K	13-J,K	14-J,K
	Intelight Index #'s	19	OPEN	OPEN	OPEN	15	16	17	18	OPEN	OPEN	OPEN	20	OPEN	21
	Maxview Input Point	1	9	10	18	14	20	22	24	46	48	16	2	4	6

2. Terminals and Wiring. Ensure that the vehicle detector field wiring inputs connect to side mounted terminal blocks. Install terminal blocks and associated wiring to the input file. Label the field wiring terminals of the side mounted terminal block using a permanent screening process to identify the input panel (labeled I), the input file slot number (labeled 1 through 14) and the channel terminal (labeled D, E, J, or K). An example label is “I4-E” for input panel file slot 4 channel terminal E. Ensure that all terminals on these detector blocks are accessible without removing equipment from the Electronic Industries Alliance (EIA) mounting rack.

3. Accessories.

a. Fully equip the cabinets with two channel loop detector sensors, transfer relay, power supply, conflict monitor, and switchpacks. When ramp meter warning signs with flashers are used, include a NEMA or Caltrans type flasher wired for control from the controller.

b. Furnish an aluminum shelf with integral storage compartment in the rack below the controller. Ensure that the storage compartment has telescoping drawer guides for full extension. Ensure that the compartment top has a non-slip plastic laminate attached.

c. Ensure that each cabinet has two LED lights installed at the top of the cabinet, one near each door. Wire the lights to the door switches in a manner that opening either door will turn on both lights.

4. Lightning and Surge Protection. Provide lightning and surge protection in accordance with C&MS 733.03.C.5.

5. Conflict Monitor. Furnish a Model 208 conflict monitor unit.

809.09.E. ITS Cabinet – DMS. Provide a total of seven conduits entering the foundation. This includes four 2 in (50.8 mm) Schedule 40 conduits to be connected to the 32 in (812.8 mm) communications “TRAFFIC” pull-box, two 2 in (50.8 mm) Schedule 40 conduits to be connected to the 18 in (457.2 mm) power “ELECTRIC” pull-box, and one 3/4 in (19 mm) Schedule 40 conduit to service the ground rod. The cost of these conduits is incidental to the cost of the ITS cabinet. Stub conduits 3 in to 6 in above the foundation. Refer to Standard Construction Drawing ITS-10.11. Cap unused conduits with a flexible rubber compression coupling or fitting with a hose clamp.

The loads must be landed appropriately to match the circuit breakers. Refer to the manufacturer’s wiring diagram to determine which terminal block ties to which breaker.

- Land a full size DMS on the terminal block associated with the 60A breaker
- Land a 12’ DMS on the terminal block associated with the 40A or 60A breaker
- Land a VSL on the terminal block associated with a 30A breaker. A near and far side VSL may be landed on the same terminal block by using a 3-way splice in the pull box

809.09.F. ATC Cabinet 5301 V2.02. Furnish and install products on the TAP in accordance with the Joint Standard of AASHTO, ITE, and NEMA’s ATC 5301 V2.02. Cap unused conduits with a flexible rubber compression coupling or fitting with a hose clamp.

809.10 Traffic Signal Equipment. Furnish and install products on the TAP.

Ensure personnel meet requirements of Supplement 1063.

1. Testing and Prequalification. For all traffic control equipment, perform functional tests and a 10 day performance test in accordance with C&MS 632.28. Do not clear conflict monitor logs during the 10 day test. Ensure that logs note power-up to start the test and all events until the test is complete. Restart the test upon correcting a noted event. Notify the Engineer at least 3 days before beginning the 10 day performance test. The Engineer will notify the maintaining agency of the beginning of the test. Ensure that the following testing and prequalification requirements are met:

a. For traffic control equipment required to meet CalTrans specifications, use a product or manufacturer that is listed on the TAP.

b. For Caltrans type controllers, use conflict monitors listed on the Department’s prequalified list in accordance with Supplement 1076.

809.10.A. Closed Loop Arterial Traffic Signal System. Furnish a closed loop arterial traffic signal system that establishes timed traffic flow between traffic signals to minimize delays and stops on a progressively timed arterial. The signals may be interconnected using wired or wireless communications, or progressive timing may be established using traffic adjusted control time-based coordination. Furnish system supervision and oversight using standard closed loop signal packages from established suppliers on the TAP.

Furnish communication interface equipment and hardware capable of providing communication between traffic signal controllers at the desired locations. If amending an existing closed loop system, ensure communication interface equipment and hardware is compatible with the existing system.

1. Interconnected control systems. Provide the capability for wired or wireless communication between traffic signal controllers within the closed loop system. This may include a field-located, master controller communicating to all other controllers within the system, a time-based coordinated system that relies upon accurate timekeeping equipment within each controller to maintain synchronized time of day without the need for a master controller, or a centrally controlled arterial system where each controller is connected to a master, off-site computer.

Furnish master controllers in accordance with 809.10.G.

Furnish centrally controlled closed loop systems in accordance with 809.10.B.

2. Traffic adjusted control. Provide capability to automatically select timing plans using data from traffic detectors. Provide control by the Urban Traffic Control System (UTCS) First Generation Control Algorithm or by algorithms provided by closed loop systems. Use a closed loop system change cycle, split, and offset separately according to sensed traffic conditions.

809.10.B. Centrally Controlled Arterial Traffic Signal System. Furnish a centrally controlled traffic signal system consisting of intersection traffic signals, a communications network to tie them together, and a central computer or network of computers to manage the system. Ensure the software and network associated with this system is capable of running as a stand-alone system, separate from the maintaining agency's computer network.

1. Remote Monitoring Station. Provide a remote monitoring station that includes all software and hardware necessary to provide full access to and control of the installed field equipment including traffic signals and traffic monitoring equipment. Ensure the system and web-based access or communication servers is compatible with the maintaining agency's existing network or network being developed with this system.

Provide the remote monitoring station using a laptop, a physical Traffic Control Center (TCC) with workstation, or a combination of both. If the TCC is a physical location, the maintaining agency will provide the desired location including building address and room number or specific location within the building.

Install the necessary equipment in the TCC including but not limited to power, adaptations to the existing service center for conduit/fiber entrance to the building, routing of fiber through the building, connection the TCC to the maintaining agency's central network, and any necessary conduit, cabling, splicing, connectors, and termination panels required to achieve a network connection.

2. Workstation. Provide a workstation that meets minimum software and network requirements specified by the system manufacturer to run, operate, interact, and control the central system. This includes at least a workstation processor, operating system, memory, hard drive, video card, network card, and HDD controller. Ensure the workstation includes standard accessories such as a mouse,

keyboard, internal speakers, all necessary power, network, and accessory cords, and at least two 20 inch monitors. Provide at least one workstation that can be substituted for a laptop at the maintaining agency's request.

3. Laptop. Ensure the laptop meets minimum software and network requirements specified by the system manufacturer to run, operate, interact, and control the central system. This includes at least a laptop processor, chassis options, operating system, video card, memory, hard drive, wireless network card, wireless driver, and battery. The laptop includes a docking station and all necessary power, network, and accessory cords. Provide at least one laptop. Provide one laptop for every 15 traffic signals in a system.

4. Equipment Rack. Provide an enclosed equipment rack that contains a transceiver/ethernet switch, a termination panel, a UPS system, and any incidentals required to connect the communication/fiber optic interconnect to the servers. Include physical connection of the communication/fiber to the system and connection of the servers, workstation, and laptop. Communication equipment includes all adapters, and connectors.

5. Intersections. Connect all new traffic signals as well as any existing traffic signals to the central system as specified in the plans.

6. Training. Provide training to the maintaining agency in accordance with 809.21.

809.10.C. Highway Rail/Traffic Signal Preemption. Furnish and install a railroad preemption system that provides interconnection between an active railroad crossing and a traffic signal used to clear vehicular traffic from the railroad crossing in accordance with Supplemental Specification 819 and 919.

809.10.D. Reserved for Future Use.

809.10.E. Traffic Signal System with Transit Priority. Furnish and install a transit priority system used to modify traffic signal phasing or timing for transit vehicles over normal traffic signal operation. Set transit signal priority at a lower priority than emergency vehicle preemption and railroad preemption.

Achieve transit priority through passive or active strategies.

1. Passive priority. Passive priority involves closed loop systems or centrally controlled signal systems designed to improve traffic flow and progression for all vehicles along routes with significant transit use. Provide passive transit priority in accordance with 809.10.A or 809.10.B.

2. Active priority. Active priority involves the detection of transit and subsequent change in normal traffic signal operation to give signal priority to the transit vehicle. This can include giving an early green indication or holding green time for the desired direction of transit movement.

a. Furnish and install necessary hardware and communication to detect the presence of transit vehicles. This includes at least vehicle detection systems or systems that reside within transit vehicles and communicate with traffic signal systems.

b. Modify signal timing or phasing as specified in the plans.

809.10.F. Adaptive Traffic Signal Control System. Furnish adaptive Traffic Signal Control that coordinates control of traffic signals across a signal network, adjusting signal control parameters based on prevailing traffic conditions. Furnish adaptive traffic signal control that includes two control schemes commonly referred to as traffic responsive control and traffic adaptive control.

1. Traffic responsive control systems. Use a system that may change the split at each phase of the traffic signal cycle based on traffic measurements upstream of the intersection.

2. Traffic adaptive control. Use traffic adaptive control that utilizes traffic flow models and predicts vehicle arrivals at the intersection in order to adjust the timing of each phase to optimize an objective function such as delay.

809.10.G. ATC Controller. Furnish and install an Advanced Transportation Controller (ATC) on the TAP. Provide an ATC that is actuated, solid state digital microprocessor type controller with menu driven prompts, internal time-based coordination, ethernet telemetry port, and all other required accessories to make the controller completely functional and operational.

1. Install controller units, consisting of the ATC controller with software and signal timing, into the specified type of prewired cabinet. Ensure the controller is functioning with no malfunctions or temporary settings to avoid malfunction.

2. Program the controller as shown on the plans unless otherwise directed by the Engineer. Programming includes all local timing settings and coordination timing settings. If the plan timing data or the supplemental timing data supplied by the Engineer does not exactly fulfill the timing requirements of the installed equipment, notify the Engineer in writing of the problem and identify the discrepancies. The Engineer will consult with the maintaining agency and provide a written response within 2 weeks. After programming, briefly operate controllers, with the signals turned off by means of the signal shutdown switch, to ensure that operation is reasonable and conforms to the plans.

3. See Supplement 1111.

809.11 Ramp Metering. Furnish and install products on the TAP.

Ensure personnel meet requirements of Supplement 1063.

Test existing ramp metering stations for conformance to 809.11. Furnish and install ramp meter signal compatible with the Department's Ramp Meter Central System and locally within the cabinet at the site in a traffic responsive operation.

Provide all services and equipment necessary to install ramp metering stations in compliance with the Contract Documents, including the documents and standards in 809.11 two through six. In addition to the requirements of C&MS 105.04, the Engineer will use the following descending order of precedence.

1. C&MS 105.04.
2. CALTRANS, Transportation Electrical Equipment Specifications, TEES, published March 2009.
3. Human Engineering Design Criteria for Military Systems, Equipment, and Facilities. MIL-STD-1472D.
4. National Electrical Manufacturers Association Standards Publication TS-1, Parts 1, 2, 5, 6, 8, 13, and 14.
5. National Electric Code.
6. International Municipal Signal Association, Inc.

Conduct field programming using a plug-in laptop computer to download to the field processor. Data may include hexadecimal input, references to printed material, or other screens on the loading program.

809.11.A. Hardware Requirements - Ramp Meter. Locate ramp meter control equipment in accordance with the Contract Documents.

Furnish certification to the Engineer that mean time between failures for the controller and cabinet hardware is no more than 30,000 hr.

Install four 2 in (50.8 mm) Schedule 40 conduits between the closest 32 in pull box and the Ramp Meter cabinet in accordance with the Contract Documents.

Install two 4 in (50.8 mm) Schedule 40 conduits and one 3 in Schedule 40 conduit between the closest 18" conduit and the Ramp Meter cabinet in accordance with the Contract Document. Power and signal conductors shall be routed through 18" pull boxes.

Install communication path and hardware in accordance with the Contract Documents.

Provide a manufacturer representative for the side fire radar detection to perform a site visit to determine the exact placement of the detector. Place the detector units in a position that is per plan following ITS-76.10.

House the Ramp Metering Station controller and related hardware in an ITS Cabinet – Ramp Meter in accordance with 909.07.D.

Provide all hardware needed to furnish a fully functional system included in the unit bid price for Ramp Meter System. Furnish and install at least the following hardware:

- 1.** Model 2070 ATC Controller with 7A Serial Module, 1C CPU, and 2E Field I/O Module.
- 2.** Model 206 Power Supply Module.
- 3.** Model SSS-86IO Flasher Module, Model 204, or equivalent.
- 4.** Model 200 Load Switch, Model SSS-88, or equivalent used to power signal heads (three for each Ramp Meter Station).
- 5.** Two Channel Loop Detectors units and corresponding Loop Detectors, per SCD TC-82.10, to cover all mainline lanes in dual mode and ramp detectors shown in the plans wired conforming to the wiring diagram and input file software requirements.
- 6.** Vehicular Signal Heads: LED, 2-Section, 12 in lens, polycarbonate housing with visors
- 7.** Mast Arm Support conforming to SCD TC-81.22, one unit or Pedestals, 8 ft, Transformer Base, two units.
- 8.** Signal Support Foundation conforming to SCD TC-21.21, one unit.
- 9.** “Stop Here on Red” right arrow 24 in by 30 in sign including support.
- 10.** “Stop Here on Red” left arrow 24 in by 30 in sign including support.
- 11.** (1) R10-28 “One Vehicle Per Green” 24 in by 30 in for one-lane ramps, or (1) R10-29 “One Vehicle per Green Each Lane” 36 in by 24 in sign for two-lane ramps.
- 12.** Ramp Meter Sign, including:
 - a.** Breakaway pole, foundation, and anchor bolts.
 - b.** Power Service, Sign, warning beacons, and all mounting hardware.
- 13.** If directed in plans, Radar Detector support, located per PIS 207610, as detailed within including:
 - a.** Pole, foundation, and anchor bolts.
 - b.** Radar Detector.
- 14.** Side-Fire Radar Detector with loop emulation option and one of the following communication protocol combinations.

a. Two RS485/RS422 or RS232 communication ports with a minimum of 16 contact closures.

b. One RS485/RS422 or RS232 communication port, one Ethernet TCP/IP port, and a minimum of 16 contact closures.

15. Allow the integration of a Bluetooth Module into the unit as a replacement to one of the communication ports.

16. For separate Radar Detector Support, run cabling from the radar detector down to a pole-mounted NEMA 4X breakout box cabinet, where the contact closure wires will continue through and the communication port wires are connected to separate cabling to send the communication back to the Ramp Meter Cabinet.

17. Bypass the termination block with the contact closure wires and install directly to the ramp meter cabinet.

18. Terminate the communication port wires and use separate cabling to the ramp meter cabinet.

19. Two EDCO PC642C020 surge suppressor with compatible PCB1B base or equivalent, two for each Ramp Meter Station.

20. Locate the Detector Loop Terminal Strip on the inside of the cabinet.

21. Provide a 19 in (0.48 m) rack-mount pull-out drawer to house spare parts, technical drawings, technical information, or a combination in accordance with C&MS 733.03.D.4

22. Install enough power outlets in each cabinet to power all devices and provide two additional GFCI outlets for testing equipment.

23. One 32 Mbit Datakey for each controller installed.

24. Additional Cabinet Power Surge Suppression.

Install Surge Suppression capable of being plugged into a standard NEMA 5-15 outlet meeting at least the following:

25. Nine NEMA 5-15 outlets.

26. Mountable in a standard 19 in (0.48 m) rack

27. Energy Handling – 1280 J

28. UL 1499 let through rating – 400 V

29. Surge Current Rating – 50,000 A

30. Output Current – 15 A

Include this secondary Surge Protection in the unit bid price for the Ramp Metering System.

In addition to the hardware documentation required by 809.11.A provide two copies of the ramp metering software operation manuals and documentation to the Department six weeks prior to delivery of the controller.

The Department will provide the data necessary to start up the system following receipt of the ramp metering software operation manuals and documentation. Notify the Department by calling the Office of Traffic Operations at 614-387-4013 three days prior to the activation of the ramp meter to schedule on site testing.

809.11.B. Ramp Meter Signal Display. Furnish and install the foundation per TC-21.21 and the signal support per TC-81.22.

Furnish signal heads that are 12 in (304.8 mm), two section, red over green, LED, and in accordance with C&MS 732.01. Furnish signal housings that are polycarbonate with aluminum visors. Mount signal heads in conformance with SCD TC-85.20.

809.11.C. Ramp Meter Sign. Furnish high-visibility retro-reflective signs in accordance with C&MS 730.19.

Electrical cable will be paid as a separate item.

809.11.D. Ramp Meter Controller. Furnish Intelight LDX Controller with 1.1.15 Firmware or newer. Locate Ramp Meter Control equipment as shown on the plans. Ensure the Controller is compatible with the control equipment, cabinet, and cabinet items and conforms to the Traffic Signal Control Equipment Specifications, Current Edition, Published by California Business: Transportation and Housing Agency, Department of Transportation P.O. Box 942874 Sacramento, CA 94272

Each Ramp Meter Controller consists of all hardware needed to be fully functional. Furnish and install at least the following hardware in the cabinet in accordance with SCD ITS-76.10:

1. One Model 2070 ATC Controller.
2. Three Model 200 Switch Pack.
3. One Model 204 Flasher Unit.
4. One Model 206 Power Supply Module.
5. Two Model 622 Two Channel Loop Detector Units Per Lane.

6. One Model 208 Conflict Monitor.

809.11.E. Testing and Certification.

1. Test all loops installed for continuity and insulation in accordance with C&MS 632.28. Furnish a copy of the test records to the Engineer. Re-cut any loops that test open or less than the specification allows to ground at no cost to the Department.

2. Ramp Meter Testing, Local and Remote Operation. Test each ramp meter system installed including all hardware and software components, warning sign, and loop detectors for operational completeness. Perform testing in the presence of the Engineer, their designated representative, or both. Testing includes the Pre-Test Check-Out and a Ramp Meter 60-day Performance Test.

Provide the Engineer in writing that the ramp meter is complete and ready for local testing. The Engineer will begin the Pre-test Check-out within five days of receipt.

a. Pre-test Check-out. The Engineer, their representative, or both will thoroughly exercise the system, using a test or procedure that demonstrates the capabilities of each component. This will include individual check of all hardware, software, and performance functions, including the maintenance and trouble-shooting software, for conformance to the Contract Documents.

Correct any portion that does not meet the pre-test check-out as directed by the Engineer. The Engineer will recheck the corrected portion.

b. Ramp Meter 60-day Performance Test – Local Control. Following successful completion of the Pre-test Check-out, including the correction, repair or replacement of identified deficiencies, operate the system continuously for 60 consecutive days without major malfunction or failure.

Notify the Engineer 14 days prior, in writing, that the Ramp Meter 60-day Performance Test will begin on a date and time mutually acceptable to all parties.

During the Ramp Meter 60-day Performance Test the Engineer will exercise the system and document the performance of all specified features. The Ramp Meter 60-day Performance Test may be suspended or terminated.

Suspension is defined as halting the test progress, conducting necessary corrective action, and the test being resumed from the point of suspension. Termination is defined as halting the test. In the event of termination, take necessary corrective action, and restart the test from the beginning. Obtain the Engineer's approval prior to any corrective action.

The Ramp Meter 60-day Performance Test may be suspended for at least the following reasons:

(1) Failure or interference due to conditions including vandalism, traffic accidents, power failures, and similar occurrences.

- (2) Communications noise from an outside source.
- (3) Failure of any support or diagnostic equipment necessary to successfully test the system.
- (4) Failure of any communications hub.
- (5) A hardware failure of the computer or associated critical peripheral equipment, or a computer software error, that causes the system to crash or behave erratically.

The Ramp Meter 60-day Performance Test may be terminated for at least the following reasons:

- (6) Failure of any hardware or performance item to meet the Contract Documents.
- (7) Communications noise from an outside source.
- (8) Failure of software to change timing patterns or go from metering to non-metering in the local mode of operation.
- (9) Failure of the warning sign to operate properly, except for lamp outages.
- (10) Intermittent or catastrophic failure of any ramp meter loop detectors.
- (11) Failure of any electronic component in the ramp meter cabinet.
- (12) The appearance of any problem the Department determines has a significant effect upon the reliability, safety, or operation of the system.

Each ramp meter system will be tested for proper operation from the Department ITS Lab located at 1606 West Broad St., Columbus, Ohio.

809.11.F. Ramp Meter Training. Provide a 4-hour classroom and hands-on training session for maintenance personnel in the operation and maintenance of all field equipment. The Department will designate the personnel to be trained.

Provide all maintenance and local operations training prior to any equipment being made operational in the field.

Provide training by personnel thoroughly familiar with the equipment operation.

Submit to the Engineer a complete course outline and summary of the experience and qualifications of the instructional personnel and obtain approval from the Engineer prior to providing training.

Training sessions may be combined, shortened, or both.

Furnish recommended test equipment, literature, and drawings for the class.

At the conclusion of class the Department will take ownership of all items furnished.

Determine the test equipment owned and available at each of the maintaining agencies and furnish any additional equipment needed.

Conduct training at the Department's Central Office and limit class size to 15 persons.

Digitally record a video with audio of all training class time both indoor and outdoor in .mp4 video format. Turn over the recorded media to the Engineer at the conclusion of the training.

Training shall conform to the following:

1. Part 1: Provide an operational description, troubleshooting procedures, recommendations for test equipment, test equipment use, repair procedures, design data, and drawings for Ramp Meter Cabinets and equipment furnished. Provide training before the first ramp meter is installed.

2. Part 2: Provide hands-on training with trouble shooting software, manuals, drawings, and test equipment for all Ramp Metering and communications equipment furnished.

809.12 Detection. Furnish a representative from the manufacturer to direct on the exact placement of the radar unit in reference to distance and height from traveled lane. Provide, at no additional cost, any power adapters needed to sufficiently power the detector. Furnish a manufacturer qualified technical representative on site during installation, testing, and to provide onsite training on the setup, operation, and maintenance of the unit.

All connectors, plugs, and wiring needed to make the detection system fully operational are incidental to each detection type. Fully Operational includes wiring to pole or ground-mounted ITS cabinet for contact closure pairs, serial RS232/RS485 communication, Ethernet communication, radar assembly power, and manufacturer detector cards to cover each lane.

Furnish and install products listed on the TAP.

809.12.A. Side-Fired Radar Detector. Furnish and install the correct model of side-fired radar detector listed on the TAP, depending on the site-specific function needs. Unless otherwise specified in the plans, use a detector with the below functions for each ITS device type.

a. Ramp Metering Sites or any ITS site or standalone radar site: 2 RS485/RS232 or RS485/RS422 communication ports.

b. Ramp Metering Sites or any ITS site or standalone radar site: 1 RS485/RS232 or RS485/RS422 communication port, 1 Ethernet TCP/IP port.

c. Any ITS site or standalone radar site: 1 Ethernet TCP/IP port only (Obtain Central Office ITS approval for use).

d. Any ITS site or standalone radar site: 2 Ethernet TCP/IP ports (Obtain Central Office ITS approval for use)

The following shall be incidental to this item:

e. Mount NEMA 4X breakout box cabinet enclosure on the radar pole with surge suppression. Refer to SCD ITS-60.10.

f. Outdoor rated Ethernet CAT 5e communication cable, in accordance with 809.13.B, from the NEMA 4X breakout box enclosure on the pole to the ITS Cabinet, for installations where the ITS cabinet is within 300 ft (91.4 m) of the radar pole.

g. Work pad. Refer to SCD ITS-60.10.

1. Installation. Install new equipment including all mounting hardware necessary for attachment to poles.

Mount the detector in a side-fired configuration. Mount on poles or structures at locations specified in the Contract Documents, using manufacturer recommended mounting brackets for attachment to steel or aluminum poles.

Install the detector unit on a pole at the height conforming to the manufacturer's installation instructions, above the road surface so that the masking of vehicles is minimized, and containing all detection zones within the specified elevation angle according to manufacturer recommendations. Set up the detection zone using the manufacturer provided software and a laptop computer.

2. Testing. Upon completion of installation at a roadside site, conduct an acceptance test at the site according to the testing plan approved by the Engineer. Provide a seven day notice to the Engineer, requesting permission to conduct a site acceptance test on a specific working day. Schedule no more than two acceptance tests in any given four hour period per day. The Engineer or its representative will witness the Stand-Alone Site Acceptance test. Furnish the attendance of a qualified technical representative of the equipment manufacturer, at no additional expense to the Department, for each test until 10 percent or at least two sites of that particular type are approved by the Engineer, whichever is greater. Submit a Stand-Alone Site acceptance test plan to the Department for review and approval. Provide a test plan that includes at least basic tests for volume and speed. Utilize test methodology that compares traffic count and speed data collected by the equipment against data collected using both manual and automated data collection methods. Report raw data in a form suitable for analysis. Develop the test plan to ensure a 95 percent confidence level that the average speed measured is within ± 5 mph (8.05 km/h).

809.12.B. Advance Radar Detection. Furnish and install an Advance Radar Detection unit capable of intersection advance detection control utilizing above ground digital wave radar techniques. Provide one unit per approach covering multiple lanes where advance detection is specified in the Contract Documents. Install the detection prior to disabling existing loop detection.

Mount unit in a forward-fire or side-fire position, looking at either approaching or departing traffic, and only detect vehicles in one direction of travel. Mount unit directly to a pole or mast arm in accordance with manufacturer recommendations. Provide cable as required and according to manufacturer recommendations. Provide power from the traffic signal cabinet and plugged into filtered power. Provide one unit per approach.

The following is incidental to this item:

1. A serial to Ethernet communications module and Ethernet cable (at least 7 ft (2.13 m) in length).

2. **Power Supply and Communications modules.** Secure to a single panel and mount to the interior of the traffic cabinet. Include in the panel modular-plug style connections for up to four sensor cables. Additional sensors may be hard-wired to the communication modules.

809.12.C. Stop Line Radar Detection. Furnish and install a Stop Line Radar Detection unit capable of intersection detection control utilizing above ground advanced radar tracking techniques. Provide one unit per approach covering multiple lanes where stop line detection is specified in the Contract Documents. Install the detection prior to disabling existing loop detection.

Mount the unit in a forward-fire or side-fire position, looking at either approaching or departing traffic, and only detect vehicles in one direction of travel. Mount unit directly to a pole or mast arm, as recommended by the manufacturer. Provide cable(s) as required and recommended by the manufacturer. Power shall be provided from the traffic signal cabinet and plugged into filtered power. Provide one unit per approach.

The following shall be incidental to this item:

1. A serial to Ethernet communications module and Ethernet cable (at least 7 ft (2.13 m) in length).

2. **Power Supply and Communications modules.** Secure to a single panel and mount to the interior of the traffic cabinet. Include in the panel modular-plug style connections for up to four sensor cables. Additional sensors may be hard-wired to the communication modules.

809.12.D. Combined Radar Detection. Furnish and install a Combined Radar Detection unit capable of intersection advance and stop line detection control utilizing above ground digital wave radar techniques. Provide enough units to cover all approaches and lanes where stop line and advance detection is specified in the Contract Documents.

Mount unit in a forward-fire or side-fire position, looking at either approaching or departing traffic. Mount unit directly to a pole or mast arm in accordance with manufacturer recommendations. Provide cable as required and according to manufacturer recommendations. Provide power from the traffic signal cabinet and plugged into filtered power.

If not integral to the unit, the following shall be incidental:

1. An Ethernet communications module and Ethernet cable (at least 7 ft (2.13 m) in length).

2. Power Supply and Communications modules. Secure to a single panel and mount to the interior of the traffic cabinet. Include in the panel modular-plug style connections for up to four sensor cables. Additional sensors may be hard-wired to the communication modules.

809.13 Communication. Submit materials to the Engineer for approval.

809.13.A. Reserved for Future Use.

809.13.B. Ethernet Cable, Outdoor-Rated. Furnish and install at least a CAT 5e outdoor-rated Ethernet cable that meets at least the following:

1. Footage Markings: Every 3 ft (0.91 m).
2. Armor: Aluminum with inner jacket.
3. Conductor Insulation: Polyolefin.
4. Jacket: UV and Abrasion Resistant Polyethylene.
5. Conductors: 24 AWG solid bare annealed copper.
6. Cable Diameter: Maximum 0.35 in (8.9 mm).
7. Flooding Compound: Waterproof Gel.
8. Minimum Bend Radius: 1.0 in (25.4 mm).
9. Maximum Pulling Force: 25 lb. (11.3 kg).
10. Shielded or Unshielded.
11. Temperature Rating.
 - a. Installation: -22 °F to 140 °F (-30 °C to 60 °C)
 - b. Operation: -49 °F to 176 °F (-45 °C to 80 °C)
12. Color Code
 - a. Pair 1: Blue-White/Blue.
 - b. Pair 2: Orange-White/Orange.
 - c. Pair 3: Green-White/Green.

d. Pair 4: Brown-White/Brown.

Install cable as shown in the plans, or as directed by the Engineer, leaving 10 ft (3.05 m) of slack in each pull box. Terminate the cable with RJ-45 connectors and wire in accordance with TIA/EIA 568-B. Replace the ethernet cable if ODOT testing shows the cable does not meet the 1000BASE-T Gigabit Ethernet standard and the TIA 568-2.E standard.

809.14 ITS Device Downtime. The duration allowed for outages of communication systems, power systems, or both for ITS devices located throughout the State of Ohio. The Department will require the maximum downtimes in 809.14. Provide adequate means to ensure that any necessary temporary lines, devices, or both are installed prior to the removal or de-energizing of any cable to the specified device. Notify the Department Office of Traffic Operations of any outage at least 7 working days in advance for Department coordination. Notify by Email at CEN.ITS.Lab@dot.ohio.gov. The Engineer, in consultation with the Office of Traffic Operations, will be the sole determining party in deeming if a circumstance is unusual and will be granted additional downtime. Perform all work on the weekend, unless it has been determined otherwise by the Office of Traffic Operations.

809.14.A. Dynamic Message Signs (DMS). Limit DMS to a maximum downtime of 8 hours. At a minimum, restore power within the maximum allotted downtime. When relocating DMS, limit the downtime to a maximum downtime of 48 hours.

Disincentive: \$400 per day or \$17 per hr. – beginning after the allowable downtime

809.14.B. CCTV Cameras. Limit CCTV Cameras to a downtime of 72 hours. Plan when relocating these devices to ensure the new infrastructure is in place before taking the existing site equipment offline.

Disincentive: \$400 per day or \$17 per hr. – beginning after the allowable downtime

809.14.C. Detection. The Department will not limit detection to a maximum downtime. Do not perform any action that results in the loss of communication or power to two or more detection systems (radar, loops, etc.) in succession.

809.14.D. Fiber Optic Cable. Limit fiber optic cable to a 24 hour maximum downtime. Consecutive downtimes, regardless of length, should be minimized and shall be at the approval of the Engineer. Install temporary fiber optic cable ready for splicing prior to any existing fiber optic cables on the project being severed.

Provide a temporary fiber optic cable having the exact same fiber count and buffer tube orientation as the existing. Provide temporary cable fibers that are core-aligned fusion spliced or mass (ribbon) fusion spliced to the like fiber (buffer-tube to buffer-tube, color to color) regardless of their active status.

Disincentive: \$400 per hr. - beginning after the allowable downtime

E. Traffic Signal Communications. Limit traffic signal communications downtime to 24 hours for isolated signals or 72 hours for corridors (2+ communicating signals). Relocate devices as necessary to maintain communications.

Disincentive: \$400 per day or \$17 per hr. – beginning after the allowable downtime.

809.15 ITS Pull Boxes and Junction Boxes. Furnish pull boxes and junction boxes conforming to 809.02.

809.15.A ITS Pull Boxes. Furnish and install a pull box of the size and type specified. Furnish and install pull box lids on the TAP. On slopes flatter than 5:1 use a Standard Lid Assembly and on slopes 5:1 or steeper use a Hinged Lid Assembly. Pull boxes shall include a work pad as specified. Excavate for each pull box as nearly as practicable to the outside dimensions of the pull box. After setting the pull box to proper grade, backfill the excavated spaces around the pull box with suitable material placed and thoroughly tamped in thin layers. **Plug the pick hole with duct seal.**

Space pull boxes a maximum of 500ft apart for multi-cell installations and a maximum of 2,000ft apart for micro-duct pathway installations.

Do not install pull boxes in pavement without OTO approval.

Refer to Standard Construction Drawings ITS-14.11 and ITS-14.20 for additional details.

809.15.B. ITS Junction Boxes. Furnish and install barrier wall junction boxes that meet at least the following:

1. 17 inch height x 24 inch length x 6" depth
2. Minimum wall thickness 0.5 inch
3. Minimum lid thickness 2 inches
4. ANSI Tier 22 rating
5. Solid bottom
6. Polymer concrete

Lids shall be marked with "Traffic". Use horizontal reinforcing steel members underneath and above the junction box to secure in place and tie into the rest of the wall reinforcing steel. The junction box shall be attached to the form work to secure it in the appropriate position in the barrier wall during concrete placement. Slip forming is not permitted in sections of concrete barrier wall containing junction boxes.

Space junction boxes a maximum of 1,000ft apart for multi-cell installations, and a maximum of 2,000ft apart for micro-duct pathway installations.

809.16 GPS Coordinates / As-Built Plans. Prior to the final acceptance of the project, provide as-built plans of the entire ITS portion of the project to the Department ITS Engineer in the following formats: DGN files and PDF file. Included with the pdf is actual field data of all sites. This data includes the following:

809.16.A. ITS Asset Inventory using Department ITS Asset Field Maps Application. Establish a MyODOT account for access to the Department ESRI ArcGIS Field Maps application for the ITS Asset Inventory (<https://myodot.dot.state.oh.us/ssl/main.aspx>; <https://extranet.dot.state.oh.us/AMLT/CollectorProgram/Pages/home.aspx>). Use a data collection device compatible with the Department ESRI ArcGIS Field Maps application for the collection efforts. Compatible devices include at least Apple and Android tablets and phones. Provide other survey equipment necessary to collect the required attributes.

Collect at least the following items installed in the as-built locations as outlined in the Department's ITS Data Collection Models using the Department ITS Asset Field Maps application:

1. Power service attributes.
2. Cabinet attributes.
3. Device attributes.
4. Pull box attributes with cable types.
5. Line attributes (power/ communications)

Take pictures of each asset and store in the Department ITS Asset Field Maps application. Name each picture uniquely so each asset can be identified by location. Include pictures of the overall area, power service and utility power, inside cabinet, outside cabinet, entire support, each device front and back, pull boxes looking upstream and downstream, power service disconnects, power and communication line locations and other pictures that help identify the asset. When taking pictures of underground power and communication lines, first mark the locations with flags or paint.

Collect the underground power and communication lines, including fiber optic cable, installed with the project in the as-built locations. The location of underground power and communication lines must meet the accuracy requirements for a class II planimetric feature as found in the Department Survey and Mapping Specification Manual.

Coordination with the Department Office of Asset Inventory and System Integration Personnel may be necessary to ensure application access and permissions, asset collection methods, and integration of data into the Department environment.

This work is paid under Item 809 As-built Construction Plans and carried to the general summary.

809.16.B. Meter numbers and utility provider of all power services with their service locations.

809.17 Maintaining ITS During Construction. Maintain and restore as necessary the functionality of all permanent ITS fiber and equipment in accordance with 809.14, as well as maintaining the initial ITS field locate that the Department will perform, within the project area. Locate new infrastructure installed until the project is complete and the as-built plans have been delivered to the Department Office of Traffic Operations, ITS Field Operations Section.

Maintain equipment not damaged or disturbed due to construction activities operational by providing a temporary connection between the pieces of equipment and an adjacent operational cabinet. This may be accomplished using an aerial connection or through an existing or new conduit and fiber cable. The Department will not accept connections and work until reviewed and inspected by the Engineer and Department ITS personnel. New permanent fiber shall be inspected and have fiber test results submitted to ODOT and approved before switching over from temporary infrastructure. Maintain service to ITS devices throughout construction.

ODOT Central Office ITS is a member of OUPS (Ohio 811). To request ODOT ITS utility location visit the OUPS website or call 811.

809.18 Wrong Way Detection System. Furnish and install products on the TAP.

Ensure personnel meet the requirements of Supplement 1063.

809.18.A Detection. Furnish a wrong way detection camera according to 809.05.I. Orient the camera to have a clear view of the area of detection. The area of detection shall not become occluded by vegetation or large vehicles.

Ensure camera software is compatible with the existing Department ATMS software platform.

809.18.B Camera Support. Use a support and mounting hardware according to the plans.

Furnish and install a strain pole according to TC-81.11. Mount a wrong way detection camera to a strain pole according to ITS-12.50.

Mount the wrong way detection camera to an existing CCTV Camera Pole so that it will not interfere with the existing camera lowering unit.

Do not mount cameras to wood poles.

Provide and install conduits per 809.06. Refer to Standard Construction Drawing ITS-10.11.

809.18.C Cabinet. Furnish an ITS Cabinet – Ground-Mounted or an ITS Cabinet – Pole-Mounted according to 809.09. A concrete work pad in accordance with ITS-10.11 is incidental to the cabinet.

Provide conduits entering the cabinet per 809.09.A or 809.09.B. Refer to Standard Construction Drawing ITS-10.11.

809.18.D Signs. Sign layout shall be according to TC-73.20. Actuated LED units shall be used to enhance the conspicuity of the DO NOT ENTER and WRONG WAY signs in accordance with MUTCD

Section 2A.12. The LED units shall only activate when a wrong way event is detected. If the LED units flash, they shall flash per MUTCD Section 2A.12.

Provide one 2 in conduit for power between signs.

809.19 Emergency Vehicle Preemption. Furnish and install emergency vehicle preemption (EVP) systems used to support safe and expeditious movement of police, fire, ambulance, or other critical emergency service vehicles through a signalized intersection. As per ORC 4511.031, the movement of equipment or unauthorized use by a Local agency to use other vehicles (i.e. snowplow trucks, non-emergency service vehicles) to receive preemption control is strictly prohibited. Violation of this requirement breaches ORC 4511.031 and may result in the disconnection or removal of the preemption equipment.

Set emergency vehicle preemption at a lower priority than railroad preemption if both exist at the same intersection.

Provide the following components at each intersection shown in the plans, each bid separately:

- a. Preempt receiving unit.
- b. Preempt detector cable.
- c. Preempt phase selector assembly and interface wiring panel.
- d. Confirmation light.

If a light-activated system is specified, inventory the maintaining agency's existing emitters and determine compatibility with the proposed system. If existing emitters are found to be not compatible, furnish the maintaining agency with emitters transmitters, switches, wiring, and all required vehicle equipment, incidental to the cost of the system.

If a radio-activated system is specified, supply emitters at cost incidental to the system.

If a sound-activated system is specified, determine compatibility of the maintaining agency's sirens with the system. Supply each vehicle that is determined to be not compatible with new sirens at cost incidental to the system.

If a light, radio, or sound activated system is not specified, provide a radio activated system.

Provide the maintaining agency software required to calibrate, log, and operate the system. Provide two operating and instruction manuals with the software.

Test the installed system prior to system acceptance for conformance to 909.11. Verify that all connections are properly made to the controller cabinets. Check that the range setting is proper for each intersection. Determine that all phase selectors are selecting the proper phase and timing accurately. Verify that all vehicle emitters are being properly detected.

If the proposed preemption system is not compatible with the existing system, provide training for up to 15 persons in the operation of the system. Provide this training within 48 hr. of the installation of the system. Provide training consisting of hands on instruction for at least 16 hr.

Provide training for up to 4 persons in the installation and maintenance of the system. Provide training consisting of at least 8 hr. of instruction. Provide training within 7 day of the installation of the system. Provide training at a location determined by the maintaining agency. Conduct training with a qualified individual who has performed training within the last year and does it on a regular basis. The cost of training, including course material, travel subsistence and related costs, is incidental to the preemption equipment.

Furnish preempt receiving units with 60-month warranties or for the manufacturer's standard warranty whichever is greater. Ensure that the warranty period begins on the date of shipment to the project. Ensure that each unit has a permanent label or stamp indicating the warranty start date.

1. Preempt Detector Cable. Furnish and install preempt detector home run cable in the locations shown in the Contract Documents. Connect the preempt receiving units to the phase selectors in the local controller cabinet.

2. Preempt Phase Selector. Furnish and install preempt phase selectors including wiring interface panels in the local controller cabinet and all other accessories that are necessary to make the preempt phase selectors completely functional and operational as shown in the plans.

Furnish preempt phase selectors with 60 month warranties or for the manufacturer's standard warranty, whichever is greater. Ensure that the warranty period begins on the date of shipment to the project. Ensure that each unit has a permanent label or stamp indicating the warranty start date.

3. Preempt Confirmation Light, LED. Furnish and install preempt confirmation lights including hardware and all other accessories that are necessary to make the preempt confirmation light completely functional and operational as shown in the plans.

Furnish confirmation lights for each approach to indicate that the emergency vehicle has achieved control of the traffic signal.

809.20 ITS Communication Conduit and Accessories. Follow all manufacturer recommended procedures when performing installation of Multiple Cell Conduits, Micro-Duct Pathways, Micro-Duct Innerducts, Conduit Raceways, and accessories. Have a manufacturer representative present for the installation of the first two complete runs of Micro-Duct Pathway and/or Micro-Duct Innerducts from pull-box to pull-box.

Multiple Cell Conduits, Micro-Duct Pathways and Conduit Raceways placed within concrete barrier are incidental to the barrier per roadway standard drawings RM-4.3, 4.4 and 4.8. Use the following procedures when forming concrete barrier:

1. Use conduit spacers sized for the size of the conduits, placed every 10ft, and per the details in RM-4.3, 4.4 and 4.8.
2. When slip forming, pull the end of the conduit taut to keep it straight.
3. Do not construct the barrier in such a way that fixes the conduit in two locations, leaving an unbound middle section. This can cause the conduit to bend when the barrier is being slip formed. If intermediate sections of barrier must be constructed first (such as at light pole foundations or median inlets), place a slightly larger empty conduit raceway through that section to act as a sleeve.

See Standard Construction Drawings ITS-14.10, ITS-14.50 and ITS-14.60 for additional details.

809.20.A. Multiple Cell Conduits. Provide a Multiple Cell Conduit between pull-boxes. Ensure innerduct colors match along the entire run. Ensure the individual pieces of conduit are securely and completely joined together as per the manufacturer recommendations to ensure the integrity of the conduit run. At the time of installation, seal the end of the conduit with plugs that have an expanding rubber sealing washer. In all unused/ empty conduit cells install a flat, woven, polyester pulling tape, rated for 2500 pounds minimum. Use continuous lengths of HDPE conduit between junction boxes when multiple cell conduits are installed encased in a concrete barrier wall or when transitioning out of the wall into underground pull boxes

809.20.B. Micro-Duct Pathway. Provide a Micro-Duct Pathway consisting of complete continuous runs between pull-boxes with no splices or couplers occurring in between. Account for thermal expansion and contraction when installing pathway. Micro-duct pathways may be installed by plowed-trench method, open-trench method, saw-cut in pavement, or by horizontally-directional boring method. In grassy areas, the default installation method shall be plowed-trench method where the trench is covered at the same time and restoration completed in the process. Perform BB and pressure testing in accordance with manufacturer recommendation on all micro-ducts following complete installation and in the presence of the Engineer or their representative and a manufacturer representative. Seal micro-ducts with end caps from the same manufacturer at the time of duct installation to prevent any soil and water infiltration into the ducts that would hinder the fiber installation process.

809.20.C. Micro-Duct Innerducts and Raceways. Provide a Micro-Duct Innerduct installed in an existing conduit raceway or provide an empty conduit raceway for the purpose of installing Micro-Duct Innerducts.

1. Micro-Duct Innerducts. The innerduct shall be continuous with no splices or couplers from the beginning location to the end location as specified by the ITS Engineer. The innerduct may pass through existing pull boxes continuously when retrofitting an old conduit system. Tracer wire shall be installed with the innerduct in all conduit raceways excluding those in median concrete barrier wall. Account for thermal expansion and contraction when installing innerducts. Perform BB and pressure testing in accordance with manufacturer recommendation on all micro-ducts following complete installation and in the presence of the Engineer or their representative and a manufacturer representative. Seal micro-ducts with end caps from the same manufacturer at the time of duct installation to prevent any soil and water infiltration into the ducts that would hinder the fiber installation process.

2. Empty Conduit Raceway. The empty conduit raceway shall be continuous with no splices or couplers from the beginning location to the end location as specified by the ITS Engineer. Account for thermal expansion and contraction when installing raceways. Seal micro-ducts with end caps from the same manufacturer at the time of duct installation to prevent any soil and water infiltration into the ducts that would hinder the fiber installation process.

809.20.D. Communication Cable Markers. Install communication cable markers as directed by the Engineer at every pull box containing conduit for communication cable (fiber optic cable, CAT5E, etc.).

Provide communication cable markers 6 ft (1.83 m) in length and securely placed at a depth of 2 ft (0.61 m). Place the marker within the pull box work pad, utilizing a 30 inch long 4" conduit sleeve. Ensure care is taken during installation not to damage any underground conduit in the vicinity. Use Type 2 markers at the pull boxes on both sides of a roadway crossing. Additionally, place Type 2 markers so that no Type 1 markers are ever placed in succession. Only use Type 1 markers on straight conduit runs along the shoulder.

Connect tracer wire to the terminal at the top of Type 2 markers. Do not connect tracer wire to Type 1 markers.

Payment for all communication cable markers is included in the unit bid price for the multiple cell conduits, micro-duct pathways, and micro-duct innerducts pay items.

809.20.E. Tracer Wire. Tracer wire shall be physically secured directly above the top conduit of all installed conduit runs using wire plastic zip ties spaced 10 ft (3.05 m) apart or be integrated into manufactured conduit or micro-ducts.

Approximately 20 ft (6.1 m) of slack of the tracer wire shall be left inside the pull boxes. Neatly coil the tracer wire slack flat and away from the lid. Tuck the slack coil in the knockout window and ensure it isn't tangled with other cables. Run the tracer wire through Type 2 markers and connect to the terminals at the top of the marker. Use ¾ inch conduit when running tracer wire from the pull box to communication cable marker.

809.21 Training. Provide training for the ITS device installed. Furnish all handouts, manuals, and product information. For the training, use the same models of equipment furnished for the project. The maintaining agency will provide the facilities that the training will take place. Furnish all media and test equipment needed to present the training. Unless otherwise shown in the plans, the minimum training requirements are as follows:

- A.** Sixteen (16) hours on how to operate the system, analyze system performance, and revise critical operating parameters.
- B.** Eight (8) hours of field troubleshooting and maintenance procedures.
- C.** Eight (8) hours of follow-up training after the maintaining agency has operated the system for a minimum period of 30 days.

809.22 Method of Measurement.

The Department will measure Step-Down Transformer, 3kVA or 7.5kVA by the number of each, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure CCTV IP-Camera System, PTZ by the number of each, and will include the costs for equipment, Local Camera Control Unit, labor, and miscellaneous materials.

The Department will measure CCTV IP-Camera System, Wall/Tunnel by the number of each, and will include the costs for equipment, Local Camera Control Unit, labor, and miscellaneous materials.

The Department will measure CCTV IP-Camera System, Portable by the number of days it is functioning, and will include the costs for equipment, labor, miscellaneous materials, and maintenance.

The Department will measure CCTV IP-Camera System, Enhanced by the number of each, and will include the costs for equipment, Local Camera Control Unit, labor, and miscellaneous materials.

The Department will measure CCTV IP-Camera System, Quad Multi-View Fixed with PTZ by the number of each, and will include the costs for equipment, Local Camera Control Unit, labor, and miscellaneous materials.

The Department will measure CCTV IP-Camera System, Multi-View by the number of each, and will include the costs for equipment, Local Camera Control Unit, labor, and miscellaneous materials.

The Department will measure CCTV IP-Camera System, Fixed-View by the number of each, and will include the costs for equipment, Local Camera Control Unit, labor, and miscellaneous materials.

The Department will measure CCTV IP-Camera System, Wrong Way Detection by the number of each, and will include the costs for equipment, Local Camera Control Unit, labor, and miscellaneous materials.

The Department will measure CCTV Pole, ___' Tall, by the number of each, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Tilttable Pole by the number of each, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure CCTV Lowering Unit by the number of each, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Dynamic Message Sign (DMS) – Full-Size Walk-In by the number of each, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Dynamic Message Sign (DMS) – Front-Access by the number of each, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Destination Dynamic Message Sign (DDMS) – Freeway by the number of each, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Destination Dynamic Message Sign (DDMS) – Arterial by the number of each, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Dynamic Message Sign (DMS) – Full Color by the number of each, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Variable Speed Limit Signs (VSLs) by the number of each, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure ITS Cabinet – Ground-Mounted by the number of each, and will include the costs for equipment, labor, work pad, conduits, and miscellaneous materials.

The Department will measure ITS Cabinet – Pole-Mounted by the number of each, and will include the costs for equipment, labor, work pad, conduits, and miscellaneous materials.

The Department will measure ITS Cabinet – Power Distribution Cabinet (PDC) by the number of each, and will include the costs for equipment, labor, work pad, conduits, and miscellaneous materials.

The Department will measure ITS Cabinet – Ramp Meter by the number of each, and will include the costs for equipment, labor, work pad, conduits, and miscellaneous materials.

The Department will measure ITS Cabinet – DMS by the number of each, and will include the costs for equipment, labor, work pad, conduits, and miscellaneous materials.

The Department will measure Closed Loop Arterial Traffic Signal System by the number of each, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Centrally Controlled Arterial Traffic Signal System by the number of each, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Highway Rail/Traffic Signal Preemption by the number of each, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Traffic Signal System with Emergency Vehicle Preemption by the number of each, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Traffic Signal System with Transit Priority by the number of each, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Adaptive Traffic Signal Control System by the number of each, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure ATC Controller by the number of each controller with software installed including any programming, configuration, testing, and wiring, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Ramp Meter Training by the number of each, and will include the costs for travel, accommodations, training equipment, and training as defined in these specifications.

The Department will measure Side-Fired Radar Detector by the number of each, and will include the costs for equipment, wiring, cabling, NEMA cabinet, labor, and miscellaneous materials.

The Department will measure Advance Detection by the number of each, and will include the costs for equipment, labor, and miscellaneous materials, including all required cabinet hardware, mounting brackets, cables, conduit, connections tested and accepted, and any other necessary hardware to establish a fully functional detection system.

The Department will measure Stop Line Radar Detection by the number of each, and will include the costs for equipment, labor, and miscellaneous materials, including all required cabinet hardware, mounting brackets, cables, conduit, connections tested and accepted, and any other necessary hardware to establish a fully functional detection system.

The Department will measure Combined Radar Detection by the number of each, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure High-Speed Ethernet Radio by the number of each, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Ethernet Cable, Outdoor-Rated by the number of feet, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure As-built Construction Plans by a lump sum value and will include the cost for equipment, labor, and miscellaneous materials.

The Department will measure Maintaining ITS During Construction by a lump sum value, and will include the cost for equipment, labor, and miscellaneous materials.

The Department will measure Wrong Way Detection System complete in place, including all materials, testing, labor and software for a fully functional system.

The Department will measure Emergency Vehicle Preemption complete and in place, including all equipment not itemized separately, testing, labor, training and software for a fully functional system.

The Department will measure Preempt Receiving Unit by the number of each intersection complete in place.

The Department will measure Preempt Detector Cable by the number of foot complete in place.

The Department will measure Preempt Phase Selector by the number of each intersection complete in place.

The Department will measure Preempt Confirmation Light by the number of each intersection complete in place.

The Department will measure Micro-Duct Pathway, ___ Cell 14/10 by the number of feet, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Micro-Duct Pathway, ___ Cell 22/16 by the number of feet, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Micro-Duct Pathway, ___ Micro-Duct Pathway, Hybrid, 3 - 14/10 and 3 - 1.25 inch by the number of feet, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Micro-Duct Pathway, Jacked or Drilled by the number of feet, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Micro-Duct Innerduct, ___ by the number of feet, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Conduit, 2", HDPE by the number of feet, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Conduit, Multicell 4" HDPE with 4 - 1" Innerducts by the number of feet, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Conduit, Multicell, Jacked or Drilled by the number of feet, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Conduit, Multicell, Misc by the number of feet, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure ITS Pull Box, ___" by the number of each, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure ITS Junction Box, ___" x ___" x ___" by the number of each, and will include the costs for equipment, labor, and miscellaneous materials.

The Department will measure Training by a lump sum including the cost for providing the training materials, instructor travel expenses, and equipment for presenting the training.

809.23 Basis of Payment. The Department will pay for accepted quantities at the contract prices as follows:

Item	Unit	Description
809	Each	Step-Down Transformer, __kVA
809	Each	CCTV IP-Camera System, PTZ
809	Each	CCTV IP-Camera System, Wall/Tunnel
809	Day	CCTV IP-Camera System, Portable
809	Each	CCTV IP-Camera System. Enhanced
809	Each	CCTV IP-Camera System, Quad Multi-View Fixed with PTZ
809	Each	CCTV IP-Camera System, Multi-View
809	Each	CCTV IP-Camera System, Fixed-View
809	Each	CCTV IP-Camera System, Wrong Way Detection
809	Each	CCTV Pole, ____' Tall
809	Each	Tilttable Pole
809	Each	CCTV Lowering Unit
809	Each	Dynamic Message Sign (DMS) – Full-Size Walk-In
809	Each	Dynamic Message Sign (DMS) – Front-Access
809	Each	Destination Dynamic Message Sign (DDMS) – Freeway
809	Each	Destination Dynamic Message Sign (DDMS) – Arterial
809	Each	Dynamic Message Sign (DMS) – Full Color
809	Each	Variable Speed Limit Sign (VSL)
809	Each	ITS Cabinet – Ground-Mounted
809	Each	ITS Cabinet – Pole-Mounted
809	Each	ITS Cabinet – Power Distribution Cabinet (PDC)
809	Each	ITS Cabinet – Ramp Meter
809	Each	ITS Cabinet – DMS
809	Each	Closed Loop Arterial Traffic Signal System
809	Each	Centrally Controlled Arterial Traffic Signal System
809	Each	Highway Rail/Traffic Signal Preemption
809	Each	Traffic Signal System with Emergency Vehicle Preemption
809	Each	Traffic Signal System with Transit Priority
809	Each	Adaptive Traffic Signal Control System
809	Each	ATC Controller
809	Each	ATC Controller, As Per Plan
809	Each	Ramp Meter Training
809	Each	Side-Fired Radar Detector
809	Each	Advance Detection
809	Each	Stop Line Radar Detection
809	Each	Combined Radar Detection

809	Each	High-Speed Ethernet Radio
809	Feet	Ethernet Cable, Outdoor-Rated
809	Lump	As-built Construction Plans
809	Lump	Maintaining ITS During Construction
809	Each	Wrong Way Detection System
809	Each	Emergency Vehicle Preemption
809	Each	Preempt Receiving Unit
809	Foot (Meter)	Preempt Detector Cable
809	Each	Preempt Phase Selector
809	Each	Preempt Confirmation Light
809	Foot	Micro-Duct Pathway, __ Cell 14/10
809	Foot	Micro-Duct Pathway, __ Cell 22/16
809	Foot	Micro-Duct Pathway, Hybrid, 3 - 14/10 and 3 - 1.25 inch
809	Foot	Micro-Duct Pathway, Jacked or Drilled (Add Supplemental Description)
809	Foot	Micro-Duct Innerduct, __
809	Foot	Conduit, 2", HDPE
809	Foot	Conduit, 4", Multicell, HDPE with 4 - 1" Innerducts
809	Foot	Conduit, 2", Multicell, with 4 - 10/8MM Innerducts
809	Foot	Conduit, Multicell, Jacked or Drilled (Add Supplemental Description)
809	Foot	Conduit, Multicell, Misc (Add Supplemental Description)
809	Each	ITS Pull Box, __"
809	Each	ITS Junction Box, __" x __" x __"
809	Lump	Training

Designer Note:

Include this specification on any project that contains INTELLIGENT TRANSPORTATION SYSTEM (ITS) DEVICES AND COMPONENTS.

**STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION 821
ARROW BOARD**

April 20, 2012

- 821.01 Description**
- 821.02 Materials**
- 821.03 Use and Operation**
- 821.04 Basis of Payment**

821.01 Description. This work consists of furnishing, installing, maintaining and removing arrow boards.

821.02 Materials. Furnish materials conforming to:

Arrow Board.....921.02

821.03 Use and Operation. Locate arrow boards as shown in the plans or as directed by the Engineer. Supply all lubricants and parts necessary to obtain continuous operation and provide all service. Inspect the operation of the unit daily including weekends and holidays. Arrange with the Engineer an acceptable method of obtaining service for a malfunctioning panel within 2 hours of a reported malfunction.

Limit use of Type A arrow boards to low-speed 20 - 35 mph urban streets. Use of Type B arrow boards is appropriate for intermediate-speed 40 – 50 mph facilities and for maintenance or mobile operation on high-speed roadways. All arrow boards used in stationary traffic control operation on high-speed 55 mph or greater, high-volume roadways shall be Type C.

Fully charge battery and solar/battery units when first set up. Verify daily that the unit is operating satisfactorily and the remaining battery charge is sufficient for at least 2 more days.

An arrow board in the arrow mode shall be used only for stationary or moving lane closures on multi-lane roadways. For shoulder work, blocking the shoulder, for roadside work near the shoulder, or for temporarily closing one lane on a two-lane, two-way roadway, an arrow board shall be used only in the caution mode. Arrow boards shall not be used to laterally shift traffic.

Lock the control cabinet when left unattended.

Type A and B arrow boards used in mobile operations may be powered by the vehicle's electrical system, but shall not be left unattended when so powered. Caution is advised to prevent the vehicle's electrical system from running down while the arrow board is

being operated during frequent stops, as a run-down of the battery would leave the arrow board to be inoperative.

When an arrow board is not being used, it should be removed; if not removed, it should be shielded; or if the previous two options are not feasible, it should be delineated with retroreflective temporary traffic control devices.

821.04 Basis of Payment. The lump sum bid for 614 Maintaining Traffic includes the cost of arrow boards.

**STATE OF OHIO
DEPARTMENT OF TRANSPORTATION**

**SUPPLEMENTAL SPECIFICATION 904
FIBER OPTIC CABLE AND COMPONENTS**

July 15, 2022

- 904.01 Fiber Optic Cable**
- 904.02 Air-Blown/Pushable Fiber Optic Cable**
- 904.03 Testing**
- 904.04 Fan-Out Kit**
- 904.05 Drop Cable**
- 904.06 Fiber Termination Panel**
- 904.07 Fiber Optic Connectors**
- 904.08 Splice Enclosure**
- 904.09 Splice Tray**

904.01 Fiber Optic Cable. Furnish loose-tube, single-mode, bend insensitive, step-index dielectric cable, manufactured in the United States.

Ensure cable is 8.1-8.3/125 μm loose buffer, single-mode, step index optical fiber cable containing glass of type Corning SMF-28 Ultra, AFL SR-15e, or approved equal, and that meets or exceeds the following:

Table 904.01-1

ITU-T G.652.D
ITU-T G.657.A1
IEC Specification 60793-2-50 Type B1.3
TIA/EIA 492-CAAB
Telecordia GR-20

Use cables free of material or manufacturing defects and dimensional non-uniformity that would:

- 5.** Interfere with the cable installation using accepted cable installation practices.
- 6.** Degrade the transmission performance and environmental resistance after installation.
- 7.** Inhibit proper connection to interfacing elements.
- 8.** Otherwise yield an inferior product.

A. Mechanical and Performance Requirements. Use cable that is a rugged all dielectric outdoor cable containing color coded buffer tubes with 12 single mode color-coded fibers per-buffer tube,

dual window (1310 nm and 1550 nm) fibers with UV acrylate coating in color coded, gel-free, loose buffer tubes with the maximum outer diameter as shown in Table 904.01-1 based on cable fiber strand count.

Table 904.01-1

Fiber Strand Count	Maximum Outside Diameter (Inches)
6	0.45
12	0.45
24	0.45
48	0.45
72	0.45
144	0.65
288	0.75

Strand the loose buffer tubes around an all-dielectric center strength element using a reverse oscillation lay, wrapped by water blocking core separator or functional equivalent.

The maximum allowable attenuation of the fiber is 0.35 dB/km for 1310 nm and 0.25 dB/km for 1550 nm.

Ensure each buffer tube contains a water blocking element for water-blocking protection.

No water blocking yarns are permitted to avoid accidentally cutting fibers.

Use water blocking elements that are non-nutritive to fungus, electrically non-conductive, homogeneous, and free from dirt or foreign matter.

Ensure this water blocking element will preclude the need for other water-blocking material; ensure the buffer-tube is gel-free.

Ensure it is free from dirt and foreign matter.

Ensure the cable manufacturer is TL 9000 registered.

Use optical fiber cable that withstands water penetration when tested with a 3.28 ft (1 m) static head or equivalent continuous pressure applied at one end of a 3.28 ft (1 m) length of filled cable for one hour.

Ensure no water leaks through the open cable end.

Perform testing in accordance with EIA-455-82B.

B. Outer Jacket. Use cables that are all dielectric cable (with no armoring) and jacketed (sheathed) with medium density polyethylene as defined by ASTM D1248, Type II, Class C, Category 4 and Grades J4, E7 and E8.

If the project plans require armored cable, use cable with two jackets, one molded to the outside of the armor and one that floats freely within the armor and contains the buffer tubes and other fiber optic cable construction components as required.

Apply jacketing material directly over the tensile strength members to provide mechanical protection, and to serve as the primary moisture barrier.

Design cable sheath to meet or exceed the tensile criteria defined in EIA-455-89a.

Ensure each jacketed fiber has a tensile strength of at least 50 lb. (22.68 kg).

Use polyethylene that contains carbon black to provide ultra-violet light protection and does not promote the growth of fungus.

Ensure the jacket or sheath is free of any holes, splits, or blisters.

Use cable jacket that contains no metal elements and is a consistent thickness.

Use at least one ripcord under the sheath for easy sheath removal. Alternatively, provide a sheath that splits uniformly and easily when entering the cable using the manufacturer's recommended method.

C. Crush Resistance. Use non-armored optical fiber cables that withstand a compressive load of 220 N/cm applied uniformly over the length of the cable.

Ensure the average increase in attenuation for the fibers is no more than 0.10 dB at 1550 nm for a cable subjected to this load.

Use cable that does not exhibit any measurable increase in attenuation after load removal.

Ensure testing is in accordance with EIA-455-41, "compressive loading resistance of fiber optic cable," except that the load is applied at the rate of 0.12 in to 0.79 in (3 mm to 20 mm) per minute and maintained for 10 minutes.

Submit the manufacturer's certification for approval.

D. Cyclic Flexing. Use cable capable of withstanding 25 cycles of mechanical flexing at a rate of 30 ± 1 cycles/minute.

Ensure the average increase in attenuation for the fibers is no more than 0.10 dB at 1550 nm at the completion of the test.

Outer cable jacket cracking or splitting observed under 10x magnification will constitute failure.

Conduct the test in accordance with EIA-455-104, except that the sheave diameter is a maximum diameter of 20 times the cable outer diameter (O.D.).

Test the cable in accordance with test conditions I and III of EIA-455-104.

Use cable that withstands 25 impact cycles.

Ensure the average increase in attenuation for the fibers is no more than 0.20dB at 1550 nm (single-mode).

Use cable jacket that does not exhibit evidence of cracking or splitting. Conduct the test in accordance with EIA/TIA-455-25A.

Submit the manufacturer's certification for approval.

E. Tensile Strength. Provide tensile strength by high tensile strength aramid yarns and fiberglass, that is helically stranded evenly around the cable core.

Use cable that withstands a tensile load of 600 lb. (2700 N) without exhibiting an average increase in attenuation of greater than 0.10 dB.

Conduct test in accordance with EIA-455-33A, using a maximum mandrel and sheave diameter of 22.05 in (560 mm).

Apply load for one hour in test condition II of EIA-455-33A.

Use optical fiber cable that withstands a maximum pulling tension of 600 lb. (2700 N) during installation (short term) with no damage and 190 lb. (845 N) installed (long term).

Submit the manufacturer's certification for approval.

F. Temperature. Ensure the shipping, storage, installation, and operating temperature range of the cable is at least -20 °F to 155 °F (-29 °C to 60 °C).

G. Loose Buffer. Contain single-mode fibers in a loose buffer tube.

Use a configuration that is dimensionally sized to minimize local stresses and microbend losses.

Use buffer tubes with a 0.1 in (2.5 mm) outer diameter.

Use optical fiber cable that is an approved product of the U.S. Department of Agriculture, Rural Electrification Administration in accordance with the requirements of REA-PE-90, or as otherwise indicated, and conforms to EIA/TIA-598.

Ensure each optical fiber consists of a doped silica core surrounded by a concentric silica cladding.

Use buffer tubes that are polypropylene.

Include fillers in the cable core to lend symmetry to the cable cross section where needed.

Ensure the central anti-buckling member consists of a glass reinforced plastic rod; the purpose of the central member is to prevent buckling of the cable.

H. Colors. Ensure all optical fibers are identifiable by standard color codes as defined in EIA/TIA-598. Ensure each fiber is distinguishable, as determined by the maintaining agency, from others by means of color coding and conforms to the EIA/TIA sequence of colors in Table 904.01-2.

Table 904.01-2

1. Blue	7. Red
2. Orange	8. Black
3. Green	9. Yellow
4. Brown	10. Violet
5. Slate	11. Rose
6. White	12. Aqua

Use colors in accordance with the Munsell color shades.

Use an ultraviolet (UV) curable ink fiber coloring that is applied to the outside of the optical fiber protective coating layer and not an integral component of the coating layer itself in order to produce more distinguishable colored fiber.

Use buffer tubes containing fibers that are color-coded with distinct and recognizable colors according to the sequence of colors in Table 904.01-3.

Table 904.01-3

1. Blue	13. Blue with black tracer
2. Orange	14. Orange with black tracer
3. Green	15. Green with black tracer
4. Brown	16. Brown with black tracer
5. Slate	17. Slate with black tracer
6. White	18. White with black tracer
7. Red	19. Red with black tracer
8. Black	20. Black with white tracer or black with yellow tracer
9. Yellow	21. Yellow with black tracer
10. Violet	22. Violet with black tracer
11. Rose	23. Rose with black tracer
12. Aqua	24. Aqua with black tracer

Use a color formulation compatible with the fiber coating and that is heat stable.

Ensure color formulation does not fade or smear or be susceptible to migration and does not affect the transmission characteristics of the optical fibers and does not cause fibers to stick together.

I. Cable Marking. Use fiber optic cable marked with at least the manufacturer's name, the words "optical fiber cable", and sequential linear foot markings, repeated every 3 feet. Use a tag to mark the cable with the name of the cable owner (e.g., "ODOT I.T.S."), Project ID number ("PID # xxxxx"), and phone number (e.g. 614-387-4113).

Cable shall be tagged in all pull boxes and cabinets.

Ensure the actual length of the cable is within -0/+1 percent of the length marking.

Use a tag that is in a contrasting color to the cable jacket.

Use a tag that is permanent and weatherproof.

J. Quality Assurance Provision. Use fiber optic cable that meets or exceeds the requirements of this specification when measured in accordance with the methods of the individual requirements or the following methods as defined in EIA-455-A:

1. Fiber dimensions.
2. Attenuation.
3. Numerical aperture.
4. Fiber proof test.
5. Crush resistance.
6. Cable bending.
7. Tensile load.
8. Impact resistance.
9. Attenuation vs. Temperature.

904.02 Air-Blown/Pushable Fiber Optic Cable. Furnish loose-tube, single-mode, bend insensitive, step-index dielectric cable, manufactured in the United States.

Ensure cable is 8.1-8.3/125 μm loose buffer, single-mode, step index optical fiber cable containing glass of type Corning SMF-28 Ultra, AFL SR-15e, or approved equal, and that meets or exceeds the following:

Table 904.02-1

ITU-T G.652 D
ITU-T G.657.A1
IEC Specification 60793-2-50 Type B1.3
TIA/EIA 492-CAAB
Telecordia GR-20

Use cables free of material or manufacturing defects and dimensional non-uniformity that would:

1. Interfere with the cable installation using manufacturer recommended cable installation methods.
2. Degrade the transmission performance and environmental resistance after installation.
3. Inhibit proper connection to interfacing elements.
4. Otherwise yield an inferior product.

A. Mechanical and Performance Requirements. Use cable that is a rugged all dielectric outdoor cable containing color coded buffer tubes / binders with 12 single mode color-coded fibers per binder, dual window (1310 nm and 1550 nm) fibers with UV acrylate coating in color coded, buffer tubes or binders with the maximum outer diameter as shown in Table 904.02-2 based on cable fiber strand count.

Table 904.02-2

Fiber Strand Count	Maximum Outside Diameter (Inches)
6	0.125
12	0.3
24	0.3
48	0.3
72	0.3
144	0.33
288	0.41
432	0.5

Use buffer tubes / binders that are stranded around an all-dielectric center strength element using a reverse oscillation lay, wrapped by water blocking core separator or functional equivalent.

The maximum allowable attenuation of the fiber is 0.35 dB/km for 1310 nm and 0.25 dB/km for 1550 nm.

No water blocking yarns are permitted to avoid accidentally cutting fibers.

Use water blocking elements that are non-nutritive to fungus, electrically non-conductive, homogeneous, and free from dirt or foreign matter.

This water blocking element will preclude the need for other water-blocking material.

Use cables that include GR-20 compliant water-blocked cable core and buffer tubes / binders.

Use cable components that are non-nutritive to fungus, electrically non-conductive, and homogenous.

Ensure it is free from dirt and foreign matter.

Use a cable manufacturer that is TL 9000 registered.

Use optical fiber cable that withstands water penetration when tested with a 3.28 ft (1 m) static head or equivalent continuous pressure applied at one end of a 3.28 ft (1 m) length of filled cable for one hour.

Ensure no water leaks through the open cable end.

Perform testing in accordance with EIA-455-82B.

B. Outer Jacket. Use cables that are all dielectric cable (with no armoring) and jacketed (sheathed) with Polybutylene Terephthalate or High-Density PolyEthylene.

Ensure jacketing material is applied directly over the tensile strength members to provide mechanical protection, and to serve as the primary moisture barrier.

Ensure this cable sheath is designed to meet or exceed the tensile criteria defined in EIA-455-89a.

Ensure each jacketed fiber has a tensile strength in excess of 50 lb. (22.68 kg).

Ensure the jacketing contains carbon black to provide ultra-violet light protection and does not promote the growth of fungus.

Ensure the jacket or sheath is free of any holes, splits, or blisters.

Ensure the cable jacket contains no metal elements and is a consistent thickness.

Ensure the cable contains at least one ripcord under the sheath for easy sheath removal.

C. Crush Resistance. Use non-armored optical fiber cables that withstands a compressive load of 220 N/cm applied uniformly over the length of the cable.

Ensure the average increase in attenuation for the fibers is no more than 0.10 dB at 1550 nm for a cable subjected to this load.

Ensure the cable does not exhibit any measurable increase in attenuation after load removal.

Perform testing in accordance with EIA-455-41, "compressive loading resistance of fiber optic cable," except that the load is applied at the rate of 0.12 in to 0.79 in (3 mm to 20 mm) per minute and maintained for 10 minutes.

Submit the manufacturer's certification for approval.

D. Cyclic Flexing. Use cable capable of withstanding 25 cycles of mechanical flexing at a rate of 30 ± 1 cycles/minute.

Ensure the average increase in attenuation for the fibers is no more than 0.10 dB at 1550 nm at the completion of the test.

Outer cable jacket cracking or splitting observed under 10x magnification will constitute failure.

Conduct the test in accordance with EIA-455-104, except that the sheave diameter is a maximum diameter of 20 times the cable outer diameter (O.D.).

Test the cable in accordance with test conditions I and III of EIA-455-104.

Use cable that withstands 25 impact cycles.

Ensure the average increase in attenuation for the fibers is no more than 0.20 dB at 1550 nm (single-mode).

Ensure the cable jacket does not exhibit evidence of cracking or splitting. Conduct the test in accordance with EIA/TIA-455-25A.

Submit the manufacturer's certification for approval.

E. Tensile Strength. Ensure tensile strength is provided by high tensile strength aramid yarns and fiberglass, that is helically stranded evenly around the cable core.

Use cable that withstands a tensile load of 300 lb. (1334 N) without exhibiting an average increase in attenuation of greater than 0.10 dB.

Apply the load for one hour in test condition II of EIA-455-33A.

Ensure the optical fiber cable withstands a maximum pulling tension of 300 lb. (1334 N) during installation (short term) with no damage and 90 lb. (400 N) installed (long term).

Submit the manufacturer's certification for approval.

F. Temperature. Ensure the shipping, storage, installation, and operating temperature range of the cable meets or exceeds 14 °F to 158 °F (-10 °C to 70 °C).

G. Bend-Insensitive. Contain single-mode fibers in color-coded binders.

Ensure the configuration is dimensionally sized to minimize local stresses and microbend losses.

Use optical fiber cable that is an approved product of the U.S. Department of Agriculture, Rural Electrification Administration in accordance with the requirements of REA-PE-90, or as otherwise indicated, and conforms to EIA/TIA-598.

Ensure each optical fiber consists of a doped silica core surrounded by a concentric silica cladding.

Ensure the central anti-buckling member consists of a glass reinforced plastic rod; the purpose of the central member is to prevent buckling of the cable.

H. Colors. Ensure all optical fibers are identifiable by standard color codes as defined in EIA/TIA-598. Ensure each fiber is distinguishable, as determined by the maintaining agency, from others by means of color coding and conforms to the EIA/TIA sequence of colors in Table 904.02-3.

Table 904.02-3

1. Blue	7. Red
2. Orange	8. Black
3. Green	9. Yellow
4. Brown	10. Violet
5. Slate	11. Rose
6. White	12. Aqua

Use colors in accordance with the Munsell color shades.

Use an ultraviolet (UV) curable ink fiber coloring that is applied to the outside of the optical fiber protective coating layer and is not an integral component of the coating layer itself in order to produce more distinguishable colored fiber.

Use buffer tubes containing fibers that are also color-coded with distinct and recognizable colors according to the sequence of colors in Table 904.02-4

Table 904.02-4

1. Blue	13. Blue with black tracer
2. Orange	14. Orange with black tracer
3. Green	15. Green with black tracer
4. Brown	16. Brown with black tracer

5. Slate	17. Slate with black tracer
6. White	18. White with black tracer
7. Red	19. Red with black tracer
8. Black	20. Black with white tracer or black with yellow tracer
9. Yellow	21. Yellow with black tracer
10. Violet	22. Violet with black tracer
11. Rose	23. Rose with black tracer
12. Aqua	24. Aqua with black tracer

Use color formulation compatible with the fiber coating and be heat stable.

Ensure color formulation does not fade or smear or is susceptible to migration and it does not affect the transmission characteristics of the optical fibers and does not cause fibers to stick together.

I. Cable Marking. Use fiber optic cable marked with at least the manufacturer's name, the words "optical fiber cable", and sequential linear foot markings, repeated every 3 feet. Use a tag to mark the cable with the name of the cable owner (e.g., "ODOT I.T.S."), Project ID number ("PID # xxxxx"), and phone number (e.g. 614-387-4113).

Cable shall be tagged in all pull boxes and cabinets.

Ensure the actual length of the cable is within -0/+1 percent of the length marking.

Use a tag that is in a contrasting color to the cable jacket.

Use a tag that is permanent and weatherproof.

J. Quality Assurance Provision. Use fiber optic cable that meets or exceeds the requirements of this specification when measured in accordance with the methods of the individual requirements or the following methods as defined in EIA-455-A:

1. Fiber dimensions
2. Attenuation
3. Numerical aperture
4. Fiber proof test
5. Crush resistance
6. Cable bending
7. Tensile load

8. Impact resistance

9. Attenuation vs. Temperature

904.03 Testing. All testing listed in Supplemental Specification 804 is incidental to the cost of new fiber optic cable and will be completed and approved, prior to acceptance of the fiber optic cable by the Engineer.

The testing listed in Supplemental Specification 804 may also be used to check if existing cable is still suitable for use. If this is the case, the item shall be paid as a lump sum (Item 804E38000).

904.04 Fan-Out Kit. Furnish a 900um fan-out kit assembly of size twelve fiber capacity.

Use at least a length of 24 in (0.61 m). Ensure it is outdoor-rated for operation with a minimum operating temperature range of -40 °F to 149 °F (-30 °C to 65 °C).

Ensure each assembly contains a Fan-Out Top, Fan-Out Bottom, Fan-Out Tubing, epoxy, syringe, and insert.

904.05 Drop Cable. Use drop cable that meets the requirements of 904.01, except for 904.01.I, Cable Marking.

Use Drop Cable marked by the vendor with the manufacturer's name, year of manufacture, the words "Optical Fiber Cable" or similar, fiber count, type of fiber, and sequential linear foot marking.

Repeat markings every 3 ft (0.91 m).

Ensure the actual length of the cable is within +/-1 percent of the length marking.

Use a marking in a contrasting color to the cable jacket, at least 0.1 in (2.5 mm) in height, permanent and weatherproof, and does not wear off during installation in the underground conduit system.

904.06 Fiber Termination Panel. Provide Fiber Termination Panels that include all materials as described in the respective specifications for NEMA Cabinet types and Caltrans (332, 334, 336) Cabinet or AASHTO/ITE/NEMA ITS Cabinet types.

A. NEMA Cabinet Type. Provide a fiber termination panel that consists of a self-contained metal enclosure, connector cassettes/modules, MTP preterminated microdistribution cable, and splice trays.

Provide a termination panel that is wall or shelf mount.

Ensure the connector cassettes/modules have 12 or 24 LC connectors on the front of the cassette/module. Ensure the cassettes/modules have an MTP, pinned, APC connector on the back of the module. Ensure all front connector terminations are ceramic UPC connectors.

Provide an MTP pre-terminated cable that is OFNP microdistribution cable 13.12 ft (4 m) in length and splice on to the fiber optic cable (drop or trunk/backbone) in the termination panel. Ensure the MTP connector is unpinned, APC.

Cassettes/modules, splice trays, patch cables, pre-terminated MTP cables, and fusion splices are incidental to the fiber termination panel.

B. Caltrans (332,334,336) Cabinet or AASHTO/ITE/NEMA ITS Cabinet Type. Provide a fiber termination panel consisting of a self-contained metal enclosure, connector cassettes/modules, MTP preterminated microdistribution cable, and splice trays.

Ensure dimensions of termination panels are able to mount inside a standard EIA 19-inch rack.

Use connector cassettes/modules that have 12 or 24 LC connectors on the front of the cassette/module. Ensure the cassettes/modules have an MTP, pinned, APC connector on the back of the module. Ensure all front connector terminations are ceramic UPC connectors.

Ensure the MTP pre-terminated cable is an OFNP microdistribution cable 13.12 ft (4 m) in length and that splices on to the fiber optic cable (drop or trunk/backbone) in the termination panel. Ensure the MTP connector is unpinned, APC.

Secure the drop or trunk/backbone cable to the termination panel utilizing the supplied strain relief bracket that attaches to the exterior of the termination panel. It is not acceptable to secure the cable to the termination panel in any way that will limit or prohibit the slide out feature of the termination panel.

Cassettes/modules, splice trays, patch cables, pre-terminated MTP cables, and fusion splices are incidental to the fiber termination panel.

C. Data Center. Provide a fiber termination panel consisting of a self-contained metal enclosure, connector cassettes/modules, MTP preterminated microdistribution cable, and splice trays.

Ensure dimensions of termination panels are able to mount inside a standard EIA 19-inch rack.

Ensure termination panel supports the following connector cassette/module densities:

- 12 connector cassettes/modules in 1U (1 rack unit) housing (144 terminations)
- 24 connector cassettes/modules in 2U (2 rack unit) housing (288 terminations)
- 48 connector cassettes/modules in 4U (4 rack unit) housing (576 terminations)

Use connector cassettes/modules that have 12 LC connectors on the front of the cassette/module. Ensure the cassettes/modules have an MTP, pinned, APC connector on the back

of the module. Ensure all front connector terminations are ceramic UPC or APC connectors as specified by the ITS Engineer.

Ensure the MTP pre-terminated cable is an OFNP microdistribution cable 13.12 ft (4 m) in length and that splices on to the fiber optic cable (drop or trunk/backbone) in the termination panel. Ensure the MTP connector is unpinned, APC.

Secure the drop or trunk/backbone cable to the termination panel utilizing the supplied strain relief bracket that attaches to the exterior of the termination panel. It is not acceptable to secure the cable to the termination panel in any way that will limit or prohibit the slide out feature of the termination panel.

Cassettes/modules, splice trays, patch cables, pre-terminated MTP cables, and fusion splices are incidental to the fiber termination panel.

904.07 Fiber Optic Connectors. Ensure all optical fiber termination components meet or exceed the applicable provisions of EIA/TIA-455-A.

Ensure all optical fiber connectors meet or exceed the applicable provisions of EIA/TIA-455-2b, EIA/TIA-455-5a, and EIA-455-34. Ensure all connectors are compliant with industry standard ANSI/TIA/EIA-568B.3. Use a connector that complies with TIA/EIA fiber optic connector intermateability standard (FOCIS) document, TIA/EIA-604-3.

1. Pigtailed Connectors:
 - a. Provide pigtails with factory pre-connectorized connectors.
 - b. Ensure optical fiber cable used for pigtails contains aramid fibers to protect fibers.
 - c. Use a pigtail jacket resistant to ultraviolet radiation.
2. Splice on Connectors:
 - a. Provide a splice on connector that has a pre-terminated ferrule
 - b. The heat shrink splice sleeve shall fit under the connector boot

Ensure strain-relief boot color matches industry standard for the polish type and fiber type.

Ensure manufacturer is ISO 9001 and TL 9000 registered.

Ensure all connectors meet the requirements of the optical transceiver and termination panel.

904.08 Splice Enclosure. Use splice enclosure that is weatherproof, corrosion resistant, rodent proof, re-enterable, and crush resistant.

A. Butt Style. Use a splice enclosure that easily fits into a 32 in (0.81 m) pull box along with loops of slack cable in box (approximately 150 ft (45.72 m)). Ensure the splice enclosure is a complete kit including all components and hardware for installation.

Ensure the splice enclosure is suitable for application in the temperature range of -40 °F to 158 °F (-40 °C to 70 °C).

Ensure the splice enclosure provides space, allowing entry of fiber optic cable without exceeding the minimum bend radius of the cable.

Ensure the enclosure has provisions for cable and pigtail strain-relief and is equipped with strain-relief hardware.

Design the splice enclosure to permit selective fiber splicing (looping a backbone cable in and out while only cutting into the desired fibers).

Ensure the size of the enclosure allows all the fibers of the largest optical fiber trunk cable to be fusion spliced to a second cable of the same size, plus additional pigtails.

Ensure the splice enclosure allows splicing of all fibers up to the maximum number.

B. In-Line. Use a splice enclosure of In-Line design so it can be installed aerially between poles.

Ensure the splice enclosure is a complete kit including all components and hardware for installation.

Ensure the splice enclosure is suitable for application in the temperature range of -40 °F to 158 °F (-40 °C to 70 °C).

Ensure the splice enclosure provides space, allowing entry of fiber optic cable without exceeding the minimum bend radius of the cable.

Ensure the enclosure has provisions for cable and pigtail strain-relief and is equipped with strain-relief hardware.

Design the splice enclosure to permit selective fiber splicing (looping a backbone cable in and out while only cutting into the desired fibers).

Ensure the size of the enclosure allows all the fibers of the largest optical fiber trunk cable to be fusion spliced to a second cable of the same size, plus additional pigtails.

Ensure the splice enclosure allows splicing of all fibers up to the maximum number.

904.09 Splice Tray. Ensure the Splice Tray is one of the following types:

1. PLP Coyote Short Tray, Model 80806033.
2. PLP Coyote Long Tray, Model 80805514.

3. Commscope, FOSC-ACC-A-12.

4. Or Approved Equal, that meets at least the following as determined by the Department:

a. Injection molded plastic.

b. Have a clear plastic cover.

c. Have elastomeric fusion splice protection sleeve retaining blocks.

d. Include felt strip(s) and cable ties, zip ties, ty-wraps, or a combination for securing buffer tubes and pigtails to the tray.

Splice tray are incidental to termination panels and splice enclosures.

**STATE OF OHIO
DEPARTMENT OF TRANSPORTATION**

**SUPPLEMENTAL SPECIFICATION 909
INTELLIGENT TRANSPORTATION SYSTEM (ITS) DEVICES AND COMPONENTS**

January 16, 2026

- 909.01 Description**
- 909.02 Material Warranty**
- 909.03 CCTV IP-Camera Systems**
- 909.04 CCTV Poles**
- 909.05 CCTV Lowering Units**
- 909.06 Dynamic Message Signs**
- 909.07 ITS Cabinets**
- 909.08 Ramp Metering**
- 909.09 Detection**
- 909.10 Communications**
- 909.11 Emergency Vehicle Preemption**
- 909.12 Wrong Way Detection System**
- 909.13 Traffic Signal Equipment**
- 909.14 ITS Communication Conduit and Accessories**
- 909.15 ITS Pull Boxes and Junction Boxes**
- 909.16 Electrical Equipment**
- 909.17 Variable Speed Limit Signs (VSL)**

909.01 Description. The requirements for ITS devices and components including Closed-Circuit Television (CCTV) Camera Systems, Poles, Lowering Units, Dynamic Message Sign (DMS), ITS Cabinets, Ramp Metering, Detection, Communications, Emergency Vehicle Preemption Equipment, Wrong Way Detection System, Traffic Signal Equipment, Conduits, Pull Boxes and Junction Boxes, Electrical Equipment and Variable Speed Limit signs, inclusive of software licenses, controllers, cable, testing, and warranty for each device.

909.02 Material Warranty. Furnish materials and equipment that is new, of first quality, of latest design, and completely free of defects in material and poor workmanship.

Guarantee equipment furnished performs to the manufacturer's published specifications.

The manufacturer will assign to the Department all manufacturer's normal warranties or guarantees, on all electronic, electrical, and mechanical equipment, materials, technical data, and products furnished and installed on the project.

Defective equipment will be repaired or replaced, at the manufacturer's option, during the warranty period at no cost to the Department.

909.03 CCTV IP-Camera Systems. Provide a training and maintenance manual for the CCTV IP-Camera system components including at least detailed information regarding the following.

1. Weight and dimensions.
2. Resolution.
3. Sensitivity.
4. Power consumption.
5. Optical zoom range.
6. Digital zoom range.
7. Zoom and focus presets.
8. Pan/tilt presets.
9. Ethernet connection.
10. Security.
11. Supported network protocols.
12. Video compression.
13. Frame rate.
14. Number of video streams and stream outputs.
15. IP-Camera control interface required by Manufacturer.
16. 10/100 Base-T RJ-45 Ethernet.
17. Operating temperature and relative humidity.
18. General maintenance procedures.

909.03.A. CCTV IP-Camera System, PTZ. Ensure the system is suitable for outdoor installation atop poles up to 100 ft (30.48 m) off the ground.

Use ethernet input/output (I/O) protocol for communications to the system.

Ensure all camera control, video compression, and related CCTV functionality in the Internet Protocol (IP) is contained within the CCTV housing unit.

Ensure at least the following components and features are included:

- a.** A CCTV IP-Camera with auto focus zoom lens in an outdoor housing attached to the IP-Camera-lowering device.
- b.** A watertight environmental housing with an integrated positioner for pan and tilt unit.
- c.** Locate camera circuitry within the housing.
- d.** Mounting hardware or adapter to connect to 1.5 in (38.1 mm) National Pipe Thread (NPT) coupling used on standard lowering units and camera mounts.
- e.** Junction boxes as needed.
- f.** IP-Camera control electronics and equipment (i.e. hardware and software).
- g.** Compass heading and azimuth positioning capabilities.

1. Functional Capabilities. Ensure system components are compatible with each other and warranted by a single manufacturer or vendor. The system shall provide video at a minimum of 24 frames per second (FPS) continuously.

Ensure the system is capable of at least the following:

- a.** Individual or local camera site control by laptop computer.
- b.** User defined video compression rates of H.265, H.264, MPEG-4, or MJPEG.
- c.** Simultaneous streaming of H.265 and MJPEG.
- d.** Transmitting simultaneous video using the IP encoder located in the camera housing with multiple IP streams.
- e.** Ensure at least 64 presets on both the zoom lens and the pan/tilt mechanism to allow setting the lens and the pan/tilt to administrator specified locations for the user.
- f.** Allow control of the pan/tilt/zoom (PTZ), preset selection, power on and off, and other functions of each system from a central site using a HyperText Transfer Protocol (HTTP) browser-based application with a graphical user interface (GUI).
- g.** Ensure the IP-Camera sensor supports the following:

(1) Automatic and manual iris adjustment.

(2) Automatic Gain Control (AGC).

(3) At least 64 alphanumeric characters per line controllable (including at least enable, disable, and edit) remotely and on site using a laptop computer.

Support selectable automatic shutter time and speed to prevent blooming or smearing.

Use privacy zones so that the operator cannot view preprogrammed camera positions. Ensure at least eight user defined privacy zones are provided. Use an IP-Camera interface compatible with the communication equipment.

2. Display Capabilities. Display custom and built-in text overlays. The Department will provide Standard Department font formats for use. Ensure text overlays are capable of being positioned. Use text overlays that display at least the current date (MM/DD/YYYY), time, the location of the camera, and the compass heading. Set the date and time using a user-defined Network Time Protocol (NTP) server. Update the date and time for daylight savings time automatically.

Display the compass heading of the camera direction (i.e. N, S, E, W, NE, SE, NW, SW) permanently over the video feed, without timing out. Ensure functionality to set the north position by an operator panning to the correct position and setting north or zero degrees pan. Ensure the compass heading is capable of being positioned by the user. Ensure a compass heading is capable of being displayed standalone without any other text for pan/tilt positioning.

Ensure the system is capable of displaying custom image overlays, uploading custom image overlays to the camera as a JPEG or bitmap, and being positioned by the user.

Scale text or image overlays appropriately for different resolutions and displayed on different streaming protocols for compression and simultaneously running at the same time.

Use a day and night camera that provides color images during daytime and black and white (monochrome) images during nighttime, with manual or automatic control capabilities. Use IP-Camera video output conforming to International Telecommunication Union Telecommunication (ITU-T) Video Coding Experts Group (VCEG) and International Organization for Standardization/International Electrotechnical Commission (ISO/IEC) Moving Picture Experts Group (MPEG) standards. Ensure the IP-Camera sensor is a Charge-Coupled Device (CCD) with 1/4 in (6.35 mm) Progressive Scan.

Support at least a resolution of National Television System Committee (NTSC) 1920 by 1080. Ensure the CCTV IP-Camera System is capable of adjusting the resolution stream settings from 1280 by 720 to 720 by 480 or lower equivalent. Ensure video images have minimal quality or bandwidth degradation regardless of environmental conditions and has low light-level sensitivity to achieve desired levels of operation at night.

Ensure at least the following image settings:

- a. Wide Dynamic Range (WDR).
- b. Electronic Image Stabilization (EIS).
- c. Manual shutter time, color, brightness, contrast, and sharpness.
- d. Text and image overlay and privacy mask.

3. Configuration Capabilities. Use a web-based application platform to control and configure the IP-Camera through a web browser using HTTP that provides an administrator the ability to change network settings and configure all camera settings. Use a specific URL for displaying the current live video snapshot at any time in the format: `http://<IP_Address>/snapshot.jpg`.

Ensure the system is capable of configuring advanced network settings.

Ensure at least the following components and features are included:

- a. Support the following protocols: IP, HTTP, HTTPS, UPnP, SNMP, System logging, RTSP, RTP, TCP, UDP, ICMP, IGMP, DHCP, H.264, H.265, MJPEG.
- b. Password Protection: Programmable settings with optional password protection.
- c. Open Application Programming Interface (API) for software integration.

4. Electrical. Power the IP-Camera assembly and all components by Power over Ethernet (PoE). Use 120 VAC/60 Hz input as a primary power source for any other devices supplied as system components, excluding cameras.

Ensure at least the following components and features are included:

- a. Exterior Ethernet CAT 5e or equal composite cabling with power, data, and video cables for power supply, images, and camera controls.
- b. Transient voltage suppression and protection.

5. Lens. Use an IP-Camera lens that is motorized and mechanically or electrically protected from overrunning extreme positions.

Ensure optical zoom range of at least 30X.

Use an iris with automatic capability, manual override, and conform to the requirements shown in Table 909.03-1.

Table 909.03-1: IP-Camera Lens Requirements

Zoom lens minimum focal length	0.14 in to 3.2 in (3.5 mm to 81 mm)
Minimum focusing distance	4 ft (1.2 m)

Minimum aperture	f/1.6
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Control the iris, zoom, and focus from a central location using HTTP protocol. Ensure the motors controlling the iris, zoom, and focus are not damaged due to overload at travel limits. Ensure that the zoom lens is capable of full coverage of the corridor mainlines and shoulders. Ensure the lens has a 1/4 in (6.35 mm) diameter with 10 preset position points.

Ensure the IP-camera lens supports the following:

- a. Automatic focus adjustments with manual override.
- b. Automatic recovery from over and under voltage conditions when power is returned to normal values.

Ensure vibration or ambient temperature changes do not affect the automatic iris function, focus mechanism, and zoom mechanism. Ensure the lens returns to the last position prior to the over or under voltage condition.

If a camera has a dome or bubble, use a dome lens that is optically clear, impact resistant, and acrylic. Ensure the acrylic dome lens does not yellow, introduce appreciable light loss, or distort over a 10-year service life when exposed to anti-icing chemicals. Provide the Engineer certification of meeting this requirement. The dome lens shall be of anti-fog design with nominal light loss of no greater than 5 percent and geometric distortion of no more than 1 percent.

6. Pan/Tilt Unit (PTU). Use a PTU that is integrated, motorized, and remotely controlled within the camera housing meeting the following requirements:

- a. Continuous rotation capability of 360 degree in either direction.
- b. Tilt movement of 95 degree.
- c. Video rotation at 90 degree down with auto-flip.
- d. Five degree up without obstructions.
- e. Pan Speed (Operator Control): 0.1 degree/s to 80 degree/s.
- f. Pan Speed (Preset Control): at least 120 degree/s.
- g. Tilt Speed (Operator Control): 0.1degree/s to 40 degree/s.
- h. Tilt Speed (Preset Control): 60 degree/s.
- i. Minimum sixty-four preset positions with repeatability within 0.1 degree.

7. Controller. Ensure the CCTV IP-Camera controller provides a single point interface for control, video communications, and prime power. Ensure that prime power provides power protection, conversion, and distribution to the IP-Camera assembly. Ensure the IP-Camera controller has a minimum of 10/100 Base-T RJ-45 Ethernet output for local video monitoring and communications to a laptop computer.

Use a CCTV IP-Camera controller that receives process and control camera, zoom lens, and PTU central commands. Ensure these commands are processed and distributed to the appropriate devices. Use non-volatile memory to store the required information for presets, camera ID, and sector text. Support at least 64 presets consisting of pan, tilt, zoom, and focus positions.

8. Assembly. Ensure the CCTV IP-Camera assembly meets National Electrical Manufacturers Association (NEMA) Type 4X and IP66 environmental standards and include an unpressurized housing enclosure with a minimum ambient operating temperature of -40 to 140 °F (-40 to 60 °C) with 100 percent relative humidity that provides complete protection for the camera and zoom lens assembly from moisture and airborne contaminants.

Use a mountable enclosure that leaves no exposed cabling, is corrosion resistant, and protects the camera electronics and zoom lenses from the following:

- a. Blowing rain at storm rates.
- b. Blowing sand or dust.
- c. Temperature.
- d. Solar loading with an internal heater and blower.

909.03.B. CCTV IP-Camera System, Type HD, Wall/Tunnel. Ensure the CCTV IP-Camera System, Type HD, Wall/Tunnel conforms to the requirements of 909.03.A except as modified below.

1. Functional Capabilities. Ensure the following additional components and features:

- a. Use mounting hardware of the vertical or adapted wall mounting type with no exposed camera control wiring.
- b. Use a housing faceplate wiper or hydrophilic glass window.
- c. Ensure the IP-Camera supports the following image settings:
 - (1) Wide Dynamic Range (WDR).
 - (2) Electronic Image Stabilization (EIS).
 - (3) Manual shutter time color, brightness, contrast, sharpness.

(4) Text and image overlay and privacy mask.

(5) Image Defogging Capability.

2. **Lens.** Use an IP-Camera lens conforming to the requirements of 909.03.A.5 except for the using Table 909.03-2 for the IP-Camera lens requirements.

Table 909.03-2: IP-Camera Lens Requirements

Zoom lens minimum focal length	0.17 in (4.3 mm) to 5.08 in (129 mm)
Minimum focusing distance	4 ft (1.2 m)
Minimum aperture	f/1.6
FOV optical zoom range	From 3.5° to 55.4°

3. **Pan/Tilt Unit (PTU).** Use a PTU that is integrated, motorized, and remotely controlled within the camera housing meeting the following requirements:

- a. X, Y axis positioner.
- b. Continuous rotation capability of 360 degree in either direction. Software limits provided for pan mode.
- c. From +90 degree to -90 degree of tilt movement.
- d. Minimum sixty-four preset positions with repeatability within 0.1 degree.
- e. High speed PTU drive capable positioning speeds of 80 degree pan and 30 degree tilt per second.

909.03.C. CCTV IP-Camera System, Portable. The system shall provide video at up to 24 frames per second (FPS) continuously.

Use a system that includes the following features:

- 1. A winch-operated mast with at least a mast height of 27 ft (8.23 m).
- 2. Electrical charging system that includes the following:
 - a. Solar panels with user selectable output.
 - b. Solar charge controller with digital display that allows monitoring solar output to batteries.
 - c. Absorbent Glass Mat (AGM) batteries rated for use of the entire electronic system simultaneously for 30 days.

- d.** Ultra-quiet generator with auto-start that charges batteries when needed.
- 3.** Remote Monitoring with email alerts for:
 - a.** Generator fuel level.
 - b.** Battery power level.
- 4.** Global Positioning System (GPS) monitoring.
- 5.** Trailer conforming to Federal Motor Carrier Safety Regulations 393.9 through 393.33.
- 6.** Spare tire.
- 7.** Removable tow hitch.
- 8.** Trailer cord plug conforming to SAE J560 wired direction to trailer cord without adapters.
- 9.** Plug conforming to the Office of Equipment Management Trailer Lighting & Wiring Standard.
- 10.** Trailer cord wired to a weatherproof 7-terminal junction block.
- 11.** Configurable Simple Network Management Protocol (SNMP) and email/Short Message Service (SMS) alarms.
 - a.** GPS location with geo-fencing.
 - b.** Compartment access intrusion alarms.
- 12.** Interior compartment with at least the following.
 - a.** Lockable.
 - b.** Easy access and replacement of any interior part or component of the system within 10 minutes.
 - c.** Extra storage for miscellaneous items that include removable tow hitch and maintenance tools.
 - d.** Tool kit including any specialty tools needed for maintenance.
 - e.** Easy visual inspection of all batteries without the use of tools.
- 13.** At least 30 days of operation between power-related site visits.

14. Configurable with cameras listed in 809.05.B, 809.05.E, or PoE versions of those listed on the TAP.

15. Provide communications using Sierra Wireless MP70 cellular modem with external mounted antenna including compatible connections for cellular, cellular/diversity, and GPS.

909.03.D. CCTV IP-Camera System, Enhanced. Use a CCTV IP-Camera System, Enhanced conforming to 909.03.A, except as modified below.

Use a CCTV IP-Camera System assembly capable of performing enhanced features for analytics processing, reporting, and alerting. Ensure the system is capable of at least the following enhanced features configurable within the camera web browser GUI.

1. Rules based alerting/notification: Ensure the camera is capable of sending alarms or notifications based on events that occur from other features.

2. Object tracking.

3. Detection zones when objects enter.

4. Detection lines when objects cross.

5. Multiple line crossing.

6. Slow Traffic detection.

7. Incident detection.

909.03.E. CCTV IP-Camera System, Quad Multi-View Fixed With PTZ. Use a CCTV IP-Camera System, Quad Multi-View Fixed With PTZ conforming to the requirements of 909.03.A except for the following differences as defined below.

Use a CCTV IP-Camera System consisting of an enclosed ring of four fixed-view cameras/lenses, each capable of at least 90 degree field of view (FOV) horizontally, providing a 360 degree panoramic field of view over large areas. The lenses shall be independently interchangeable with other lenses that can provide different focal lengths for more detailed viewing in certain directions or wider-angle viewing. Ensure a PTZ camera for detailed viewing is located within the all-in-one assembly.

Use a PTZ camera with at least a resolution of 1920 by 1080 for the PTZ camera and 1280 by 720 for each fixed-view camera. The system shall provide video at a minimum of 20 frames per second (FPS) continuously.

Ensure each camera is capable of adjusting the resolution stream settings to 1280 by 720 and 720 by 480 or lower equivalent with multiple, individually configurable streams, each capable of at least H.264 and MJPEG.

Use a system capable of flexible positioning anywhere within the 360-degree FOV and ensure each lens has individual tilt functionally. Lenses shall be capable of being physically locked into place and shall not move due to vibration or exterior conditions.

Use a CCTV IP-Camera System capable of being powered by PoE, including a PoE injector capable of running all camera system functions and withstanding outdoor environments. Supply all weatherproofing pigtails and connectors necessary to connect directly to outdoor CAT5e cabling supplying PoE to the camera.

Use a CCTV IP-Camera System capable of mounting to standard camera lowering unit system and supply a 1.5 in (38.1 mm) NPT Pipe Mount adapter.

Ensure each camera/lens is capable of overlaying text and custom images consistent with Department standards and pulling snapshot jpeg images.

Use a system capable of performing enhanced features for analytics processing, reporting, and alerting. Ensure each camera/lens is able to detect events that can be configured to send a command to the PTZ camera to move to that location, as well as sending alerts and notifications to other devices or software systems. Use a CCTV IP-Camera System with built-in analytics functionality available and any licensing necessary to activate it.

909.03.F. CCTV IP-Camera System, Multi-View. Use a CCTV IP-Camera System, Multi-View conforming to the requirements of 909.03.A except for the following differences as defined below.

A PTZ camera is not required.

Use a CCTV IP-Camera System consisting of multiple cameras/lenses within one enclosure. The enclosure shall have a minimum of two cameras/lenses and a maximum of five cameras/lenses. Each camera may have similar or different characteristics or lens capabilities. Cameras may be fixed in place or capable of remote PTZ type functions. The lenses may be independently interchangeable with other lenses that can provide different focal lengths for more detailed viewing in certain directions or wider-angle viewing. It is generally desirable, but not required, for the combination of camera lenses to provide a 360-degree panoramic field of view over large areas such as highway interchanges or signalized intersections.

Use cameras/lenses with at least a resolution of 1920 by 1080. Ensure each camera is capable of adjusting the resolution stream settings to 1280 by 720 and 720 by 480 or lower equivalent with multiple, individually configurable streams, each capable of at least H.264 and MJPEG. The system shall provide video at a minimum of 20 frames per second (FPS) continuously.

Use a system capable of flexible positioning of the cameras/lenses within the enclosure and ensure each lens has individual tilt functionally. Any fixed lenses shall be capable of being physically locked into place and shall not move due to vibration or exterior conditions.

Use a CCTV IP-Camera System capable of being powered by PoE, including a PoE injector capable of running all camera system functions and withstanding outdoor environments. Supply all

weatherproofing pigtails and connectors necessary to connect directly to outdoor CAT5e cabling supplying PoE to the camera.

Use a CCTV IP-Camera System capable of mounting to standard camera lowering unit system and supply a 1.5 in (38.1 mm) NPT Pipe Mount adapter.

Ensure each camera/lens is capable of overlaying text and custom images consistent with Department standards and pulling snapshot jpeg images.

Use a system capable of performing enhanced features for analytics processing, reporting, and alerting. Ensure each camera/lens is able to detect events that can be configured to send alerts and notifications to other devices or software systems. Use a CCTV IP-Camera System with built-in analytics functionality available and any licensing necessary to activate it.

909.03.G. CCTV IP-Camera System, Fixed-View. Ensure the CCTV IP-Camera System, Fixed-View conforms to the requirements of 909.03.A except as modified below.

Remote Pan/Tilt/Zoom control functionality is not required.

Use a CCTV IP-Camera System capable of being powered by PoE, including a PoE injector capable of running all camera system functions. Supply all weatherproofing pigtails and connectors necessary to connect directly to outdoor CAT 5e cabling supplying PoE to the camera.

Ensure the system is suitable for outdoor installation atop or mounted to the side of poles up to 100 ft (30.48 m) off the ground. Use mounting hardware that ensures no camera control wiring is exposed or only a small amount is exposed with a drip loop from the bottom of the camera enclosure to a weatherhead conduit body.

Provide mounting hardware, brackets, and adapters to be able to mount the camera to the side of a pole.

1. Functional Capabilities.

a. Use a camera with at least a resolution of 1920 by 1080.

b. Ensure the camera is capable of adjusting the resolution stream settings to 1280 by 720 and 720 by 480 or lower equivalent with multiple, individually configurable streams, each capable of at least H.264 and MJPEG.

c. Use a camera with remote auto focus functionality.

d. Presets are not required for the CCTV IP-Camera System, Fixed-View as it will have one stationary view in a specific direction. However, if the CCTV IP-Camera System, Fixed-View does have the ability for presets, ensure presets on both the zoom lens and the pan/tilt mechanism to allow setting the lens and the pan/tilt to administrator specified locations for the user.

e. If the CCTV IP-Camera System, Fixed-View has Pan, Tilt and Zoom (PTZ) or Electronic Pan, Tilt and Zoom (E-PTZ), allow control of the PTZ, preset selection, power on and off, and other functions of each system from a central site using a HyperText Transfer Protocol (HTTP) browser-based application with a graphical user interface (GUI).

2. Display Capabilities.

a. Displaying the compass heading of the camera direction the camera direction (i.e. N, S, E, W, NE, SE, NW, SW) permanently over the video feed will not be necessary as the CCTV IP-Camera System, Fixed-View as it will have one stationary view in a specific direction.

b. Use a CCTV IP-Camera System assembly capable of performing enhanced features for analytics processing, reporting, and alerting. Ensure the system is capable of at least the following enhanced features configurable within the camera web browser GUI:

(1) Rules based alerting/notification. Ensure the camera is capable of sending alarms or notifications based on events that occur from other features.

(2) Object classification and tracking (car/truck/pedestrian/etc.)

(3) Detection zones when objects enter.

(4) Detection lines when objects cross.

(5) Multiple line crossing.

(7) Slow Traffic detection.

(8) Incident detection.

3. Lens. Provide the camera with a varifocal lens that is adjusted for the desired view of the roadway. The camera may allow optional lenses to be used for various applications. Ensure the lens allows remote auto focus functionality.

4. Assembly. Ensure the CCTV IP-Camera enclosure meets National Electrical Manufacturers Association (NEMA) Type 4X and IP66-/IP67- environmental standards and include an unpressurized housing enclosure with a minimum ambient operating temperature of -40 to 140 °F (-40 to 60 °C) with 100 percent relative humidity that provides complete protection for the camera and zoom lens assembly from moisture and airborne contaminants. Use an enclosure that is barrel or dome style, placed and installed at fixed locations to provide coverage of the desired roadway lanes.

909.03.H. CCTV IP-Camera System, Wrong Way Detection. Use a CCTV IP-Camera System, Wrong Way Detection conforming to the requirements of 909.03.G.

909.04 CCTV Poles.

All pole and foundation designs and calculations shall be stamped/sealed by a Professional Engineer and submitted to the Office of Traffic Operations for acceptance.

909.04.A. Concrete Closed Circuit Television (CCTV) Pole.

1. Design Requirements. Use a CCTV pole designed in accordance with the latest AASHTO "Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals." Ensure the minimum loading requirement is based on an isotach wind velocity of 100 mph (145 km/h) including a 3 s gust.

2. Concrete Pole. Use prestressed concrete pole, with concrete placed by the centrifugal spinning process. Use pole with at least 28-day compressive strength of 8,000 psi (55.16 MPa) and at least 3/4 in (19 mm) cover over the prestressing strand.

Use pole with a natural form finish, soft gray in color, designed and constructed so that all wiring and grounding facilities are concealed within the pole. Ensure all handholes, couplings, thru-bolt holes, and ground wire are cast into the pole during the manufacturing process.

Ensure poles are round in cross section and provide a continuous taper of 0.18 in/ft (15 mm/m) of length and a minimum 3/4 in (19 mm) of concrete coverage over the prestressing strands.

Ensure all cable entry holes and sizes conform to the Contract Documents and are free from sharp edges for passages of electrical wiring.

A Support Information Tag per C&MS 732.11 shall be attached to the pole.

Use poles that meet the following:

a. Ensure two 4 in by 12 in (75 by 300 mm) conduit entrance openings are centered 20 in (450 mm) below grade.

b. Ensure one large handhole 4.5 in by 30 in (114.3 by 762 mm) steel galvanized or cast aluminum reinforced handhole frame with flush cover and 9/16 in (14.3 mm) hex head screw is located 38 in (966 mm) above grade.

c. Use a pole capable of mounting a camera lowering device, in accordance with the ITS series of standard construction drawings 180 degrees from the handhole. Ensure the pole tenon and camera lowering system are compatible.

d. Ensure there is a bolt hole in the bottom center of the large handhole box for connecting a standard lowering unit winch, utilizing a 1/2" stainless steel coupling nut with a pullout strength of at least 500 pounds. The coupling shall be capable of being tapped and there shall be a clean-out hole to be able to wash out debris from the bolt hole so debris can exit out below the bolt hole.

e. Provide a fish wire to facilitate cable installation.

- f.** Ensure an inside raceway dimension of at least 5 in (125 mm) at tip of pole.
- g.** Ensure pole 75 ft (22.9 m) or less above grade has a deflection less than 1 in (25 mm) and pole over 75 ft (22.9 m) above grade has a deflection less than 1.62 in (40 mm) at 30 mph (50 km/h) non-gust wind speed.
- h.** Use pole conforming to the Guide Specification for Prestressed Concrete Poles published in the May-June 1982 issue of the Journal of the Prestressed Concrete Institute.
- i.** Ensure poles are lifted and supported during manufacturing, stockpiling, transporting, and erection operations at the points shown on the shop drawings.
- j.** Ensure transportation, site handling, and erection are performed in accordance with manufacturer requirements and as directed by the Engineer.
- k.** Use pole capable of housing at least 1.25 in (31.75 mm) PVC conduit installed inside of the pole from the top of the pole to the top of the handhole used for the lowering unit cable only.
- l.** Ensure pole is coated in a weatherproof Silane treatment for the bottom 30 ft (9.144 m) section of the concrete pole and in accordance with the product specifications.

3. Material Requirements.

- a. Concrete.** Furnish Portland Cement conforming to 701.04. Ensure maximum size aggregate is 3/4 in (19 mm) or 3/4 in (19 mm) of the clear spacing between reinforcing steel and surface of pole, whichever is greater. Use water reducers, retarders, or accelerating admixtures conforming to ASTM-C494. Ensure water is free from foreign materials in amounts harmful to concrete and embedded steel.
- b. Reinforcing Steel.** Use deformed steel reinforcement conforming to the requirements of ASTM-A615 for Grade 60 Rebar.
- c. Prestressing Steel.** Use prestressing steel reinforcement conforming to ASTM-A416 for uncoated 7-wire, stress relieved strand.
- d. Spiral Reinforcement.** Use steel spiral reinforcement conforming to the requirements of ASTM-A82 and at least 0.15 in (3.75 mm) diameter.
- e. Hardware.** Use structural steel conforming to ASTM-A36 and zinc alloy AC41A conforming to ASTM-B240. Ensure the finish is hot dipped galvanized in accordance with ASTM-A153.
- f. Electrical Ground.** Ensure pole is supplied with a number 6 stranded copper ground wire cast into the wall of the pole at the handhole box location. Ensure ground lugs do not interfere with the mounting of a lowering device.

4. Camera Lowering Device. Furnish a pole capable of mounting a camera lowering device conforming to 909.05. Ensure that the pole tenon and camera lowering device are compatible.

909.04.B. Steel Closed Circuit Television (CCTV) Pole.

1. Design Requirements. Ensure that there is not more than one longitudinal, automatically electrically welded seam on circular poles. Ensure that the welded seams are neat and uniform in appearance and have a thickness not less than the base material and a bead height not exceeding 1/16-inch (2 mm). Ensure that the wall thickness at each pole or arm cross-section is of uniform thickness, except at weld beads. Do not place transverse seams or welds on true continuous taper type poles or arms. Weld according to 513.21.

Fit poles with a welded-on cast or plate steel base designed to mount on an anchor bolt foundation and ensure that each pole includes the furnishing of anchor bolts and conduit ells for installation in the foundation. Furnish conduit ells for installation in each foundation as required by ITS-10.10 and ITS-11.10. Furnish conduit ells made from steel complying with 725.04; however, if they connect to non-metallic conduit, ensure that they are of the same non-metallic material.

Ensure that the poles include a handhole near the base oriented as required. Reinforce the handhole with a welded-on steel frame with a grounding lug and fit it with a cover plate fastened by stainless steel screws. Ensure that the poles also include a cable and wire support J-hook welded near the top and a removable pole cap. Design poles so their interiors conceal wiring.

Furnish certified materials according to Supplement 1094.

All pole and foundation designs and calculations shall be stamped/sealed by a Professional Engineer and submitted to the Office of Traffic Operations for acceptance.

2. Steel Pole.

Use poles designed and constructed so that all wiring and grounding facilities are concealed within the pole.

Ensure poles are round in cross section and provide a continuous taper of 0.13 in/ft (11 mm/m) of length.

Ensure all cable entry holes and sizes conform to the Contract Documents and are free from sharp edges for passages of electrical wiring.

Use poles that meet the requirements of 909.04.A.2.a through 909.04.A.2.k, except h.

A Support Information Tag per C&MS 732.11 shall be attached to the pole.

3. Material Requirements. Use tapered steel tubes meeting the requirements of ASTM A595 Grade A or ASTM A572 Grade 55 or 65

Ensure that there is not more than one longitudinal, automatically electrically welded seam on circular poles. Ensure that the welded seams are neat and uniform in appearance and have a thickness not less than the base material and a bead height not exceeding 1/16-inch (2 mm). Ensure that the wall thickness at each pole or arm cross-section is of uniform thickness, except at weld beads. Do not place transverse seams or welds on true continuous taper type poles or arms. Weld according to 513.21.

After fabrication, hot-dip galvanize poles according to 711.02.

4. Camera Lowering Device. Furnish a pole capable of mounting a camera lowering device according to 909.04.A.4.

909.04.B. Tilttable Closed Circuit Television (CCTV) Pole.

1. Design Requirements. Ensure that the wall thickness at each pole or arm cross-section is of uniform thickness, except at weld beads. Weld according to 513.21.

Fit poles with a welded-on cast or plate steel base designed to mount on an anchor bolt foundation and ensure that each pole includes the furnishing of anchor bolts and conduit ells for installation in the foundation. Furnish conduit ells for installation in each foundation as required by ITS-10.10. Furnish conduit ells made from steel complying with 725.04; however, if they connect to non-metallic conduit, ensure that they are of the same non-metallic material.

Ensure that the poles include a handhole near the base oriented as required. Reinforce the handhole with a welded-on steel frame with a grounding lug or cadwelded pigtails. Attach the Point-of-Entry box over the handhole. Ensure that the poles also include a cable and wire support J-hook welded near the top and a removable pole cap. Design poles so their interiors conceal wiring.

Furnish certified materials according to Supplement 1094.

All pole and foundation designs and calculations shall be stamped/sealed by a Professional Engineer and submitted to the Office of Traffic Operations for acceptance.

2. Steel Pole. Use square steel tubes meeting the requirements of TIA A500B.

Use poles designed and constructed so that all wiring and grounding facilities are concealed within the pole.

Ensure all cable entry holes and sizes conform to the Contract Documents and are free from sharp edges for passages of electrical wiring.

Use poles that meet the requirements of 909.04.A.2.i & j.

A Support Information Tag per C&MS 732.11 shall be attached to the pole.

3. Material Requirements. Pole steel shall be square steel tubes meeting the requirements of A500B. Flange steel shall meet the requirements of A572-50. Pipe steel shall meet the requirements of A53-B

4. Pivot System. Furnish a pivot system for a typical total equipment weight of 25 lbs. Lowering ropes and connections shall have a min. 3000 lb breaking strength.

909.05 Closed Circuit Television (CCTV) Lowering Unit

909.05.A. Camera Lowering Device. Furnish a camera lowering system designed to support and lower a standard CCTV camera, lens, housing, PTZ mechanism, cabling, connectors, and other supporting field components without damage or causing degradation of camera operations.

Use a lowering system consisting of a pole, communications contact unit, self-aligning divided support arm, pole adapter for attachment to a pole top tenon, and a camera junction box. Ensure the divided support arm and receiver bracket is designed to self-align the contact unit with the pole center line during installation and ensure the contact unit cannot twist under high wind conditions.

Ensure the camera lowering device is rated for raising/ lowering devices which cumulatively add up to at least 40 pounds.

Ensure the camera lowering device will withstand wind forces of 100 mph (160 km/h) with a 30 percent gust factor using a 1.65 safety factor. Furnish manufacturer testing documents from an independent laboratory certifying adherence to the stated wind force criteria utilizing an Effective Projected Area (EPA) of at least 12 square feet hanging a maximum of 3 ft below the bottom of the lowering unit junction box.

Use a tenon arm capable of slight adjustment without completely removing the bolts securing the pole top adapter to the camera pole.

1. Suspension Contact Unit. Ensure the suspension contact unit has a load capacity of at least 600 lb (272.15 kg) with a safety factor of four. Furnish a suspension contact unit with locking mechanisms between the fixed and moveable components of the lowering device. Ensure the movable assembly has at least two latches. Ensure the latching mechanism securely holds the device and mounted equipment and is operated by alternately raising and lowering the assembly using a winch and lowering cable. When latched, ensure all weight is removed from the lowering cable. Use a fixed unit with a heavy duty cast tracking guide that allows latching in the same position each time. Use a contact unit housing that is weatherproof with a gasket provided to seal the interior from dust and moisture.

Use prefabricated components of the lift unit support system designed to preclude the lifting cable from contacting the power or video cabling. Use an internal pole conduit for the CCTV camera stainless steel lowering cable. Ensure the stainless steel lowering cable is the only cable permitted to move within the pole or lowering device during lowering or rising. Ensure all other cables remain stable and secure during lowering and raising operations.

2. Connector Blocks and Cabling. Use connector blocks consisting of outdoor-rated material with male and female matched body parts that mate together to make an electrical connection between the cable and the camera housing when the camera is fully raised and locked.

Ensure the connector block bodies hold the individual contacts together without separating or losing contact during normal operations. Furnish guide pins, guide bushings, or both to prevent misconnections and provide accurate mating without relying on the contact pins to provide alignment. Use connector blocks and cabling that support at least 3-wire power and at least 3 Ethernet communications cables (minimum CAT6 1000 base T tested and certified). Ensure at least 3 contacts supporting at least 18 AWG power wiring (power wiring to top of pole shall be at least 14 AWG), and 24 contacts for supporting at least three separate CAT6 Ethernet connections (8 contacts for each Ethernet connection). Use pins sized to support at least 24 AWG wire for typical CAT6 cabling standards. All cabling shall be continuous from the top lowering unit connector block at the top of the pole to the ITS Cabinet on the ground; no splicing or connections are permitted in between. Cabling shall also be continuous from the bottom lowering unit connector block to the lowering unit junction box and 3 feet of cable slack shall be provided within the junction box. Ensure each Ethernet cable end is crimped with an industry standard 8-point crimp tool to an RJ45 connector. Each individual cable shall be a minimum of 130 feet in length and the individual cables shall be ran alongside each other and taped or secured together every 10 feet at a minimum.

3. Contacts. Furnish contacts with metal, electrically conductive connections in the male and female connectors. Use heavy duty, gold plated or copper material contacts. Ensure the female socket is sized to match the male contacts. Ensure the connector provides a rain and weather-tight seal when male and female components are fully connected.

4. Lowering Tool. Use a camera lowering device operated by an externally-powered portable lowering tool. Furnish a lowering tool consisting of a lightweight metal frame and winch assembly with cable as described in 909.05.A.2, two quick release cable connectors, an adjustable safety clutch, and a variable speed industrial duty electric drill motor with at least 550 rpm.

Use a lowering tool capable of accessing the support cable through the hand hole of the pole. Ensure the lowering tool supports itself and the load when attached to the hand hole by means of one single bolt or a speed adapter and prevents freewheeling when loaded. Furnish a lowering tool with the following:

- (1) Reduction gear.
- (2) An adapter for operating the lowering device by portable drill using a clutch mechanism.
- (3) Positive locking mechanism to secure cable reel during operation.

Use a variable speed, heavy-duty, and reversible drill motor and at least one lowering tool including any additional tools needed. Use a lowering tool made of durable and corrosion resistant materials, powder coated, galvanized, or otherwise protected from the environment by industry-accepted coatings to withstand exposure to a corrosive environment. Ensure each lowering tool with associated drill is housed in a watertight case.

5. Lower Junction Box. Use a lower junction box consisting of a heavy-duty clamshell box that is weather-sealed when closed, except for a drain hole in the bottom. Use a lower junction box closed by way of stainless steel hex bolts and nuts. Ensure the hex bolts and nuts secure in a way that when the junction box is open the bolts and nuts do not come out of the lower portion of the clamshell.

Use a lower junction box sized to permit the installation of surge protection for all wiring. Ensure the lower portion of the lower junction box does not exceed 10 lb (4.53 kg) weight. Ensure the lower junction box does not allow water to pass directly through the enclosure and into the camera. Ensure to route cables in a manner that prohibits water from traveling along the cable path through the junction box.

6. Materials. Ensure pulleys for the camera lowering device and portable lowering tool have sealed self-lubricated bearings, oil tight bronze bearings, or sintered bronze bushings. Ensure the lowering cable is at least 1/8 in (3 mm) diameter stainless steel aircraft cable with at least a breaking strength of 1,740 lb (789.25 kg) with 7 strands consisting of 19 wires each.

Ensure all electrical and video connections between the fixed and lowerable portion of the outdoor-rated contact block is protected from exposure to the weather by a waterproof seal. Ensure electrical connections between the fixed and movable lowering device components are designed to conduct high frequency data bits, 1 V peak-to-peak video signals, and the power requirements for operation of dome environmental controls.

Use interface and locking components made of stainless steel or aluminum. Use external components of the lowering device made of corrosion resistant materials, powder coated, galvanized, or otherwise protected from the environment by industry accepted coatings to withstand exposure to a corrosive environment.

909.06 Dynamic Message Signs. Use a DMS placed on a State Highway or Interstate Highway, permanently mounted, overhead, LED dynamic message sign.

No items other than inventory or maintenance-related information shall be displayed on the front or back of a dynamic message sign. Names or logos of the manufacturer, brand, or model shall not be displayed on a DMS, either in the message display itself or on the exterior housing.

Furnish NTCIP documentation containing ASCII versions of the following Management Information Base (MIB) files in Abstract Syntax Notation 1 (ASN.1) format:

- 1.** The relevant version of each official standard MIB modules referenced by the device functionality.

2. If the device does not support the full range of any given object within a standard MIB Module, a manufacturer specific version of the official standard MIB Module with the supported range indicated in ASN.1 format in the SYNTAX and/or DESCRIPTION fields of the associated OBJECT TYPE macro. The filename of this file shall be identical to the standard MIB Module except that it will have the extension “man”.

3. MIB module in ASN.1 format containing any and all manufacturer specific objects supported by the device with accurate and meaningful DESCRIPTION fields and supported ranges indicated in the SYNTAX field of the OBJECT-TYPE macros.

4. A MIB containing any other objects supported by the device.

909.06.A. Dynamic Message Signs – Full-Size DMS. Use a DMS enclosure providing walk-in access for all Light Emitting Diode (LED) display modules, electronics, environmental control equipment, air filters, wiring, and other internal components.

Ensure each display pixel is capable of displaying full color messages using red, green, and blue LED assemblies.

Use a DMS containing a full display matrix measuring at least 27 rows high by 105-pixel columns wide. For full color displays, ensure the DMS contains a full display matrix measuring a minimum of 96 rows high by 336-pixel columns wide. Ensure the matrix is capable of displaying messages that are continuous, uniform, and unbroken in appearance to motorists and travelers.

Ensure the pixel matrix is capable of displaying alphanumeric character fonts measuring at least 18 in (460 mm) high to a maximum of the display matrix height. For full color displays, ensure the DMS pixel pitch is no greater than 0.79 in (20 mm). Ensure the DMS is able to display messages composed of any combination of alphanumeric text, punctuation symbols, and graphic images across multiple frames.

Ensure the DMS is capable of being controlled by the existing Department ATMS software platform. Provide one controller unit to the Department for testing and obtain equipment approval from the Department. The control software and communication interface shall be compatible with the Department’s platform for controlling the messages and must be approved prior to acceptance by the Department.

1. Legibility. Ensure DMS messages are legible within a distance range from 150 ft to 1000 ft (45 m to 360 m) from the DMS display face under the following conditions:

a. The DMS is mounted so its bottom side is positioned between 17 ft (1.5 m) and 20 ft (6 m) above a level roadway surface.

b. The DMS is displaying alphanumeric text that is 18 in (460 mm) high.

c. In normally encountered weather conditions 24 hours per day.

d. During dawn and dusk hours when sunlight is shining directly on the display face or when the sun is directly behind (silhouetting) the DMS.

e. When viewed by motorists and travelers that have 20/20 corrected vision.

f. When the motorist eye level is from 3 ft to 12 ft (0.9 to 3.6 m) above the roadway surface.

2. Enclosure.

a. **Dimensions.** Use a DMS enclosure not exceeding 8.5 ft (2.6 m) high by 26 ft 1 in (7.9 m) wide. Ensure the front-to-back housing depth does not exceed 3 ft 11 in (1.2 m) at its widest point, including the rear ventilation hoods. Ensure the DMS weight does not exceed 4300 lb (1900 kg).

b. **Sign Construction.** Use an enclosure conforming to NEMA Type 3R standards, as described in NEMA Standards Publication 250-2003, Enclosures for Electrical Equipment (1000 V Maximum).

Use a DMS enclosure with weep holes for drainage on the bottom. Ensure all weep holes and ventilation and exhaust hoods have screens.

Use a DMS and sign controller capable of operating within a temperature range of -30 °F to 165 °F (-34 °C to 74 °C) and a non-condensing relative humidity range of 0 to 99 percent. Ensure DMS and sign controller components are not damaged by storage or temporary operational exposure to a temperature range of -40 °F to 185 °F (-40 °C to 85 °C).

Use external DMS component hardware including at least nuts, bolts, screws, standoffs, rivets, and fasteners fabricated from hot dipped or mechanically galvanized steel, stainless steel, aluminum, nylon, or other durable corrosion-resistant materials suitable for the roadway signage application.

Use solid state DMS and sign controller components, except for the environmental control fans and thermostats. Ensure all electrical components exceeding 24 VDC used in the DMS and the sign controller are Underwriter's Laboratory (UL) listed and conform to all applicable NEC codes.

Ensure ambient electromagnetic interference does not impair the performance of the DMS system. Ensure the DMS system does not radiate electromagnetic signals that adversely affect any other electronic device. Provide certification showing the DMS system passes standard Electromagnetic Compatibility (EMC) guidelines to the Department.

Use a DMS enclosure structural frame consisting of aluminum extrusions made from 6061-T6, 6063-T6 aluminum alloy, or both. Ensure all sides of the DMS housing exterior, except the front, are covered with 0.125 in (3.17 mm) thick aluminum sheets made from 5052-H32 aluminum alloy. Use continuous welding to attach external aluminum skin to the structural framework.

Use DMS structural assembly hardware including at least nuts, bolts, washers, and direct tension indicators of stainless steel or galvanized A325 high-strength steel sized for the application.

c. Welding. Ensure the aluminum skin is welded to the DMS cabinet frame. Ensure all exterior sheet seams are continuously seam welded to the DMS frame to form a single structure. Use stitch welding on the interior of the cabinet to attach the aluminum skin sheets to the aluminum extrusion frame. Ensure welding and inspection of the DMS enclosure conforms to the requirements of ANSI/AWS D1.2-97 Structural Welding Code-Aluminum (1997). Ensure compliance with this standard includes at least the following:

- (1) Perform welding in accordance with documented manufacturer welding procedures.
- (2) Ensure personnel who perform welding on the DMS housing are certified to AWS D1.2-97 for all weld types required for housing fabrication.
- (3) Use a Certified Welding Inspector (CWI) to inspect DMS welding daily and complete written reports that document welding progress, weld integrity, and any corrective action taken. Archive these reports and furnish them as requested by the Engineer.

d. Mounting Brackets. Use I-beam or Z-bar extrusions bolted to the rear wall of the DMS enclosure to facilitate attachment of the DMS to the support structure. Use mounting brackets meeting at least the following:

- (1) Front face design achieves a 3 degree viewing angle.
- (2) Extrude from aluminum alloy number 6061-T6 or equivalent.
- (3) Attach to the DMS structural frame members, not just the exterior sheet metal.
- (4) Factory installed.
- (5) Attach to the DMS using stainless steel or mechanically galvanized A325 high-strength steel bolts.
- (6) Attach to the DMS using direct tension indicators to verify that mounting hardware is tightened with the proper amount of force.
- (7) Install bracket to DMS attachment points are sealed and water-tight.
- (8) Design and fabricate to allow drill into them without penetrating the DMS housing and compromising the housing's ability to shed water.

Use hardware to attach the mounting brackets including at least nuts, bolts, washers, and direct tension indicators to the DMS cabinet of stainless steel or galvanized A325 high-strength steel and appropriately sized for the application.

e. Lifting Hardware. Use galvanized steel lifting eyebolts attached to the top of the DMS housing for moving and installation purposes. Ensure hardware attaches directly to the DMS housing structural frame and is factory installed. Ensure all mounting points for eyebolts are sealed to prevent

water from entering the DMS housing. Use a lifting hardware and housing frame design that ensure the DMS can be shipped and handled without damage or excessive stress being applied to the housing prior to or during DMS installation on its support structure.

Use lifting hardware capable of being removed easily by one individual without opening or entering the display and without any risk of compromising water-tightness. Ensure special tools are not required. Ensure removal of the hardware does not create holes and no replacement bolts or other hardware is necessary to seal the cabinet.

f. Front Face Construction. Use front face panels that provide a high-contrast background for the DMS display matrix. If an aluminum mask is used, ensure it is painted flat black and contains an opening for each pixel. Ensure openings are large enough to not block any portion of the viewing cones of the LEDs.

Ensure face panels are attached to each other using stainless steel hardware. Ensure seams that separate adjacent panels are sealed. Ensure panels are not welded or otherwise permanently mounted to the DMS enclosure. Panels shall be mounted in such a way that they are removable from the interior of the DMS housing.

Ensure each panel has a single polycarbonate sheet attached securely to the inside of the aluminum panel. Use a polycarbonate sheet to cover all of the pixel openings. Ensure the polycarbonate sheet is sealed to prevent water and other elements from entering the DMS. Ensure the polycarbonate contains ultraviolet (UV) inhibitors that protect the LED display matrix from the effects of UV light exposure and prevent premature aging of the polycarbonate itself. Use a Lexan XL10 polycarbonate sheet or equivalent approved by the Engineer.

Use LED display modules mounted to the inside of the DMS front face panels. Use hand tools for removal and replacement of the LED display modules.

Use DMS front face borders (top, bottom, left side, and right side) that surround the front face panels and LED display matrix painted black to maximize display contrast and legibility.

Ensure wind does not cause the DMS front face to distort in a manner that adversely affects LED message legibility.

g. Exterior Finish. Use DMS front face panels and front face border pieces coated with semi-gloss black Kynar 500.

Use all other DMS enclosure surfaces, including the access doors and DMS mounting brackets, of natural mill-finish aluminum.

h. Service Access. Use a DMS enclosure that provide safe and convenient access to all modular assemblies, components, wiring, and subsystems located within the DMS enclosure. Ensure a single technician is able to remove and replace all internal components. Ensure the DMS front face panels are removable and replaceable from inside the DMS cabinet.

Use one vertically hinged door located on each end (left and right side) of the DMS enclosure. Ensure each access door mounts to an integral doorframe and use stainless steel hardware to bolt to the DMS enclosure. Use a continuous vertical stainless steel hinge to support each door and ensure all doors open outward. Ensure each door latches to its frame with a three-point draw-roller mechanism when in the closed position. Use a latching mechanism that includes an internal handle and release lever. Use door release levers located that a person with no key and no tools cannot become trapped inside the enclosure.

Ensure access doors, when open at a 90 degree angle from the DMS enclosure end wall, do not extend more than 38 in (965 mm) from the enclosure. Ensure the bottom edge of each door is at least 3.5 in (89 mm) from the bottom edge of the DMS enclosure.

Use doorframes double flanged on all sides to shed water. Ensure each door closes around its flanged frame and compress against a closed-cell foam gasket, that is adhered to the door. Ensure all doors contain a stop that retains the door in a 90 degree open position. Ensure when a door is open, the door and its stop are not damaged by a 40 mph (64 km/h) wind.

Ensure each door is furnished with a lock that is keyed to Corbin Number 2.

Use a DMS equipped with an Occupational Safety and Health Administration (OSHA) compliant safety rail assembly, that prevents service personnel from falling out of the DMS when closed across an open access door. Use a rail assembly for each door in the display. Use a safety rail that consists of a top rail that extends 42 in (1067 mm) above the interior walkway and a mid-rail that extends 21 in (530 mm) above the interior walkway. Ensure the rail assembly does not require tools to open and close.

i. Interior Housing Area. Ensure a minimum headroom of 72 in (1.83 m) is provided. Ensure this free space is maintained across the entire width of the DMS enclosure, except for structural frame members. Use structural members designed to not obstruct the free movement of maintenance personnel throughout the DMS interior.

Ensure a walkway is installed in the bottom of the DMS housing that is level at the angle the sign is installed. Use a walkway at least 24 in (610 mm) wide and run the entire length of the enclosure, from access door to access door. Ensure the walkway's top surface is non-slip and free of obstructions that could trip service personnel. Ensure the walkway supports a load of 300 pounds per linear foot (130 kg per meter) and is constructed of multiple, removable panels.

3. Illumination. Use LED display modules, LED pixel boards, and driver circuit boards that are identical and interchangeable throughout the DMS.

a. LED Display Module. Use a DMS containing LED display modules that include a LED pixel array, LED driver circuitry, and mounting hardware.

Ensure each LED display module is mounted to the rear of the display's front face panels using durable non-corrosive hardware. Ensure no tools are required for module removal and replacement. Ensure each module is mounted that the LEDs emit light through the face panel's pixel holes and that the face panel does not block any part of the viewing cone of any of the LEDs in any pixels.

Use quick-disconnect locking connectors for LED display module power and signal connections. Ensure soldering is not required for removal of a display module, a pixel board, or driver circuit board from its display module.

Ensure removal or failure of any LED module does not affect the operation of any other LED module or sign component. Ensure removal of one or more LED modules does not affect the structural integrity of any part of the sign.

Ensure it is not possible to mount an LED display module upside-down or in an otherwise incorrect position within the DMS display matrix.

b. LED Pixel Boards. Use LED pixel boards composed of a printed circuit board that LED pixels are soldered. Ensure the LED pixel boards conform to the following:

- (1) Manufactured using a laminated fiberglass printed circuit board.
- (2) Contains a maximum of 45 LED pixels configured in a two-dimensional array. Ensure the pixel array is a maximum of nine pixels high by five pixels wide.
- (3) Ensure the distance from the center of one pixel to the center of all adjacent pixels, both horizontally and vertically, is at least 2.57 in (65.27 mm).
- (4) Ensure each pixel consists of a at least two independent strings of discrete LEDs and contains an equal quantity of LED strings.
- (5) Ensure the failure of an LED string or pixel does not cause the failure of any other LED string or pixel in the DMS.
- (6) Ensure each LED pixel does not consume more than 1.5 W.
- (7) Ensure the circular base of the discrete LEDs is soldered so that they are flush and parallel to the surface of the printed circuit board. Ensure the longitudinal axis of the LEDs is perpendicular to the circuit board.
- (8) Ensure all exposed metal on both sides of the LED pixel board, except connector contacts, is protected from water and humidity exposure by a thorough application of acrylic or silicone conformal coating. Ensure bench level repair of individual pixels, including discrete LED replacement and acrylic or silicone conformal coating repair is possible.
- (9) Use identical and interchangeable LED pixel boards throughout the DMS.

c. Discrete LEDs. Use DMS pixels constructed with surface mount or through hole discrete LEDs. Ensure discrete LEDs conform to the following:

(1) Use through hole LEDs that are non-diffused, high-intensity, and solid-state lamps in T1-3/4-style LED packages.

(2) Use surface mount LEDs that are non-diffused, high-intensity, and solid-state lamps.

(3) Ensure all LEDs have a nominal viewing cone of 30 degree with a half-power angle of 15 degree measured from the longitudinal axis of the LED. Use viewing cone tolerances specified in the LED manufacturer's product specifications not to exceed ± 3 degree.

(4) Use LED lenses fabricated from UV light resistant epoxy.

(5) Use LEDs obtained from no more than two consecutive luminous intensity "bins" as defined by the LED manufacturer.

(6) Use LEDs obtained from no more than two consecutive color "bins" as defined by the LED manufacturer.

(7) Use various LED color and intensity bins distributed evenly throughout the sign and consistent from pixel to pixel. The Department will not accept random distribution of the LED bins.

(8) Use LEDs in each DMS from the same manufacturer and of the same part number.

(9) Use LEDs rated by the LED manufacturer to have a minimum lifetime of 100,000 hr of continuous operation while maintaining at least 70 percent of the original brightness.

(10) Use LEDs not driven with a forward current that exceeds the LED manufacturer's recommendations to maintain the minimum 100,000 hr lifetime requirement.

d. Pixel Drive Circuitry. Use a driver circuit boards conforming to the following:

(1) Use LED driver boards manufactured using a laminated fiberglass printed circuit board.

(2) Ensure all exposed metal on both sides of the LED driver board, except connector contacts, is protected from water and humidity exposure by a thorough application of acrylic or silicone conformal coating. Ensure bench level repair of individual components, including conformal coating repair, is possible.

(3) Ensure each LED driver board is microprocessor-controlled and communicates with the sign controller on a wire or fiber optic communication network using an addressable network protocol. Use a microprocessor that processes commands from the sign controller to display data, perform diagnostic tests, and report pixel and diagnostic status.

(4) Use a constant current LED driver Integrated Circuits (IC) to prevent LED forward current from exceeding the LED manufacturer recommended forward current whenever a forward voltage is applied. The Department will not accept the LED drive currents exceeding the manufacturer's recommendations for the 100,000 hr lifetime requirement.

(5) Use LED pixels directly driven using pulse width modulation (PWM) of the drive current to control the display intensity. Use LED driver circuitry that varies the current pulse width to achieve the proper display intensity levels for all ambient light conditions. Use drive current pulse that is modulated at a frequency high enough to provide flicker-free operation and at least 200 brightness levels.

(6) Ensure the LED driver boards receive updated display data at a rate of at least ten frames per second from the sign controller.

(7) Ensure each LED driver board is powered by 24 VDC from external regulated DC power supplies. Ensure each driver board receives separate power feeds from at least two independent power supplies.

(8) Ensure each LED driver board contains a microprocessor-controlled power regulation circuit that controls the voltage applied to the LED strings. Use a power circuit that automatically adjusts the forward voltage of the LEDs to optimize power consumption efficiency as the temperature changes. Use indicator LEDs to indicate the status of power to each driver board.

(9) Ensure each LED driver board contains a temperature sensor and reports the temperature to the sign controller upon request.

(10) Use LED driver circuitry that is able to detect individual LED strings or pixels that are non-responsive and reports the pixel status to the sign controller upon request.

(11) Use identical and interchangeable driver circuit boards throughout the DMS.

(12) Ensure removal or failure of a single driver circuit board does not affect the performance of any other LED display module in the DMS.

(13) Use individual addressing of each driver circuit configured using the communication wiring harness and connector. The Department will not accept on-board addressing jumpers or switches.

(14) Use a redundant LED power supply system designed to illuminate every character on the sign with any allowable alphanumeric character at full power and at 165 °F (74 °C). Use switching power supplies that are at least 80 percent efficient at nominal voltage and include a self-resetting internal thermal protection device that switches off the output in case of an overload. In the event of a failure of one of the power supplies, ensure the controller detects the loss of power from the failed supplies.

e. Regulated DC Power Supplies. Use LED pixel display modules powered with auto-ranging regulated switching power supplies that convert the incoming AC to DC at a nominal voltage of 24 VDC. Use power supplies wired in a redundant parallel configuration that use multiple supplies for the DMS display matrix.

Use power supplies arranged in redundant pairs within the display to supply power to a defined region of the sign. Ensure each pair of power supplies contains two physically and electrically independent supplies. Ensure each pair of power supplies is parallel but not wired in a current sharing configuration.

Use power supplies within each pair that are redundant and rated for if one supply fails, the remaining supply shall be able to operate 100 percent of the pixels in that display region at 100 percent brightness when the internal DMS air temperature is no greater than 140 °F (60 °C).

Use power supplies capable of maintaining the appropriate LED display intensity throughout the entire operating input voltage range.

Ensure the output of each power supply is connected to multiple circuits that provide power to the LED modules. Ensure each output circuit does not exceed 15 A and is fused.

Ensure each group of power supplies is monitored by a microprocessor-controlled circuit. Use a circuit to monitor the voltage of each power supply and the status of each output circuit's fuse. Ensure the power supply voltages and fuse states are reported using a controller area network (CAN) communication network to the sign controller upon request.

Use identical and interchangeable power supplies to power the LED pixel modules throughout the DMS.

Use regulated DC power supplies conforming to Table 909.06-1 and the following.

(1) Maximum output power rating maintained over a temperature range from -30 °F to 140 °F (-34 °C to 60 °C).

(2) Fused power supply input circuit.

(3) Automatic output shut down and restart if the power supply overheats or one of the following output faults occurs: over-voltage, short circuit, or over-current.

(4) Power supplies are UL listed.

(5) Protect printed circuit boards using an acrylic or silicone conformal coating.

Table 909.06-1

Nominal output voltage	24 VDC \pm 10 %
Nominal maximum output power rating	1000 W
Operating input voltage range	90 VAC to 260 VAC
Operating temperature range	-30 °F to 165 °F (-34 °C to 74 °C)
Minimum power supply efficiency	80 %
Minimum power factor rating	0.95

4. Wiring and Power Distribution.

a. Maximum Power. Use maximum AC power not to exceed 6000 W when the following circuits are operational and fully loaded:

- (1) LED display pixel matrix, with 100 percent of pixels operating at maximum drive current.
- (2) DMS environmental control system.
- (3) Utility outlet circuit.
- (4) DMS sign controller.

Use AC operating power not to exceed 3000 W with the following circuit loadings:

- (1) LED display pixel matrix, with 25 percent of pixels operating at maximum drive current.
- (2) DMS sign controller.

Ensure the DMS operates from a 120/240 VAC, 60 Hz, single-phase power source, including neutral and earth ground.

b. Power and Signal Entrances. Use two threaded conduit hubs located on the rear wall of the DMS enclosure. Use one hub shall be for incoming AC power and the second for incoming DMS signal cabling or a communications line.

c. Load Center. Use a DMS with a power load center and circuit breakers that conforms to at least the following:

- (1) Service entrance-rated.
- (2) At least 20 circuit breaker mounting positions.
- (3) Short circuit ratings of 22,000 A for the main circuit and 10,000 A for the branch circuit.
- (4) UL listed load center and circuit breakers.

d. Internal Wiring. Use wiring conforming to the NEC. Ensure wiring does not impede the removal of display modules, power supplies, environmental control equipment, and other sign components. Ensure wires do not contact or bend around sharp metal edges.

e. Earth Grounding. Ensure all earth grounding conforms to the NEC. Use one earth ground lug that is electrically bonded to the DMS housing. Ensure the lug is installed near the power entrance location on the DMS housing's rear wall. Ensure the balance of materials and services needed to properly earth ground the DMS.

f. Convenience Outlets. Ensure the DMS enclosure contains a utility outlet circuit consisting of at least three 15 A NEMA 15-R, 120 VAC duplex outlets, with ground-fault circuit interrupters (GFCI). Use one outlet shall be located near each end of DMS housing interior and the third outlet located near the housing's center.

g. Site AC Power. Ensure the AC power feed for all equipment is protected at the load center by a parallel-connection surge suppresser rated for a surge of at least 10 kA.

h. Control Equipment AC Power. Use a series-connected surge suppressor capable of passing 15 A of current to protect the sign controller and other control and communication equipment in the ITS cabinet and sign housing. Ensure this device conforms to the following:

- (1) Withstand a peak 50,000 A surge current for an 8 by 20 microsecond wave form.
- (2) Maximum continuous operating current of 15 A at 120 VAC, 60 Hz.
- (3) Series inductance of 200 microhenrys (nominal).
- (4) Temperature range from -40 °F to 158 °F (-40 °C to 70 °C).
- (5) Approximate dimensions of 3 in (76 mm) wide by 5 in (127 mm) long by 2 in (50 mm) high or rack-mounted to fit in a standard EIA 19 in (482.6 mm) rack.
- (6) The device is UL 1449 recognized.
- (7) UL 1449 surge rating of 400 V or less.
- (8) At least eight NEMA 15-R outlets, if equipment is to be hardwired in DMS Sign Housing use a unit specified for the hardwiring application.

i. Communication Signals. Use transient voltage surge suppressors to protect all communication signals connecting to the control equipment from off-site sources using copper cables. Ensure transient voltage surge suppressors protect all copper communication lines used to pass data between the sign controller and sign.

5. Control Systems.

a. Internal Lighting. Use a DMS enclosure containing at least one 4 ft (1.2 m), 60 W fluorescent lamp fixture for every 8 ft (2.4 m) of DMS housing width. Ensure to evenly space lamps across the enclosure ceiling to provide uniform light distribution. Use wire cages to protect lamps. Use lamp ballasts rated for cold weather operation down to 0 °F (-17 °C). Use a timer switch located just inside each access door to activate the lighting system. Use a switch adjustable from 0 to 4 hr.

b. Environmental Monitoring Systems. Use a DMS with sensors that monitor and report external ambient light level and temperature and the internal temperature and humidity.

c. Ambient Light Measurement. Use sensors that measure the outdoor ambient light level and the outdoor ambient temperature at the DMS site mounted in line with the DMS enclosure walls. Use an ambient light and temperature measurement system consisting of three electronic light sensors.

Ensure two of the three light sensors are placed to measure the ambient light levels striking the front and rear of the DMS. Ensure one sensor is mounted to the floor or top of the DMS enclosure facing the ground. Ensure the DMS sign controller continuously monitors the light sensors and adjusts the LED display matrix intensity to a level that creates a legible message on the DMS face.

d. Ambient Temperature Measurement. Use at least one ambient temperature sensor mounted to either the rear wall or bottom side of the DMS housing. Ensure the sensor is placed to never be in direct contact with sunlight. Ensure the external temperature sensor reading is continuously monitored by the DMS sign controller and reported to the DMS control software upon request.

e. Internal Temperature Measurement. Use a DMS containing at least one temperature sensor mounted near the top of the DMS interior. Ensure sensor measures the temperature range of the air in the cabinet from -40 °F to 176 °F (-40 °C to 80 °C). Ensure the internal temperature sensor output is continuously monitored by the DMS sign controller and reported to the DMS control software upon request.

f. Internal Humidity Measurement. Use a DMS with one sensor that measures the relative humidity of the air inside the DMS cabinet. Use a sensor that monitors the humidity from 0 to 100 percent. Ensure the humidity sensor output is continuously monitored by the DMS sign controller and reported to the DMS control software upon request.

g. Interior DMS Environmental Control. Use a DMS with systems for cabinet ventilation, face panel fog and frost prevention, and safe over-temperature shutdown.

h. Housing Ventilation System. Use a DMS with a thermostatically controlled ventilation system designed to keep the internal DMS air temperature lower than 140 °F (60 °C) when the outdoor ambient temperature is 115 °F (46 °C) or less.

Use a ventilation system with two or more air intake ports. Ensure intake ports are located near the bottom of the DMS rear wall. Ensure each intake port is covered with a filter that removes airborne particles measuring at least 500 microns in diameter. Use at least one ball bearing-type fan mounted at each intake port after the air filters to limit the amount of dust directly contacting the fans. Ensure these fans positively pressure the DMS enclosure.

Use fans and air filters that are removable and replaceable from inside the DMS enclosure. To ease serviceability, use fans mounted no more than 4 ft (1.2 m) from the floor of the DMS enclosure.

Use ductwork beneath the walkway to transfer air from the intake ports to the front of the cabinet. Ensure the ductwork does not prohibit or hinder movement of service personnel through the cabinet. Use ductwork that does not diverge into a series of smaller airways in a manifold style distribution system.

Use a ventilation system which moves air across the rear of the LED modules in a manner that heat is dissipated from the LED's. Ensure airflow moves from the bottom of the cabinet toward the top.

Ensure each exhaust port is located near the top of the rear DMS wall. Use one exhaust port for each air intake port. Ensure all exhaust port openings are screened to prevent the entrance of insects and small animals.

Use an aluminum hood attached to the rear wall of the DMS to cover each air intake and exhaust port. Ensure all intakes and exhaust hoods are sealed to prevent water from entering the DMS.

Use a ventilation system with a thermostat to control the activation of the system. Ensure the thermostat is located near the top of the DMS interior.

Use manual override timer switches located just inside the access doors to manually activate the ventilation system. Ensure the switches are adjustable from 0 to 4 hr.

i. Front Face Panel Defog and Defrost System. Use a DMS with a defog and defrost system that automatically warms the DMS front face when the internal DMS relative humidity is near condensation levels. Ensure the front face polycarbonate panel is free of frost and condensation. Ensure the heat generated by the defog and defrost system does not damage any part of the DMS. Use a thermostat that automatically activates the defog and defrost system.

j. Over Temperature Safety Shutdown. Use a DMS that automatically shuts down the LED modules to prevent damaging the LEDs if the measured internal cabinet air temperature exceeds factory programmed maximum of 140 °F (60 °C). Ensure the threshold temperature is also manually configurable.

k. Sign Controller Signal Interface. Use an auxiliary controller mounted inside the DMS enclosure. Ensure the main DMS controller to the auxiliary control panel sign interface use shielded CAT 5e copper cable. Ensure the communication between the Department ITS cabinet Ethernet switch and the DMS sign controller is provide by a shielded CAT 5e copper cable.

6. Controllers.

a. General Requirements. Ensure each DMS is controlled and monitored by its own sign controller. Use a sign controller that is a stand-alone microprocessor-based system, that does not require continuous communication with DMS control software in order to perform most DMS control functions and conforms to the following:

- (1) Communicate using the NTCIP protocol.
- (2) Contain memory for storing changeable and permanent messages, schedules, and other necessary files for controller operation.

(3) Include a front panel user interface with LCD and keypad for direct operation and diagnostics.

(4) Contain at least three NTCIP-compliant RS232 communication ports.

(5) Contain at least one NTCIP-compliant Ethernet port with RJ45 connector.

(6) Contain a built-in Hayes-compatible modem with standard RJ11 connector.

(7) Contain DMS specific control firmware (embedded software) that monitors all external and internal sensor and communication input and controls the display modules as directed by external control software and the front panel interface.

Use NTCIP natively supported in the DMS controller. The Department will not accept External protocol converter or translator devices.

b. Environmental. Use a sign controller conforming to the environmental requirements defined in NEMA Standards Publication TS 4, Hardware Standards for Dynamic Message Signs (DMS), with NTCIP Requirements.

c. Mechanical and Electrical. Use a sign controller conforming to the following electrical and mechanical requirements:

(1) Mount in a standard EIA 19 in (480 mm) equipment rack with a maximum 4U space requirement.

(2) Weigh no more than 10 lb (4.5 kg) including its enclosure.

(3) Consume no more than 30 W of power.

(4) Powered by an internal regulated DC power supply capable of operating on 120 VAC or 240 VAC at both 50 Hz and 60 Hz.

7. Operational Requirements.

a. Front Panel User Interface. Use a DMS Controller front panel that includes a keypad and Liquid Crystal Display (LCD). Ensure inclusion of the following functions:

(1) Monitor the current status of the sign controller, including the status of all sensors and a monochromatic what-you-see-is-what-you-get (WYSIWYG) representation of the message visible on the display face.

(2) Perform diagnostics testing of various system components including pixels, power systems, and sensors.

(3) Activate messages stored in memory.

(4) Configure display parameters including display size.

(5) Configure communications port settings and NTCIP options.

Ensure the front panel interface also includes the following:

(6) Power switch to turn the controller on and off.

(7) LED power “on” indicator.

(8) “Local/remote” switch that places the controller in local mode to be controlled from the front panel interface instead of using the primary NTCIP communication channel.

(9) LED to indicate state of the “Local/remote” mode switch.

(10) Reset switch to quickly restart the controller.

(11) LED “Active” indicator that blinks when the controller is operating correctly.

(12) LED to indicate when any of the NTCIP communication channels are active.

b. Memory. Use a sign controller with non-volatile electronically changeable memory. Use either flash memory or non-battery-backed static RAM integrated circuits that retain the data in memory for at least 30 days following a power loss. Ensure this changeable memory stores messages and schedules. Ensure the controller memory is capable of storing at least 100 changeable messages in non-volatile RAM.

c. Internal Clock. Use a DMS sign controller with a computer-readable clock that has a battery backup circuit. Use a battery that keeps the clock operating properly for at least five years without external power. The Department will set the clock using network or central control.

d. Communications. Use NTCIP-compatible remote communication ports. Use conductive cables equipped with surge suppression capable of withstanding a minimum 1 kA surge current.

e. Communication Modes. Use a DMS sign controller capable of receiving instructions from and providing information to a computer containing DMS control software using the following communication modes:

(1) Remotely using direct communications with a remotely located computer over Ethernet.

(2) Locally using direct connection with a laptop computer that is connected directly to the sign controller using Ethernet.

f. Ethernet Port. Use a DMS sign controller containing at least one 10/100 Base-T Ethernet communication port. Ensure this port is available for communicating from the central control system to the DMS sign controller when an Ethernet network is available. Ensure the Ethernet port has a standard RJ45 connector.

Ensure communications on the Ethernet port are NTCIP-compatible using the NTCIP 2202 Internet transport profile and the NTCIP 2104 Ethernet sub network profile. Ensure this permits the controller to be operated on any typical Ethernet network using the TCP/IP and UDP/IP protocols.

g. Controller Addressing. Use a DMS sign controller with an appropriate addressing scheme for the NTCIP network types used for communications. Use controller addressing configurable through the front panel user interface.

Use NTCIP 2101 (PMPP) networks configured with an address in the range 1 to 255 with a default address of 1. Use NTCIP 2104 (Ethernet) networks with a static IP address. Ensure both the IP address and subnet is configurable. Ensure NTCIP 2103 (PPP) networks do not require network addressing.

h. Transient Protection. Use Ethernet communication ports in the DMS sign controller protected with surge protection between each signal line and ground. Use surge protection integrated internally within the controller.

Use a series/parallel two-stage suppression device to protect the modem communication port from over-voltage and over-current conditions.

i. DMS Control Outputs. Use a DMS sign controller to transmit and receive data packets to and from the DMS using dedicated armored outdoor-rated fiber optic cable as listed on the TAP. Use core-aligned fusion splicing for pigtails on fiber optic cable. The Department will accept copper cables in instances where the controller needs to be located within the sign housing, as directed by the Engineer. Ensure this network communicates with all sensors, drivers, and other devices utilizing a CAN bus running throughout the DMS.

Use data transfer including pixel states, sensor values, and I/O readings from various devices, including at least door sensors and power supply monitors. Use pixel data including the states to be displayed on the sign face as well as diagnostic data retrieved from the LED drivers.

j. Messaging. Ensure the DMS sign controller has the ability to display messages on the DMS display face.

k. Message Presentation on the DMS Display Matrix. Use a DMS sign controller to control the LED drivers to display the desired message on the DMS sign. Use a DMS sign controller that supports the following features:

- (1) Display of alpha numeric characters, including letters, numbers, and punctuation.
- (2) Selection of particular character font styles.

- (3) Horizontal alignment of text on the display including left, center, and right justification.
- (4) Vertical alignment of text on the display including top, middle, and bottom justification.
- (5) Adjusting the spacing horizontally between characters or vertically between lines of text.
- (6) Alternating between pages of a multiple-page message.
- (7) Display of graphic bitmaps of various sizes ranging from very small to the size of the entire DMS matrix.

l. Message Effects. Use a DMS able to display messages using the following types of effects:

- (1) **Static Message.** The selected message is displayed continuously on the sign face until the DMS sign controller blanks the sign or causes the display of another message.
- (2) **Flashing Message.** All or part of a message is displayed and blanked alternately at rates between 0.1 s and 9.9 s. Ensure the flash rate is user programmable in increments of 0.1 s.
- (3) **Scrolling Message.** The message moves across the display face from one side to the other. Ensure the direction of travel is user selectable as either left-to-right or right-to-left.
- (4) **Multiple-Page Message.** A message contains up to six different pages of information, with each page filling the entire pixel matrix. Ensure each page display time is user programmable from 0.1 to 25.5 s and adjustable in increments of 0.1 s.

m. Message Activation. Use messages activated on a DMS in the following three ways:

- (1) **Manual.** An operator using the front panel LCD, keypad interface, or NTCIP-compatible control software manually instructs a message to be activated.
- (2) **Schedule.** The internal time-based scheduler in the DMS is configured to activate messages at programmable times and dates. Prior to activation, these messages and their activation times and dates are configured using the control software.
- (3) **Events.** Certain events, including a power loss, trigger the activation of pre-configured messages when they occur. These events are configured using the control software.

A displayed message remains on the sign until one of the following occurs:

- (4) The message's duration timeout expires.
- (5) The controller receives a command to change the message.

(6) The controller receives a command to blank the sign.

(7) The schedule stored in the controller's memory indicates that it is time to activate a different message.

(8) A special event, including a loss of communication, occurs that is linked to message activation.

Ensure it is possible to confer a "priority" status onto any message and a command to display a priority message overrides any non-priority message.

n. Schedule Activation. Use a DMS sign controller that supports the activation of messages based on a time/date-based schedule. Ensure the format and operation of the message scheduler is in accordance with NTCIP 1201 and NTCIP 1203.

o. Display of Alphanumeric Text. Use a DMS sign controller that supports the storage of and use of at least 24 font sets to format and display messages. Ensure each font supports at least 255 characters. Use a DMS sign controller with the ability to display subscripts and superscripts. Ensure all text font files include the following characters:

(1) The letters "A" through "Z", in both upper and lower case.

(2) Decimal digits "0" through "9".

(3) A blank space.

(4) Eight directional arrows.

(5) Punctuation marks, including at least: . , ! ? - ' ' " " ; ;

(6) Special characters, including at least: # & * + / () [] < > @

Use a default font style of 07X04_1_ CP1252. Use this font for testing the DMS.

Use a DMS controller with the fonts in Table 909.06-02 preinstalled.

Table 909.06-2

Font Name	Character Height	Character Width (Avg.)	Variable or Fixed Width	Stroke Width
7x4	7	4	Variable	Single (1)
7x4	7	4	Variable	Single (1)
7x6	7	6	Variable	Double (2)
Graphic 7	7	N/A	Variable	N/A
8x4	8	4	Variable	Single (1)
8x6	8	6	Variable	Double (2)
9x6	9	6	Variable	Double (2)

11x7	11	7	Fixed	Double (2)
14x8	14	8	Fixed	Double (2)
14x10	14	10	Variable	Triple (3)
16x8	16	8	Variable	Double (2)
16x10	16	10	Variable	Triple (3)

Ensure the controller supports changing or replacing these fonts from the central software using NTCIP.

p. Display of Graphic Images. Ensure the DMS control software supports the inclusion of graphics in messages using NTCIP 1203 V3.

q. DMS Intensity Control. Use a DMS sign controller that provides a means to change the brightness of the display matrix manually or automatically. Ensure the manual control allows the user to select one of at least 100 intensity levels communicated to the LED drivers in the DMS. Ensure the brightness remains at that level until the user changes the level or sets the controller to automatic mode.

Ensure the automatic intensity control mode monitors the ambient light sensors of the DMS and automatically select one intensity level.

Use an intensity control mode, manual or automatic, selected using NTCIP with the control software or the front panel interface. Use manual brightness level selected using the software or front panel. Ensure the mode and brightness level is able to be monitored from both the software and front panel interfaces.

r. System Status Monitoring and Diagnostic Testing. Use a DMS sign controller capable of monitoring the status DMS components and subsystems in real-time and manual modes. Ensure all status and diagnostic data is accessible using the front panel LCD and transmitted using NTCIP to control software upon request.

s. Message Display Status. Use a DMS sign controller capable of monitoring and displaying the active message on the controller's front panel LCD in WYSIWYG format.

t. LED Pixel Testing. Ensure that upon command from either the front panel control interface or using NTCIP from remote control software, the DMS sign controller directs all the LED modules to perform diagnostic tests of all their pixels. Ensure the controller then collects and reports the results of the pixel testing.

Use a controller capable of automatically detecting, in real-time, the status of each of the display's pixels and reporting the on or off status. Ensure this monitoring takes place without interfering with the display of data on the DMS.

u. Power Supply Operation. Use a DMS sign controller that monitors and reports the functional status of regulated DC power supplies located in the DMS by monitoring diagnostic outputs located on the supplies. Ensure the controller monitors the output voltage of each power supply and

the status of each output fuse. Ensure the power supply voltages are measured to the nearest tenth of a volt and the fuse status indicates pass or fail.

v. Door States. Use a DMS enclosure equipped with access door sensors to monitor, using the controller, their open or closed status.

w. Environmental Conditions. Ensure the DMS sign controller monitors the readings of all light, temperature, and humidity sensors installed in the DMS housing.

x. Error Notification. Use a DMS sign controller capable of automatically informing a maintenance operator and a central control system (using NTCIP communication) of the occurrence of important events and subsystem failures. Ensure all major component and subsystem errors are indicated on the controller's LCD front panel.

Use a controller capable of sending event notifications to the central control system using SNMP "traps" as allowed and governed by NTCIP standards. Ensure the DMS sign controller creates a data packet for transmission to the central controller that contains event details when an event occurs. Use a controller configurable to enable or disable the transmission of traps for each event or error type. Ensure this configuration includes the automatic initiation of these traps, including establishing telephone modem connections if appropriate, when the NTCIP network permits transmission initiation by the sign controller.

y. Over Temperature Shutdown. Use a DMS sign controller that continuously monitors the DMS enclosure temperature sensors and automatically shuts down the DMS if the internal cabinet temperature exceeds a safety threshold with a default value of 140 °F (60 °C) and is configurable at the DMS sign controller.

Ensure the DMS sign controller sends a trap notification to the central system when the controller detects the following conditions:

- (1) Controller restart.
- (2) DMS sign controller power loss.
- (3) Failure of any major power system of the sign.
- (4) Cabinet door open.
- (5) Enclosure door open.

Use a DMS sign that activates NTCIP messages for the following conditions:

- (6) NTCIP reset message for controller restart.
- (7) NTCIP power loss message for DMS sign controller power loss.

Use a DMS sign that displays messages on the controller LCD for the following condition:

(8) DMS sign controller power loss.

z. Communication Loss. Use a DMS sign controller that monitors the frequency of communication packets from the central system. Ensure the DMS sign controller automatically activates a communication loss message as defined by NTCIP if the controller detects that communication has not occurred between the controller and central system for longer than a configurable timeout. Ensure this communication loss message is configurable and may be disabled in accordance with NTCIP.

aa. Auxiliary Control Panel. Use a DMS that includes an auxiliary control panel or laptop computer interface port that provides a secondary user interface panel for DMS sign control, configuration, and maintenance. Use an auxiliary control panel meeting the same electrical, mechanical, and environmental requirements as the DMS controller. Ensure it is powered independently from a 120 VAC outlet.

bb. DMS Control Interface. Use an auxiliary control panel or local laptop software including an identical menu system to the DMS sign controller with all features and functionality.

cc. Location. Use an auxiliary control panel or local laptop port located in the DMS sign enclosure. If a local laptop port is provided, use a drop-down shelf near the port and to support a laptop computer.

dd. Controller Signal Interface. Use an auxiliary control panel to interface with the DMS sign controller using a CAT 5e copper cable. Ensure it is capable of operating up to 330 ft (100.58 m) from the DMS controller.

ee. Queue Warning System Interface. Use a Mini DC I/O Board installed in each cabinet and capable of accepting up to four contact closure inputs that, when closed, will activate specific messages in the controller's message library.

8. DMS Control Software. Provide all software, software media, licenses, and documentation necessary to install and operate a dynamic message sign (DMS) control that conforms to the functional requirements below.

a. General Specifications. Ensure DMS control software conforms to the following:

(1) Operate on current production version business desktop and laptop computer with at least an Intel® Pentium® 4 system running the latest commercial version of Microsoft® Windows operating system.

(2) Provide a user-friendly multi-color graphical user interface (GUI).

(3) Be written as a native 32-bit Windows® program using Microsoft-certified software development tools.

- (4) Control a network of at least 250 dynamic message signs.
- (5) Utilize a client-server architecture with the server handling sign communications and the clients connecting to the server using local and wide area networks (LAN and WAN).
- (6) Support DMS communications using any combination of dedicated hardwired ethernet network, fiber-optic network, cellular modem, spread spectrum radio, Ethernet, or as specified in the Contract Documents.
- (7) Support DMS control, monitoring, and diagnostic functions.
- (8) Control DMS remotely from a central location and locally at the DMS site using a laptop computer.
- (9) Provide an easy-to-use software installation utility.
- (10) Include an operation manual that includes detailed instructions for configuring and using all parts of the software.
- (11) Contain an on-line help system that includes documentation for every screen or dialog box present in the software. Ensure it is also context sensitive where pressing the help button or [F1] key on any screen will launch the help page for that screen.
- (12) Conform to the communications protocol requirements of the NTCIP Special Provision.

b. Software Security. Use DMS control software that supports the creation of user IDs and passwords for at least 100 system users. Use software that only allows a “System Administrator” to assign user creation and individual user access rights.

Use DMS control software that requires a “user name” and user “password” before a system operator can access the software. Ensure access to the software is denied if an invalid user name and password combination is provided.

c. Client-Server Architecture. Use software of a modular design including a server and multiple client modules. Use a server that handles all DMS communication and store all configuration data, messages, and other data. Ensure the client software modules send requests to and receive responses from the server over any TCP/IP-based network, including LAN and WAN. Use separate clients for each of the following software functions:

- (1) Shell client that handles user login and logout, including launching the other clients.
- (2) Display control client for controlling DMS messaging, monitoring system status, and performing DMS diagnostics.

(3) Message editor client for creating DMS messages.

(4) Message scheduler client for creating time and date schedules for activating messages.

(5) Administration client for DMS system configuration and administration.

d. DMS Control. Use DMS control software that uses a GUI to display the DMS display message in both list and graphical formats. Use software that allows the DMS to be grouped by the administrator. Ensure the DMS list and graphical interface include only the signs for the group selected.

e. List and Map Interfaces. Use a DMS list to clearly display the following information:

(1) DMS ID number from 1 to 250.

(2) DMS name in text format.

(3) Iconic representation of the type of communication network used for the DMS (i.e. direct or dial-up).

(4) Name and priority level of message file being displayed.

(5) Date and time of last communication between the control software and the DMS sign controller.

(6) Error and warning status.

Ensure the GUI includes the following:

(7) Configurable bitmaps that allow all or parts of the system to be shown geographically.

(8) Icons for each sign that are able to be placed anywhere on the map.

(9) Color changing icons indicating the status of the DMS using yellow for warnings and red for errors.

(10) Flashing icon if a message is running on the DMS.

(11) DMS sign name becomes visible when a computer mouse cursor placed over a DMS icon.

f. Direct Control Operations. Use a GUI that provides users the ability to directly perform the following tasks for each DMS:

(1) Send and activate stored messages from libraries.

(2) Display no message (blank).

(3) Activate a message created in real-time, not loaded from a library.

(4) Send and activate schedules.

(5) Retrieve both messages and schedules from the DMS.

(6) Perform diagnostics of DMS subsystems.

(7) Perform tests of pixels.

(8) Monitor the DMS event log.

g. Polling. Use software that has a feature to poll all or a set of DMS at predefined intervals or at a specific time-of-day. During this poll, ensure the software retrieves the most recent status information from the DMS and displays it to the user in the list and map interfaces.

h. Scenarios. Ensure the administrator has the ability to create scenarios that act like macros or scripts to automate a series repeated task. Ensure these scenarios have the ability to perform the following actions:

(1) Send and activate stored messages from the libraries.

(2) Display no message (blank).

(3) Send and activate schedules.

(4) Perform diagnostics of DMS subsystems.

(5) Perform tests of pixels.

Ensure the scenarios are saved to libraries for users activation through the GUI. Ensure the scenarios are also scheduled to automatically run at predetermined times and dates.

i. System Monitoring. Use software capable of monitoring and displaying the contents of any communications in progress with DMS. Ensure the status of all outgoing and incoming data packets is visible.

j. Multi-Vendor Sign Control. Use software capable of controlling any NTCIP-compatible DMS regardless of manufacturer. Use software that supports all mandatory and optional features typical in LED DMS. Use software configurable to enable or disable support for any standard optional NTCIP objects.

k. Message Creation and Editing. Ensure a DMS user is able to use the DMS control software to create, edit, name, and store message files.

Use a message editor GUI to present a scaled image of the DMS display matrix, including a complete and accurate representation of the display matrix type (full or line) and the number of display pixels. Use a DMS editor image that actively shows message content in a WYSIWYG format, while a new message is being created or an existing message is being edited.

Use a message editor that provides the user with the ability to program the following:

- (1) Contain at least three pages for the message.
- (2) Message text.
- (3) Message graphics, including at least pixel-by-pixel editing, lines, area fill, and block move unless otherwise specified.
- (4) Character font type(s) used to construct the message.
- (5) The amount of inter-line spacing, measured in pixels.
- (6) Horizontal message justification on the DMS display matrix including left, center, and right.
- (7) Vertical message justification on the DMS display matrix including top, middle, and bottom.
- (8) The type of entry effect, as “static” or “scrolling”.
- (9) Message page on time and off time.
- (10) Message scroll rate, if a scrolling message.
- (11) The flash rate of all or part of a message page.
- (12) Message priority status.
- (13) The display status of any flashing beacons mounted to the DMS.

Use a message editor that provides a method of incorporating data fields into a DMS message. Use the following data fields:

- (14) Time, in 12 and 24 hr format.
- (15) Temperature, in degrees Fahrenheit and Celsius.
- (16) Speed in miles per hour and kilometers per hour (at applicable DMS locations).
- (17) Day of week.

- (18) Day of the month in numerical format.
- (19) Month of the year in numerical format.
- (20) Calendar year, in both two-digit (YY) and four-digit (YYYY) formats.

Use a message editor to provide a convenient means for the user to do the following:

- (21) Insert, add, or delete, message text.
- (22) Paste graphics from other programs using the Windows® clipboard.
- (23) Clear the content of the editing page.
- (24) Save the message file under its existing name or a new name.
- (25) Delete a message file.
- (26) Save all new changes.

Ensure it is possible to store message files in both the DMS control computer memory and the DMS sign controller memory.

Ensure users have the ability to print any message or library of messages.

I. Message Libraries. Use DMS control software that supports the creation and storage of message libraries (file directories), that allow the user to categorize message files by the following:

- (1) DMS matrix size.
- (2) Message subject matter.

Use a library editor that allows a user to perform the following:

- (3) Create a new library.
- (4) Store the same message in multiple libraries.
- (5) Select a message from an existing library and edit the message contents.
- (6) Search message libraries for messages with specified text in message name or contents.
- (7) Copy and Paste a message from one library to another.
- (8) Delete a message file from a library.

- (9) Rename a library.
- (10) Delete a library.
- (11) Save all new changes.

m. Schedule Creation and Editing. Use DMS control software that supports the creation of message schedules, that instruct the DMS sign controller to run specific messages at pre-determined times and dates.

Use DMS control software that contains an editor to allow messages to be scheduled using the following:

- (1) Month of the year.
- (2) Day of the week.
- (3) Day of the month.
- (4) Time of day.

Use a schedule editor that provides a convenient means for the operator to do the following:

- (5) Create a new schedule.
- (6) Rename an existing schedule.
- (7) Delete a schedule.
- (8) Save all new changes.

Ensure it is possible to store schedule files in both the DMS control computer memory and the DMS sign controller memory.

n. Display Fonts. Use software that supports at least 12 fonts for each model of DMS. Ensure fonts are configurable by the system administrator and selectable from a library containing at least 24 fonts. Ensure each sign model is capable of using a different set of fonts. Use software that automatically adjusts the available fonts in the message editor based on the DMS model configuration.

Use software including a font editor to allow the user to create custom fonts. Ensure the font editor allows the user to create new fonts or modify existing fonts. Ensure the user has the capabilities to graphically edit each character within a font in a pixel-by-pixel manner.

Ensure all fonts are downloadable to the DMS.

o. Event Logging. Use software with an event logging system that logs all significant system events. Ensure each logged event includes at least the following fields:

- (1) Event ID number.
- (2) User that initiated the event.
- (3) Time and date that the event occurred.
- (4) Description of the event.
- (5) Source of the event (i.e., DMS sign name).
- (6) Additional data relevant to the event (i.e., “Failed pixel: (4, 73)”).

Ensure the events logged include at least the following:

- (7) User login/logout.
- (8) Failed login attempts.
- (9) Communication failures.
- (10) Message and schedule activation or display blanking.
- (11) Diagnostics test results.
- (12) Warning events sent from the DMS.
- (13) Other system errors.

Ensure users are able to view, sort by category, and print the log file at any time.

p. System Configuration. Use DMS control software that allow system administrators and other users with correct security access to configure system parameters and functions. Ensure the basic configurable settings include at least the following:

- (1) Sign models and individual signs.
- (2) Communication networks.
- (3) System error/warning alarms.
- (4) User security rights.
- (5) System maps and sign icon placement.

(6) Default system option settings.

(7) Default message parameters.

(8) Message priority settings.

q. Sign Configuration. Ensure each sign in the DMS control software is configured with the following parameters:

(1) Sign viewing area height and width (for full-matrix signs).

(2) Number of lines and each line's height and width (for line-matrix signs).

(3) Site name.

(4) DMS ID number.

(5) Network address.

(6) Communication parameters.

r. Communication Settings. Ensure communication network configuration includes the ability to configure and modify sign communication networks with the following parameters:

(1) Network type – Ethernet.

(2) NTCIP subnetwork and transport protocols.

(3) Communication retries and timeouts.

s. System Alarms. Use configurable settings that allow the system administrator to determine if the following events will trigger an audio and visual (on-screen) alarm:

(1) Communication failure.

(2) Priority status conflict.

(3) Sign restart.

(4) Power supply failure.

(5) Door open.

(6) Pixel error and Pixel module failures.

(7) Fan status and failure.

t. User Administration. Ensure the administrator has the ability to add, remove and modify users. Ensure the access rights of each user is configurable to allow or deny access to each major software feature.

u. System Maps. Ensure it is possible to configure each sign group to appear on a map within the software. Ensure the administrator is able to use the software to select the map, identified as a bitmap file, that can then be imported into the software. Ensure each sign has an icon that is able to be placed anywhere on the map.

v. Message Editor Defaults. Use a message editor that automatically utilizes the following default settings during the creation of new message files:

- (1) Pixel spacing between adjacent lines of text.
- (2) Pixel spacing between adjacent text characters.
- (3) Display duration of a given message page.
- (4) Beacon activation status (for DMS that contain flashing beacons).
- (5) Effect to be applied to text.
- (6) Effect rate (i.e. the speed of scrolling messages).
- (7) Flash rate, (i.e. the speed of flashing messages).
- (8) Message priority classification.
- (9) Horizontal text justification supporting left, center, or right.
- (10) Vertical text justification supporting top, middle, and bottom

w. Message Priorities. Use user-definable defaults that allow messages to be assigned a numeric priority classification of the following:

- (1) Emergency.
- (2) High.
- (3) Normal.
- (4) Low.
- (5) Minimal.

Use priority classifications that allow two different message files to be assigned the same classification where one message can be identified as having higher priority within that classification.

x. Software Use and Reproduction Rights. Use the latest version of DMS control software site license. Ensure the Department has the right to request or reproduce an unlimited number of software copies for use on the DMS system.

y. Requirements for NTCIP Conformance. Provide all the software, firmware, and services necessary to operate a DMS system that fully complies with the NTCIP functional requirements.

z. References. Use Table 909.06-3 to identify the NTCIP reference standards to be used when referenced. Refer to the NTCIP library at www.ntcip.org for information on the current status of NTCIP standards.

Table 909.06-3

Document Number and Version	Document Title	Document Status
NTCIP 1101:1996 and Amendment 1	<i>Simple Transportation Management Framework (STMF)</i>	Jointly Approved
NTCIP 1102 v1.12	<i>Octet Encoding Rules (OER) Base Protocol</i>	Recommended Standard
NTCIP 1103 v1.15	<i>Transportation Management Protocols</i>	User Comment Draft
NTCIP 1201:1996 and Amendment 1	<i>Global Object Definitions</i>	Jointly Approved
NTCIP 1203:1997 and Amendment 1	<i>Object Definitions for Dynamic Message Signs</i>	Jointly Approved
NTCIP 2001:1996 and Amendment 1	<i>Class B Profile</i>	Jointly Approved
NTCIP 2101:2001	<i>Point to Multi Point Protocol (PMPP) Using RS-232 Subnetwork Profile</i>	Jointly Approved
NTCIP 2103 v1.13	<i>Point-to-Point Protocol Over RS-232 Subnetwork Profile</i>	Jointly Approved
NTCIP 2104 v1.10	<i>Ethernet Subnetwork Profile</i>	Jointly Approved
NTCIP 2201 v1.14	<i>Transportation Transport Profile</i>	Jointly Approved
NTCIP 2202:2001	<i>Internet (TCP/IP and UDP/IP) Transport Profile</i>	Jointly Approved
NTCIP 2301:2001	<i>Simple Transportation Management Framework (STMF) Application Profile</i>	Jointly Approved

aa. Subnetwork Profiles. Ensure each Ethernet port on an NTCIP device complies with NTCIP 2104. Use of NTCIP devices supporting additional subnet profiles are acceptable. Use only one

active subnet profile on a given port of the NTCIP device at any time. Use response datagram packets of the same transport profile used in the request. Use a NTCIP device configurable to allow a field technician to activate the desired subnet profile and provide a visual indication of the currently selected subnet profile.

bb. Transport Profiles. Ensure each Ethernet port on an NTCIP device complies with NTCIP 2202. Use of NTCIP devices supporting additional transport profiles are acceptable. Use response datagrams with the same transport profile used in the request. Ensure each NTCIP device supports the receipt of datagrams conforming to any of the supported transport profiles at any time.

cc. Application Profiles. Ensure each NTCIP device complies with NTCIP 2301 and meets the requirements for Conformance Level 1. Use of NTCIP devices supporting additional application profiles are acceptable. Use responses of the same application profile used by the request. Ensure each NTCIP device supports the receipt of application data packets at any time allowed by the subject standards.

dd. Object Support. Ensure each NTCIP device supports all mandatory objects of all mandatory conformance groups as defined in NTCIP 1201 and NTCIP 1203. Ensure each NTCIP device supports all mandatory and optional objects

Use NTCIP device that supports the optional conformance groups in Table 909.06-4.

Table 909.06-4

Conformance Group	Reference
Time Management	NTCIP 1201
Timebase Event Schedule	NTCIP 1201
Report	NTCIP 1201
PMPP	NTCIP 1201
Font Configuration	NTCIP 1203
DMS Configuration	NTCIP 1203
MULTI Configuration	NTCIP 1203
MULTI Error Configuration	NTCIP 1203
Illumination/Brightness Control	NTCIP 1203
Scheduling	NTCIP 1203
Sign Status	NTCIP 1203
Status Error	NTCIP 1203
Pixel Error Status	NTCIP 1203

Use objects that are considered optional in the NTCIP standards shown in Table 909.06-5, these are required. Use the modified object value ranges for certain objects indicated in Table 909.06-5. Ensure each NTCIP device provides the full standardized object range support (FSORS) of all objects required unless otherwise indicated in Table 909.06-5.

Table 909.06-5

Object	Reference	Project Requirement
moduleTable	NTCIP 1201 Clause 2.2.3	Shall contain at least one row with <i>moduleType</i> equal to 3 (software).
maxTimeBaseScheduleEntries	NTCIP 1201 Clause 2.4.3.1	Shall be at least 28
maxDayPlans	NTCIP 1201 Clause 2.4.4.1	Shall be at least 20
maxDayPlanEvents	NTCIP 1201 Clause 2.4.4.2	Shall be at least 12
maxEventLogConfig	NTCIP 1201 Clause 2.5.1	Shall be at least 50
eventConfigMode	NTCIP 1201 Clause 2.4.3.1	The NTCIP Component shall Support the following Event Configuration: onChange, greaterThanValue, smallerThanValue
eventConfigLogOID	NTCIP 1201 Clause 2.5.2.7	FSORS
eventConfigAction	NTCIP 1201 Clause 2.5.2.8	FSORS
maxEventLogSize	NTCIP 1201 Clause 2.5.3	Shall be at least 200
maxEventClasses	NTCIP 1201 Clause 2.5.5	Shall be at least 16
eventClassDescription	NTCIP 1201 Clause 2.5.6.4	FSORS
maxGroupAddresses	NTCIP 1201 Clause 2.7.1	Shall be at least 1
communityNamesMax	NTCIP 1201 Clause 2.8.2	Shall be at least 3
numFonts	NTCIP 1203 Clause 2.4.1.1.1.1	Shall be at least 12
maxFontCharacters	NTCIP 1203 Clause 2.4.1.1.3	Shall be at least 255
defaultFlashOn	NTCIP 1203 Clause 2.5.1.1.1.3	The DMS shall support flash “on” times ranging from 0.1 to 9.9 seconds in 0.1 second increments
defaultFlashOff	NTCIP 1203 Clause 2.5.1.1.1.4	The DMS shall support flash “off” times ranging from 0.1 to 9.9 seconds in 0.1 second increments
defaultBackgroundColor	NTCIP 1203 Clause 2.5.1.1.1.1	The DMS shall support the black background color
defaultForegroundColor	NTCIP 1203 Clause 2.5.1.1.2	The DMS shall support the amber foreground color

Object	Reference	Project Requirement
defaultJustificationLine	NTCIP 1203 Clause 2.5.1.1.1.6	The DMS shall support the following forms of line justification: left, center, and right
defaultJustificationPage	NTCIP 1203 Clause 2.5.1.1.1.7	The DMS shall support the following forms of page justification: top, middle, and bottom
defaultPageOnTime	NTCIP 1203 Clause 2.5.1.1.1.8	The DMS shall support page “on” times ranging from 0.1 to 25.5 seconds in 0.1 second increments
defaultPageOffTime	NTCIP 1203 Clause 2.5.1.1.1.9	The DMS shall support page “off” times ranging from 0.1 to 25.5 seconds in 0.1 second increments
defaultCharacterSet	NTCIP 1203 Clause 2.5.1.1.1.10	The DMS shall support the eight bit character set
dmsMaxChangeableMsg	NTCIP 1203 Clause 2.6.1.1.1.4	Shall be at least 11500.
dmsMessageMultiString	NTCIP 1203 Clause 2.6.1.1.1.8.3	The DMS shall support any valid MULTI string containing any subset of those MULTI tags listed in Table 3 (below)
dmsControlMode	NTCIP 1203 Clause 2.7.1.1.1.1	Shall support at least the following modes: local, central, and centralOverride
dmsSWReset	NTCIP 1203 Clause 2.7.1.1.1.2	FSORS
dmsMessageTimeRemaining	NTCIP 1203 Clause 2.7.1.1.1.4	FSORS
dmsShortPowerRecoveryMessage	NTCIP 1203 Clause 2.7.1.1.1.8	FSORS
dmsLongPowerRecoveryMessage	NTCIP 1203 Clause 2.7.1.1.1.19	FSORS
dmsShortPowerLossTime	NTCIP 1203 Clause 2.7.1.1.1.10	FSORS
dmsResetMessage	NTCIP 1203 Clause 2.7.1.1.1.12	FSORS
dmsCommunicationsLossMessage	NTCIP 1203 Clause 2.7.1.1.1.12	FSORS

Object	Reference	Project Requirement
dmsTimeCommLoss	NTCIP 1203 Clause 2.7.1.1.1.12	FSORS
dmsEndDurationMessage	NTCIP 1203 Clause 2.7.1.1.1.15	FSORS
dmsMemoryMgmt	NTCIP 1203 Clause 2.7.1.1.1.16	The DMS shall support the following Memory management Modes: normal and clearChangeableMessages
dmsMultiOtherErrorDescription	NTCIP 1203 Clause 2.4.1.1.1.20	If the vendor implements any vendor-specific MULTI tags, the DMS shall provide meaningful error messages within this object whenever one of these tags generates an error
dmsIllumControl	NTCIP 1203 Clause 2.8.1.1.1.1	The DMS shall support the following illumination control modes: Photocell, and Manual
dmsIllumNumBrightLevels	NTCIP 1203 Clause 2.8.1.1.1.4	Shall be at least 100
dmsIllumLightOutputStatus	NTCIP 1203 Clause 2.8.1.1.1.9	FSORS
numActionTableEntries	NTCIP 1203 Clause 2.9.1.1.1	Shall be at least 200
watcdogFailureCount	NTCIP 1203 Clause 2.11.1.1.1.5	FSORS
dmsStatDoorOpen	NTCIP 1203 Clause 2.11.1.1.1.6	FSORS
fanFailures	NTCIP 1203 Clause 2.11.2.1.1.8	FSORS
fanTestActivation	NTCIP 1203 Clause 2.11.2.1.1.9	FSORS
tempMinCtrlCabinet	NTCIP 1203 Clause 2.11.4.1.1.1	FSORS
tempMaxCtrlCabinet	NTCIP 1203 Clause 2.11.4.1.1.2	FSORS
tempMinSignHousing	NTCIP 1203 Clause 2.11.4.1.1.5	FSORS
tempMaxSignHousing	NTCIP 1203 Clause 2.11.4.1.1.6	FSORS

ee. MULTI Tags. Ensure each NTCIP device supports the message formatting MULTI tags shown in Table 909.06-6.

Table 909.06-6

MULTI Tag	Description
f1	Field 1-time (12 hr)
f2	Field 2-time (24 hr)
f8	Field 8-day of month
f9	Field 9-month
f10	Field 10-2 digit year
f11	Field 11-4 digit year
fl (and /fl)	Flashing text on a line-by-line basis with flash rates controllable in 0.1-second increments.
Fo	Font
jl2	Justification- line-left
jl3	Justification- line-center
jl4	Justification- line- right
jp2	Justification- page- top
jp3	Justification- page- middle
jp4	Justification- page- bottom
mv	Moving text
nl	New line
np	New page up to 5 instances in a message (i.e. up to 6 pages/frame in a message counting first page)

909.06.B. Dynamic Message Sign (DMS), Front Access. Use a DMS conforming to 909.06.A except for the differences shown below.

Use a DMS enclosure providing front access for all LED display modules, electronics, environmental control equipment, air filters, wiring, and other internal DMS components.

Ensure each display pixel is capable of displaying full color messages using red, green, and blue LED assemblies.

Use a DMS containing a full display matrix measuring at least 27 rows high by 60-pixel columns wide. For full color displays, use a DMS with a full display matrix measuring at least 96 rows high by 192-pixel columns wide. Ensure the matrix displays messages that are continuous, uniform, and unbroken in appearance to motorists and travelers.

Use a pixel matrix capable of displaying alphanumeric character fonts measuring at least 18 in (457 mm) high to a maximum of the display matrix height. For full color displays, use a DMS pixel pitch of

0.79 in (20 mm) or less to achieve high quality messaging and graphics. Use a DMS able to display messages composed of any combination of alphanumeric text, punctuation symbols, and graphic images across multiple frames.

Use a DMS capable of being controlled by the existing Department ATMS software platform. Use control software and communication interface compatible with the Department's platform for controlling the messages and approved prior to acceptance by the Department.

909.06.C. Destination Dynamic Message Signs (DDMS) – Freeway. Use a DDMS conforming to 909.06.A except for the differences below.

Use a DDMS enclosure providing front access for all LED display modules, electronics, environmental control equipment, air filters, wiring, and other internal DMS components.

Use a DDMS capable of operating up to at least three panels with three characters each.

Use a DDMS single panel pixel matrix capable of displaying three characters of alphanumeric character fonts measuring a minimum of 18 in (457 mm) high to a maximum of the display matrix height.

Ensure each DDMS enclosure panel dimensions do not exceed 1 ft 10 in (0.56 m) high by 3 ft 7 in (1.10 m) wide. Ensure the front-to-back housing depth does not exceed 2.5 in (63.5 mm) at its widest point, including the ventilation hoods. Ensure the DDMS single panel weight does not exceed 35 lb (15.9 kg).

1. Service Access. Use a DDMS enclosure that provides front access, in a safe and convenient manner, to all modular assemblies, components, wiring, and subsystems located within the DDMS enclosure. Use internal components capable of removal and replacement by a single technician. Ensure the DDMS front face panels are removable and replaceable from inside the DDMS enclosure.

Provide front access for all LED display modules, electronics, environmental control equipment, air filters, wiring, and other internal components.

Ensure each access point is located on the front of the DDMS enclosure. Ensure each access point connects to the DDM frame with an allen or hex head screw or be opened and closed with an allen or hex head wrench or tool.

2. Controllers. Ensure each DDMS includes a sign controller, a front panel user interface with LCD and keypad for direct operation and diagnostics, and associated equipment.

909.06.D. Destination Dynamic Message Sign, DDMS – Arterial. Use a DDMS conforming to 909.06.B except for the differences below.

Use a DDMS single panel pixel matrix capable of displaying three characters of alphanumeric character fonts measuring a minimum of 12 in (305 mm) high to a maximum of the display matrix height.

Ensure each DDMS enclosure panel dimensions does not exceed 1 ft 5 in (0.30 m) high by 2 ft 7 in (0.79 m) wide. Ensure the front-to-back housing depth does not exceed 2.5 in (63.5 mm) at its widest point, including the ventilation hoods. Ensure the DDMS single panel weight does not exceed 150 lb (68 kg).

Ensure the pixel matrix is capable of displaying alphanumeric character fonts measuring a minimum of 12 in (305 mm) high to a maximum of the display matrix height.

909.06.E. Dynamic Message Sign (DMS) – 12’ Walk-In. Use a DMS conforming to the requirements of 909.06.A except that the DMS shall be 12 feet wide.

909.07 ITS Cabinets. Furnish cabinets that are constructed of aluminum and are supplied unpainted. An anodic coating is not required. Supply galvanized anchor bolts, nuts, and 2 in by 2 in square washers with each cabinet. Furnish 3/4 in (19 mm) diameter by 16 in (0.4 m) minimum length anchor bolts with an “L” bend on the unthreaded end.

909.07.A ITS Cabinet – Ground Mounted. Use a standard 334 Traffic Controller Cabinet in accordance with C&MS 733.03 except modified with the following.

The Department will not accept prototype equipment. Use equipment warranted against defects and any failures that occur through normal use for at least five years from the date of successful completion of the equipment’s system test.

Use cabinets complete with a prefabricated cabinet shell and all internal components and equipment, back and side panels, front and back doors, terminal strips, cabling and harnesses, cable management, surge protection for power and communication circuits, power distribution blocks or assemblies, shelves, connectors and all mounting hardware necessary for installation of equipment. Ensure the cabinet is completely weatherproof to prevent the entry of water. Ensure the cabinet top is crowned 1/2 in (13 mm) or slanted to the rear to prevent standing water.

1. Construction. Use a cabinet at least 67 in H x 24 in W x 30 in D (1701.8 mm x 609.6 mm x 762 mm). Use cabinet and doors fabricated from at least 0.125 in (3.2 mm) thick aluminum. Ensure all exterior seams for the cabinets and doors are continuously welded and ground smooth. Ensure edges are filed to a radius of at least 0.03 in (0.76 mm).

2. Locks. Use a cabinet door that locks when the door is closed and latched. Use a handle of at least 7 in (180 mm) not including a steel shank of at least 5/8 in (16 mm). Use a handle fabricated of cast aluminum, stainless steel, zinc plated steel, or cadmium plated steel. Use cabinet locks that are solid brass and keyed to the Department master key Corbin Number 2 (6 pin tumbler rim type). Use a lock with rectangular and spring loaded bolts. Use a lock that is left hand and rigidly mounted with stainless steel machine screws approximately 2 in (50.8 mm) diagonally apart. Use a cabinet door that is pad lockable. Ensure keys are removable in the locked and unlocked positions. Ensure the front position of the lock extends 1/8 in (3.2 mm) to 3/8 in (9.5 mm) beyond the outside surface of the door.

3. Doors. Ensure cabinet has two fully functional full-size doors. Use a cabinet designed that mounting brackets can be installed on the side. Use a full-length stainless-steel piano or butt style hinge

with stainless steel pins spot-welded at the top for each door. Use hinges mounted so that they cannot be removed from the door or cabinet without first opening the door. Use door and hinges braced to withstand a 100 lb/ft (149 kg/m) of door height load applied vertically to the outer edge of the door when standing open. Ensure no permanent deformation or impairment of any part of the door or cabinet body when the load is removed. Use a double flanged door opening on all four sides. Use doorstops at 90 and 120 degree positions. Use catches of at least 3/8 in (9.5 mm) diameter plated steel rods. Ensure the catches are capable of holding the door open at 90 degrees in a 60 mph (96.5 km/h) wind at an angle perpendicular to the plane of the door. Use a door and the doorstop mechanism to withstand a simulated wind load of 5 psf (24.4 kg/m²) of door area applied to both the inside and outside surfaces without failure, permanent deformation, or compromising of door position and normal operation. Use a cabinet door frame designed so that the latching mechanism will hold tension on and form a firm seal between door gasket and door frame. Use a 3-point cabinet latching mechanism with nylon rollers. Use center catch and pushrods of 6061 aluminum, zinc plated steel, or cadmium plated steel. Use pushrods turned edgewise at the outer supports and at least 1/4 x 3/4 in (6.4 x 19 mm). Use nylon rollers of at least a diameter of 3/4 in (19 mm) and equipped with ball bearings. Use doors manufactured with all internal door components welded to the door. The Department will not accept fastening of door components by the method of inserting a bolt through the door.

4. Gaskets. Use cabinet doors that include a gasket to provide a dust and weather-resistant seal when closed. Use gasket material that is closed-cell neoprene and maintains its resiliency after exposure to the outdoor environment. Use a gasket that shows no sign of rolling or sagging and ensure a uniform dust and weather resistant seal around the entire door facing. Use gaskets permanently bonded to the metal. Ensure the mating surface of the gasket is covered with a silicone lubricant to prevent sticking to the mating surface. Ensure all overlapping exterior seams and doors conform to NEMA Type 4 enclosure standards.

5. Mounting. Provide all necessary components required for secure connection to the foundation and riser including at least mounting brackets and mounting hardware. Use 12 in (304.8 mm) risers. Use a rodent proof riser vent that also allows water to escape the cabinet. Use silicone to seal around the cabinet and riser connection. Use galvanized anchor bolts, nuts, and 2 in by 2 in square washers with each cabinet. Use 3/4 in (19 mm) diameter by at least 16 in (0.4 m) long anchor bolts with an “L” bend on the unthreaded end.

6. Shelves. Use one metal shelf to support equipment at the middle of the 19 in (0.48 m) rack. Ensure machine screws and bolts do not protrude beyond the outside wall of the cabinet. Ensure shelves do not require more than 1 shelf unit (1U) of rack space.

7. Coating. Use coatings that are commercially smooth and substantially free of flow lines, paint washout, streaks, blisters, and other defects that would impair serviceability or detract from general appearance. Use cadmium plating conforming to Military Specification MIL QQ 416b. Use zinc plating conforming to Military Specification MIL QQ 325b.

8. Ventilation. Use cabinets with vent openings in the front door to allow convection cooling of electronic components. Ensure each cabinet is equipped with an electric fan with ball or roller bearings and a capacity of at least 100 ft³/min (2.8 m³/min). Use a fan thermostatically controlled and manually adjustable to activate between 89.6 °F (32 °C) and 149 °F (65 °C) with a differential of not more than 10.8

°F (6 °C) between automatic turn on and turn off. Use a cabinet fan circuit fused at 125 percent of the ampacity of the fan motor installed. Use manual adjustment graded in 18 °F (10 °C) increments.

Provide a vent opening located on the lower portion of the cabinet door and fully cover the vent opening on the inside with a commercially available filter. Use a removeable filter housed behind the door vents that is washable, reusable, and provide a spare filter of the same type for each filter in use on the cabinet. Ensure the filter filtration area covers the vent opening area. Provide a filter shell that fits over the filter, providing mechanical support for the filter.

Use a louvered shell to direct the incoming air downward. Use shell sides and top that are bent over at least 0.26 in (6 mm) to house the filter. Use a filter and shell held firmly in place with a bottom bracket and a spring-loaded upper clamp. Ensure no incoming air bypasses the filter. Use a bottom filter bracket formed to create a waterproof sump with drain holes to the outside housing. Ensure the filter traps particles 2 microns and larger.

9. Wiring. Use No. 22 or larger conductors in cabinet wiring with at least 19 strands. Use conductors conforming to Military Specification MIL W 16878D, Type B or better. Use insulation with at least a thickness of 10 mil (254 µm) and made of nylon jacketed PVC, irradiated cross link PVC, polyhalocarbon, or polychloro alkene. For conductors No. 14 and larger, Underwriters Laboratories Incorporated (UL) Type Thermoplastic High Heat Resistant Nylon Coated (THHN) is acceptable. Use conductor insulation rated at 300 V and rated for use at 221 °F (105 °C). Provide strain relief for all cables. Ensure wiring within cabinets is neatly arranged and laced or enclosed in plastic tubing or raceway. Use conductors in cabinet wiring conforming to the following color code requirements:

- a.** Identify the grounded conductor of a circuit by a continuous white or natural gray color.
- b.** Identify the equipment grounding conductor by a continuous green color or by a continuous green color with one or more yellow stripes.
- c.** Identify the ungrounded conductors by any color not specified in 909.07.A.9.a or 909.07.A.9.b.

Use conductors in cabinet wiring that terminate with properly sized captive or spring spade type terminals or soldered to a through panel solder lug on the rear side of the terminal block. Use crimp style connectors applied with a proper tool that prevent opening of the handles until the crimp is completed. Provide equipment grounding conductor bus in each cabinet. Use a bus that is grounded to the cabinet and connected to the metal conduit system with a No. 8, or larger, grounding conductor.

Provide resistance between the grounded conductor terminal bus and the equipment grounding conductor bus of at least 50 MΩ, when measured with an applied voltage of 150 volts-direct current (VDC) and after all equipment is connected and in place. If direct current (DC) is to be grounded, connect to equipment ground only. Provide two or more terminal blocks for field connections.

Use terminals at least 5 in (127 mm) above the foundation. Ensure no more than three conductors are brought to any one terminal. The Department will also accept two flat metal jumpers, straight or U

shaped, placed under a terminal screw. Ensure at least two full threads of all terminal screws are fully engaged when the screw is tightened. Ensure no electrically live parts extend beyond the barrier.

Use a field connection made for the conductors of signal cable, power cable, interconnect cable and wireless cable. Ensure conductors are connected so the outgoing circuits shall be of the same polarity as the line side of the power supply. Ensure the circuit common return is of the same polarity as the ground side of the power supply. Ensure all field wiring is neatly arranged and routed to the appropriate terminal blocks. Use field wiring identified in accordance with 713.18 except that marking by indelible pen is acceptable.

Use field wiring entering the cabinet, except power wiring, that is fitted with spade terminals. The Department will accept spade terminals for incoming power. The Department will accept connecting the bare conductor wire to terminal points utilizing screw or spring applied clamping surfaces compatible with either copper or aluminum wire and providing a positive grip.

10. Labels. Use a permanent printed, engraved, or silk-screened label for all removable items of equipment. Use labels conforming to the designations on the cabinet wiring diagram. Ensure labels for all shelf mounted equipment are on the face of the shelf below the item. Ensure labels for wall mounted equipment are below the item.

11. Power Unit. Use a rack mounted power unit mounted in the bottom front of the cabinet. Ensure the power unit contains the following requirements:

a. Maximum Dimensions. 17 in (W) x 7 in (H) x 8 in (D) (431.8 mm x 177.8 mm x 203.2 mm).

b. Equipment Receptacle.

(1) Mount on the rear of the power unit.

(2) Use duplex, 3 prong, NEMA Type 5 20R grounding type outlet and conform to the requirements in UL Standard 943.

c. Field Personnel Testing Outlet.

(1) One GFCI receptacle outlet on right front.

d. Surge Suppression.

(1) Install so LED indicators can be easily seen and the unit can be easily replaced.

(2) Mount on right front of unit.

(3) 100 kA per phase rating.

(4) 120 Single Phase.

- (5) UL 1449 Listed.
 - (6) < 1 nanosecond response time.
 - (7) Normal Operating Temperature: -40 °F to 131 °F (-40 °C to 55 °C).
 - (8) Peak Operating Temperature: 176 °F (80 °C).
 - (9) Maximum Dimensions: 8 in (W) x 4 in (H) x 4 in (D).
- e. Three Circuit Breakers mounted on the left front of unit (one 50 A and two 20 A).
- (1) Use circuit breakers with a minimum interrupting capacity of 5000 A, root mean square (RMS).
 - (2) Use the 50 A breaker (CB1) as the main breaker of the cabinet.

Incoming power shall be wired through the following path:

- (3) Utilize one 20 A breaker (CB2) for all cabinet equipment.
 - (4) Utilize one 20 A breaker (CB3) for the GFCI, LED lighting, and cabinet fans.
 - (5) Wire the Surge Suppression to encompass both 20 A breakers.
 - (6) Wire the Noise Filter to only encompass the equipment outlet.
- f. **Power Distribution Blocks.** Provide a Power Distribution Block for the main power entering the cabinet. Ensure the power distribution block has at least the following:
- (1) Current Rating of 175 A.
 - (2) Voltage Rating of 600 V.
 - (3) 4-Pole.
 - (4) Primary Wire Range of 14 to 2/0 AWG Copper.
 - (5) Secondary Wire Range of 14 to 4 AWG Copper.
 - (6) Equipped with a touch safe cover.
- g. Provide a green LED that illuminates while incoming utility power is on. The LED shall be 1 inch diameter (nominal), mounted at the top of the cabinet above the front door, and be visible from the exterior. The LED shall be NEMA 4X and/or IP66 rated.

12. Terminal Blocks. Use terminal blocks rated for at least 600 VAC, and provide with nickel, silver, or cadmium plated brass binder head screw terminals. Use heavy duty terminal blocks rated at 20 A and provide with 12 poles with No. 10 x 5/16 in (250 x 7.9 mm) nickel plated brass binder head screws and nickel-plated brass inserts. Provide each pole position with two terminal positions. Use barrier type terminal blocks, with shorting bars in each of the twelve positions, and provide with integral type marking strips. Use light duty terminal blocks rated at 5 A and provide with twelve poles with No. 6 x 1/8 in (150 x 3.2 mm) binder head screws. Provide each pole position with one terminal position. Ensure all terminal blocks are fitted with associated clear safety covers to protect against accident contact.

13. Pullout Drawer Assembly. Install a pullout drawer in the cabinet cage. Ensure the drawer is 16.92 in (430 mm) long by 16.92 in (430 mm) wide by 1.73 in (44 mm) deep. Use a hinged top that covers the storage box area, that provide a smooth surface to write on. Use aluminum for the top of the storage compartment. Ensure the compartment has ball bearing telescoping drawer guides to allow full extension from the rack assembly. Ensure the storage compartment supports a weight of 20 lb (9 kg) when extended without sagging. Use a re-sealable plastic envelope large enough to provide protection for cabinet and site detailed drawings in each drawer.

14. Door Switches. Ensure all cabinets have door-activated switches that provide a contact closure for alarms so they can be wired into a remotely monitored network device when the door is opened. The wires for the contacts shall be clearly labeled and neatly organized and coiled on the rack location where ODOT would install a power distribution unit per Standard Construction Drawing ITS-18.00.

15. Cartridge Fuses. Install cartridge fuses in panel mounted fuse holders. Use fuse type and rating recommended by the fuse manufacturer for the type of load being protected.

16. Network Device DIN Rail. Include a rack mount DIN Rail unit for mounting network switch equipment. Ensure the DIN Rail is recessed, has access holes for network cabling on each side of the panel, and cable management panels at the top of the cabinet front and back. Install access hole grommets to protect the cables from wearing on bare metal. Ensure the dimensions are approximately 17 in (W) x 8 in (H) x 10 in (D) (431.8 mm x 203.2 mm x 254 mm) and has a louvered bottom to act as a shelf. Install the center of the DIN rail strip at a height of 4.5 in (114.3 mm) above the bottom of the shelf so the network switch can fit in the location correctly.

17. Device Locations.

- a. Power Unit.** Mount a rack mounted power unit in the bottom front of the cabinet.
- b. Pull-Out Drawer.** Mount the drawer to open to the front of the cabinet at a height of approximately 38 in (965.2) from the foundation (including a 12 in (304.8 mm) riser). An empty area of 7U shall be directly above the Pull-Out drawer and below the Network Device DIN Rail unit. Install a fiber termination panel in this empty space if needed.
- c. Shelves.** Mount one shelf 3U below the bottom of the Pull-Out Drawer.

d. Network Device DIN Rail. Mount this unit in the top front side of the cabinet 7U above the top of the Pull-Out Drawer. Ensure there is 2U of empty space between the top of this unit and the lamp assembly that is mounted at the very top of the rack.

18. Connectors. Use connectors designed to provide positive connection of all circuits and easy insertion and removal of mating contacts, and permanently keyed to prevent improper connection of circuits. Provide connectors, or devices plugging into connectors, with positive means to prevent any individual circuit from being broken due to vibration, pull on connecting cable or similar disruptive force.

19. Cable Management. Include vertical plastic cable management strips on all four sides of the rack. Ensure the cable management system easily allows for new cabling to be installed and routed within the cabinet to new devices installed at a later time. Position the cable management strips so that they do not interfere with the door operation opening/closing, do not block the rack screw holes, and allow installation of new devices into the 19 in (0.48 m) rack without removal of any strips. The Department will not accept horizontal cable management strips.

20. Environmental. Ensure the components operate properly within the temperature range of 0 °F (-17.8 °C) to 120 °F (48.9 °C) and conform to NEMA TS-2 ambient temperature, relative humidity, applied power, shock, and vibration ranges.

21. Testing. Subject the equipment to design approval test (DAT) and factory approval test (FAT). The Department reserves the right to witness all FAT's. After starting the tests, complete the tests within five calendar days. Ensure that the test plans demonstrate every feature available in the device or system under test and includes the tests identified below. The Department will evaluate material and devices purchased under this contract to verify compliance with 909 and determine suitability for use. Submit sample material and devices for evaluation at no additional cost to the Department. The Department will retain the submissions for operational testing as long as the material or device is approved for use.

Develop and submit a test plan for DAT's and FAT's to the Department for approval. The Department may accept certification by an independent testing laboratory in lieu of the DAT's to satisfy the requirement that certain features and functions have been witnessed and documented as performing satisfactorily. Satisfy all inspection requirements prior to submission for the Department's inspection and acceptance.

Provide one cabinet of each type for testing and evaluation purposes at no cost to the Department. The units shall be tested and evaluated as indicated below. The Department will review the proposed products for compliance of the test procedures as noted within Section 2.2.7 of the NEMA TS 2-1998 standard and shall include the following tests:

- a.** (DAT) Placement in Environmental Chamber and Check-Out of Hook-Up.
- b.** (DAT) Temperature Cycling and Applied Transient Tests (Power Service).
- c.** (DAT and Production Testing) Low-Temperature Low-Voltage Tests.

- d. (DAT and Production Testing) Low-Temperature High-Voltage Tests.
- e. (DAT and Production Testing) High-Temperature High-Voltage Tests.
- f. (DAT and Production Testing) High-Temperature Low-Voltage Tests.
- g. Test Termination (All Tests).
- h. Appraisal of Equipment under Test.

909.07.B. ITS Cabinet – Pole Mounted. Ensure this item conforms to 909.07.A except for 909.07.A.17 and as shown below.

- 1. Construction.** Use a cabinet with at least dimensions of 44 in H x 24 in W x 22 in D (1100 mm x 610 mm x 560 mm).
- 2. Doors.** Use pole mounted cabinets designed for mounting bracket installation on the side so both doors are fully functional.
- 3. Mounting.** Use pole mount cabinets that include all necessary components required for secure connection to any pole including at least the pole mounting brackets and mounting hardware. When mounted, ensure the bottom of the cabinet is 30 in (762 mm) above the foundation.
- 4. Shelves.** Provide one substantial metal shelf to support equipment at the bottom of the 19 in (482.6 mm) rack just above the power receptacles and circuit breakers. Ensure machine screws and bolts do not protrude beyond the outside wall of the cabinet.

909.07.C. ITS Cabinet – Power Distribution Cabinet (PDC). Use a PDC conforming to 909.07.A except from 909.07.A.6 to 909.07.A.11, from 909.07.A.13 to 909.07.A.19, and as shown below.

- 1. Construction.** Use a cabinet 50 in H x 30 in W x 17 in D. Use cabinet and doors fabricated from at least 0.125 in (3.2 mm) thick aluminum. Ensure all exterior seams for the cabinets and doors are continuously welded and ground smooth. Ensure edges are filed to a radius of at least 0.03 in (0.76 mm). Use a cabinet that contains aluminum back and side panels.
- 2. Mounting.** Ensure all ground mounted cabinets include all necessary components required for secure connection to the foundation and 6 in (152.4 mm) riser including at least the mounting brackets and mounting hardware.
- 3. Power Distribution Blocks.** Use Power Distribution Blocks for the main power entering the cabinet and for field wiring multiple devices. Provide one power distribution block for the main power entering the cabinet and then five additional power distribution blocks to wire in field loads, mounted at the bottom of the back panel of the cabinet. Ensure the power distribution blocks conform to the following:

- a. Current Rating of 175 A.
- b. Voltage Rating of 600 V.
- c. (2) 4-Pole, (2) 3-Pole for loads, (1) 4-Pole for line
- d. Primary Line Wire Range of 14 AWG Copper to 2/0 AWG Copper.
- e. Secondary Wire Range of 14 AWG Copper to 4 AWG Copper.
- f. Equipped with a TouchSafe cover.

Wire the power distribution block for the main power entering the cabinet into the Main breaker in the load center.

Wire each additional power distribution block into the appropriate breaker in the load center.

4. Terminal Blocks. Use terminal blocks rated for at least 600 VAC, including nickel, silver, or cadmium plated brass binder head screw terminals. Ensure heavy duty terminal blocks are rated for 20 A and use twelve poles with No. 10 x 5/16 in (250 x 7.9 mm) nickel plated brass binder head screws and nickel-plated brass inserts. Ensure each pole position is provided with two terminal positions. Use barrier type terminal blocks with shorting bars in each of the twelve positions and provided with integral type marking strips. Ensure light duty terminal blocks are rated at 5 A and provided with twelve poles with No. 6 x 1/8 in (150 x 3.2 mm) binder head screws. Ensure each pole position is provided with one terminal position. Use terminal blocks fitted with associated clear safety covers to protect against accidental contact.

5. Circuit Breakers. Use circuit breakers with a minimum interrupting capacity of 5000 A, root mean square (RMS). Ensure the cabinet has at least six circuit breakers installed:

- a. (1) 100 A 2-Pole Main
- b. (1) 60 A 2-Pole for load
- c. (1) 40 A 2-Pole for load
- d. (2) 30 A 1-Pole for load
- e. (1) 15 A 1-Pole for accessories

Wire the main power entering the cabinet into the 100 A breaker. Wire the remaining circuit breakers through the 100 A circuit breaker.

6. Load Center. Install a 100 A, 120/240 Volt load center in the cabinet. Use a load center of at least twelve 1 inch 1-Pole Spaces.

909.07.D. ITS Cabinet – Ramp Meter. Use an ITS Cabinet – Ramp Meter conforming to 909.07.A except from 909.07.A.9, 909.07.A.11, 909.07.A.13, 909.07.A.15, and as shown below.

1. Mounting. Use galvanized anchor bolts, nuts, and 2 in by 2 in square washers with each cabinet. Furnish 3/4 in (19 mm) diameter by at least 16 in (0.4 m) length anchor bolts with an “L” bend on the unthreaded end.

2. Shelves. Provide one substantial metal shelf to support equipment at the middle of the 19 in (482.6 mm) rack just above the power receptacles and circuit breakers. Ensure machine screws and bolts do not protrude beyond the outside wall of the cabinet.

3. Coating. The Department will not require an anodic coating.

4. Labels. Ensure marker strips are made of material that can be easily and legibly written upon using a pencil or ballpoint pen. Locate marker strips immediately below the item they are to identify and clearly visible with all items installed.

5. Convenience Receptacle. Use four convenience receptacles mounted in readily accessible locations inside the cabinet opposite the circuit breakers at the bottom of the cabinet. Use duplex, 3 prong, NEMA Type 5 15R grounding type outlet conforming to UL Standard 943. Wire all receptacles through the cabinet surge arrestor in accordance with C&MS 733.03.C.5 and the 20 A circuit breakers.

Include a supplemental surge suppressor in the price of the cabinet, wired in series with the cabinet surge arrestor, and conform to the following:

a. Minimum dimensions of 3.75 in (D) x 7.8 in (L) x 5.75 in (W) (95.25 mm x 198.12 mm x 146.05 mm).

b. Minimum Surge Current of 50,000 A.

c. Normal operating current of 15 A.

d. Provide at least 9 NEMA 5-15R Outlets.

6. Terminal Blocks. Provide a Power Distribution Block for the main power entering the cabinet. Use a power distribution block conforming to the following:

a. Current Rating of 175 A.

b. Voltage Rating of 600 A.

c. 4-Pole.

d. Primary Wire Range of 14 AWG Copper to 2/0 AWG Copper.

e. Secondary Wire Range of 14 AWG Copper to 4 AWG Copper.

f. Equipped with a TouchSafe cover.

Provide side mounted terminal blocks to land vehicle detector field wiring. Install terminal blocks and associated wiring to the input file. Label the field wiring terminals of the side mounted terminal block by a permanent screening process to identify the input panel (I), the input file slot number (1 through 14) and the channel terminal (D, E, J, or K), for example "I4-E". Ensure that all terminals on these detector blocks are accessible without removing equipment from the EIA mounting rack. Ensure all terminals are alternating in colors, grey and white, down the block with all ground terminals colored green.

7. Switches. Use cabinets with door-activated switches that provide a contact closure for alarm when the door is opened to the Department's network switch. Use 16 AWG wire for wire connected to switches and provide 5 ft (1.52 m) of wire to connect to the Department's network switch.

8. Circuit Breakers. Use circuit breakers with a minimum interrupting capacity of 5000 A, root mean square (RMS). Use a cabinet with at least three circuit breakers installed, one 60 AMP and two 20 AMP. Wire the power service into the 60 A breaker. Wire the two 20 A circuit breakers through the 60 AMP circuit breaker. Wire the required convenience receptacles through the 20 A circuit breakers.

9. Accessories. Furnish two channel loop detector sensors, one transfer relay, power supply, Model 208 conflict monitor and switchpacks in each cabinet. Include a NEMA or Caltrans type flasher wired for control from the controller when ramp meter warning signs with flashers are present. Use lightning/surge suppression conforming to C&MS 733.03.C.5.

Furnish an aluminum shelf with integral storage compartment in the rack below the controller. Ensure that the storage compartment has telescoping drawer guides for full extension, and a non-slip plastic laminate attached. Ensure that each cabinet has 2 fluorescent lights installed at the top of the cabinet, with 1 near each door. Wire the lights to the door switches such that opening either door will turn on both lights. Furnish a Model 208 conflict monitor unit.

909.07.E. ITS Cabinet – DMS. Use an ITS Cabinet - DMS that conforms to 909.07.A and as shown below.

1. Circuit Breakers. Use circuit breakers with a minimum interrupting capacity of 5000 A, root mean square (RMS). Ensure all cabinet circuit breakers are housed in the load center and no other breakers are installed in the cabinet.

2. Power Unit. Furnish a power panel with load center in place of the rack mounted power unit.

3. Power Panel with Load Center. Use a rack mounted power panel with load center mounted in the bottom front of the cabinet.

Install a 120/240 V load center with main lug rated for up to 100 A and room for at least 10 breaker spaces in the cabinet. Include at least one 60 A two pole breaker for a Dynamic Message Sign, a 40 A two pole breaker, a 20 A equipment breaker, and a 20 A auxiliary breaker for fans/lights/GFCI outlet. Equip additional breakers as specified in the Contract Documents.

Ensure the power panel conforms to the following:

a. Maximum Dimensions of 19 in (W) x 17 in (H) x 8 in (D) (482.6 mm x 431.8 mm x 203.2 mm).

b. Equipment Receptacle.

(1) Use duplex, 3 prong, NEMA Type 5 20R grounding type outlet and shall conform to UL Standard 943.

c. Field Personnel Testing Outlet.

(1) One GFCI receptacle outlet on right front.

d. Surge Suppression.

(1) Install so that any LED indicators can be easily seen, and the unit can be easily replaced.

(2) 100 kA per phase rating.

(3) 120 Single Phase.

(4) UL 1449 Listed.

(5) Less than 1 nanosecond response time.

(6) Normal operating temperature of -40 °F to 131 °F (-40 °C to 55 °C).

(7) Peak Operating Temperature of 176 °F (80 °C).

(8) Maximum dimensions of 8 in (W) x 4 in (H) x 4 in (D) (203.2 mm x 101.6 mm x 101.6 mm).

909.07.F. ATC Cabinet 5301 V2.02. Use an ATC Cabinet 5301 V2.02 that conforms to all requirements of the Joint Standard of AASHTO, ITE, and NEMA's ATC 5301 V2.02.

909.08 Ramp Meter System.

909.08.A Ramp Meter System.

1. Software Requirements.

a. Ramp Meter Controller Processor. Ensure compatible with the Department's specified data protocol for communications with the Traffic Management Center.

Ensure the ramp meter controller processor conforms to the following:

- (1) Process all local detector data.
- (2) Turn advanced warning sign beacons on 20 s prior to metering operation displaying first RED signal.
- (3) Monitor and flag errors with the Ramp Meter controller operation and detection loops.
- (4) Dwell in steady green during all non-metering periods

b. Local Metering Capability. Ensure local parameters are entered, modified, and viewed using a laptop computer and on-screen display conforming to the following:

- (1) Table appears on the screen.
- (2) Type over to enter or modify local database.
- (3) Direct numerical input to PC.
- (4) No direct Hexadecimal or machine input required by the person entering the data.
- (5) Ramp Meter Controller Status Display showing at least the following real-time data:
 - (a) Ramp Meter Operation:
 - i. Implemented Action.
 - ii. Metered Lane Interval.
 - iii. Command Source.
 - iv. Metering Level.
 - v. Metering Rate.
 - vi. Minimum Metering Time.
 - vii. Minimum Non-Metering Time.
 - viii. Interval Timer.
 - (b) Mainline Data:
 - i. Station Average Speed, Occupancy, and Flow Rate.
 - ii. Average Mainline Station Speed, Occupancy, and Flow Rate per Lane.

iii. Historical Station Average Speed, Occupancy, and Flow Rate.

(6) Use ramp metering software that utilizes a NTCIP 2070 controller and capable of setting the following parameters:

- (a)** Operational Minimum Metering Rate.
- (b)** Operational Maximum Metering Rate.
- (c)** Startup Warning Time.
- (d)** Minimum Green Time.
- (e)** Maximum Green Time.
- (f)** Minimum Red Time.
- (g)** Short Stop Time.
- (h)** Red Violation Clearance Time.
- (i)** Red Violation Adjustment Time.
- (j)** Shutdown Warning Time.
- (k)** Shutdown Time.
- (l)** Post Metering Green Time.

(7) Use ramp metering software capable of performing the following user-defined ramp metering modes:

- (a)** Fixed Time-of-Day Metering.
- (b)** Local Traffic Responsive Metering based on downstream mainline conditions communicated from the Side-fired radar vehicle detector.
 - i.** Capable of utilizing both Speed and/or Occupancy Mainline Data as defined by the End-User on a lane-by-lane basis.
- (c)** Dwell in Green during all non-metering periods.
- (d)** Emergency Green and/or Preemption green.
- (e)** Rest in Dark.

(8) Use a ramp meter with the capability of being controlled/programmed by the following sources (Prioritized from Highest Priority to Lowest Priority):

- (a) Central Command.
- (b) Manual Control (Locally).
- (c) Time-Based (Local Controller Settings).

(9) Use a ramp meter with the following loop detector inputs:

- (a) Demand.
- (b) Passage.
- (c) Intermediate Queue.
- (d) Excessive Queue.

(10) Metering Modes:

- (a) Fixed rate metering.
- (b) Local traffic responsive metering based upon:
 - i. Volume and Occupancy thresholds.
 - ii. Volume only threshold.
 - iii. Occupancy only threshold.

(11) **Software Documentation.** Furnish the following up-to-date documentation with each ramp meter cabinet:

- (a) Full operating instructions.
- (b) Full software documentation.

2. Testing and Certification. Test all loops for continuity and insulation in accordance with C&MS 632.27. Ensure the insulation resistance measured to ground is at least 100 MΩ. Furnish a copy of the test results to the Engineer. Re-cut any loops that test open or less than 100 MΩ to ground at no cost to the Department.

a. Ramp Meter Testing, Local and Remote Operation. Test each for operational completeness. Perform testing in the presence of a representative of the Department. Testing consists of Pre-Test check-out Test and a Ramp Meter Sixty-day Performance Test.

Notify the Engineer, in writing, that the ramp meter is complete and ready for local testing. Within 5 days upon receiving this notification the Engineer will begin the Pre-test Check-out.

(1) Pre-test Check-out. The Engineer will exercise the system, using procedures that demonstrate the capabilities of each component. All hardware, software, and performance functions, including the maintenance and troubleshooting software, will be individually checked by the Engineer for conformance to 909.08. Provide training before the tests begin.

Demonstrate that the field equipment conforms to 909.08. Correct any component not conforming to 909.08 and the Engineer will recheck the component.

(2) Ramp Meter Sixty-day Performance Test – Local Control. Demonstrate that the system satisfies specification as an integrated unit by operating the system continuously for 10 consecutive days without malfunction or failure.

Notify the Engineer, in writing, that the test will begin on a date and time mutually acceptable to all parties, including the maintaining agency.

The Engineer will exercise the system and document the performance of all features and any other events that are expected to occur in an operational Traffic Management System, including the simulation of failures. During the system exercise, the test may be suspended or terminated.

Suspension is defined as halting the test progress. Make repairs or necessary corrective action prior to resuming the test from the point of suspension.

Termination is defined as halting the test. Repair or perform necessary corrective action prior to restarting the test from the beginning. Obtain the Engineer's approval prior to taking any corrective action.

The Ramp Meter Sixty-day Performance Test may be suspended for the following reasons, including but not limited to:

- (a)** Failure or interference caused by vandalism, traffic accidents, power failures, and similar occurrences.
- (b)** Communications noise from an outside source.
- (c)** Failure of any support or diagnostic equipment necessary to successfully test the system.
- (d)** Failure of any communications hub.
- (e)** A hardware failure of the computer or associated critical peripheral equipment, or a computer software error, that causes the system to crash or behave erratically.

The Ramp Meter Sixty-day Performance Test may be terminated for the following reasons, including at least:

- (f) Failure of any hardware or performance item.
- (g) Communications noise from an outside source.
- (h) Failure of software to change timing patterns or go from metering to non-metering in the local mode of operation.
- (i) Failure of the warning sign to operate properly, except for lamp outages.
- (j) Intermittent or catastrophic failure of any ramp meter loop detectors.
- (k) Failure of any electronic component in the ramp meter cabinet.
- (l) The appearance of any problem that has a significant effect upon the reliability, safety, or operation of the system, as determined by the Department.

Each ramp meter will be tested for proper operation from the Department's ITS Lab.

909.09 Detection.

909.09.A Side-Fired Radar Detector. Use a Radar Detector assembly conforming to the following.

1. Microwave Detector.

a. Use a Side-Fire Radar Detector with loop emulation option and one of the following communication protocol combinations, depending on the type of installation.

(1) Two RS485/RS422 or RS232 communication ports with at least 16 contact closures (To be used for Ramp Metering Sites only).

(2) One RS485/RS422 or RS232 communication port, one Ethernet TCP/IP port, and at least 16 contact closures.

(3) RS485/RS422 or RS232 communication port, one Ethernet TCP/IP port.

(4) One Ethernet TCP/IP port only (To be used with Central Office ITS approval only).

(5) Two Ethernet TCP/IP ports (To be used with Central Office ITS approval only).

(6) One RS485/RS422 communication port and One 1 RS232 communication port.

b. Providing access to an internal camera with an Ethernet TCP/IP port is acceptable.

c. Install cable from the radar detector to a pole-mounted NEMA 4X breakout box cabinet if no other ITS device is on the same pole, where it will then have the contact closure wires continue through (if used with Ramp Metering) and the communication port wires connected to separate cabling to send the communication back to the Ramp Meter Cabinet or ITS Cabinet.

d. It shall be possible to integrate a Bluetooth Module into the unit as a replacement to one of the communication ports

2. General. Use the detectors that operate in loop emulation mode. Provide NEMA 4X breakout box cabinet enclosure mounted on the radar pole with surge suppression as necessary for each unit. Provide 120 VAC power to each site. Operate side-fire radar units at 24 VDC or PoE. Provide a power transformer/converter from 120VAC to 24VDC or appropriate PoE injector, or equipment necessary for the side-fire radar unit to operate. Use Ethernet for primary communications with the VDU.

3. Compliance. Install materials fully compliant with NTCIP and conform to NEMA TS-4 standards where applicable.

909.09.B Stop Line Radar Detection.

1. General. Provide units conforming to the following:

a. Ensure the unit is non-intrusive and detects vehicles from 6 ft (1.83 m) to 140 ft (42.7 m) for a 90 degree field of view from the unit.

b. Provide real-time presence data for at least 10 lanes.

c. Provide at least 16 detection zones simultaneously for intersection control.

d. Provide presence-detection of stopped vehicles with a minimum of 98 percent accuracy for all motor vehicles.

e. Include a simple setup routine that automatically configures and calibrates the unit for proper operation during installation. Use a unit capable of being programmed and updated from a laptop computer or other portable programming device using a local or remote ethernet connection using vendor supplied software. Ensure the software supports TCP/IP connectivity, unit configuration back-up and restore, and Real-time traffic visualization for performance verification and traffic display. Ensure the graphical user interface operates on a Department approved version of Windows.

f. Use a unit with two half-duplex RS-485 communication ports and the ability to upgrade firmware over any communication port.

g. Include surge protection devices, as recommended by the manufacturer, at the pole where the unit is located to protect the unit and in the traffic cabinet to protect the cabinet electronics.

h. Ensure the unit consumes less than 10 W and operates from a DC input between 9 VDC and 28 VDC. Ensure complete and automatic recovery from a power failure is within 15 s after resumption of normal power.

i. Include all required inputs cards in the traffic cabinet are compatible with CALTRANS, NEMA TS1 and NEMA TS2 detector racks. Ensure the cards provide true presence detector calls or contact closure to the traffic controller.

j. Provide a representative of the manufacturer during installation and testing to provide onsite training on the setup, operation, and maintenance of the unit.

k. Cables shall tie into the bus bar on the side of the cabinet.

2. Compliance. Test the unit for conformance to NEMA TS2 environmental standards. Ensure the unit maintains accurate performance in the following operating conditions:

a. Rain up to 1 in (25.4 mm) per hr.

b. Freezing rain.

c. Snow.

d. Wind.

e. Dust.

f. Fog.

g. Changing temperature.

h. Changing lighting.

Ensure the radar design for each unit conforms to the following:

i. Operating frequency from 24.0 GHz to 24.25 GHz (K-band).

j. No manual tuning to circuitry.

k. Transmits modulated signals generated digitally.

l. No temperature-based compensation necessary.

m. Bandwidth stable within 1 percent.

n. Printed circuit board antennas.

- o.** Antenna vertical 6 dB beam width (two-way pattern): 65 degree.
- p.** Horizontal field of view of at least 90 degree.
- q.** Antenna two-way sidelobes: -40 dB.
- r.** Transmit bandwidth: 245 MHz.
- s.** Un-windowed resolution: 2 ft (0.61 m).
- t.** At least 8 RF channels.
- u.** Self-test for verifying hardware functionality.
- v.** Diagnostics mode for verifying system functionality.

909.09.C Advance Radar Detection.

1. General. Provide units conforming to the following:

- a.** Use a unit that tracks the speed, range, and perform real time calculations of how long it will take a vehicle to arrive at the stop line for each vehicle it detects.
- b.** Determine the time, location and size of gaps in flowing traffic.
- c.** Use a unit that is non-intrusive and detects vehicles from 50 ft (15.2 m) to 900 ft (274.3 m) from the unit.
- d.** Provide up to 8 detection zones simultaneously for intersection control.
- e.** Provide presence-detection of moving vehicles with the following accuracy:
 - (1)** Detection accuracy of 98 percent for large vehicles and 95 percent for all motor vehicles.
 - (2)** Range accuracy of ± 10 ft (3.05 m) for 90 percent of measurements.
 - (3)** Speed accuracy of ± 5 mph (8.05 km/h) for 90 percent of measurements.
- f.** Include a simple setup routine that automatically configures and calibrates the unit for proper operation during installation. Use a unit capable of being programmed and updated from a laptop computer or other portable programming device, using a local or remote ethernet connection using vendor supplied software. Ensure the software supports TCP/IP connectivity, unit configuration back-up and restore, and virtual sensor connections. Ensure the graphical user interface that operates on a Department approved version of Windows.

g. Ensure the unit that has one full-duplex RS2-232 and one half-duplex RS-485 communication ports and has the ability to upgrade firmware over any communication port.

h. Include surge protection devices, as recommended by the manufacturer, at the pole where the unit is located to protect the unit and in the traffic cabinet to protect the cabinet electronics.

i. Ensure the unit consumes less than 10 W and operates from a DC input between 9 VDC and 28 VDC. Ensure complete and automatic recovery from a power failure within 15 s after resumption of normal power.

j. Ensure all required inputs cards are included in the traffic cabinet and compatible with CALTRANS, NEMA TS1, and NEMA TS2 detector racks. Ensure the cards provide true presence detector calls or contact closure to the traffic controller.

k. Provide a representative of the manufacturer on site during installation and testing to provide onsite training on the setup, operation and maintenance of the unit.

l. Cables shall tie into the bus bar on the side of the cabinet.

2. Compliance. Test the unit for conformance to NEMA TS2 environmental standards and maintain accurate performance in the following operating conditions:

a. Rain up to 4 in (101.6 mm) per hr.

b. Freezing rain.

c. Snow.

d. Wind.

e. Dust.

f. Fog.

g. Changing temperature.

h. Changing lighting.

Ensure the radar design for each unit conforms to the following:

a. Operating frequency: 10.5 GHz to 10.55 GHz (X-band).

b. No manual tuning to circuitry.

- c. Transmits modulated signals generated digitally.
- d. No temperature-based compensation necessary.
- e. Bandwidth stable within 1 percent.
- f. Printed circuit board antennas.
- g. Antenna vertical 6 dB beam width (two-way pattern): 80 degree.
- h. Antenna horizontal 6 dB beam width (two-way pattern): 10.5 degree.
- i. Antenna two-way sidelobes: -40 dB.
- j. Transmit bandwidth: 45 MHz.
- k. Un-windowed resolution: 11 ft (3.35 m).
- l. RF channels: 4.

909.09.D Combined Radar Detection

1. General. Provide units conforming to the following:

- a. Ensure the unit is non-intrusive and detects vehicles from 6 ft (1.83 m) to 900 ft (274.3 m) from the unit.
- b. Provide real-time presence data for at least 10 lanes and at least 24 detection zones simultaneously for intersection control.
- c. Provide presence-detection of stopped and moving vehicles with a minimum of 98 percent accuracy for all motor vehicles. Additionally, characteristics of moving vehicles shall be detected with the following accuracy:
 - (1) Range accuracy of ± 10 ft (3.05 m) for 90 percent of measurements.
 - (2) Speed accuracy of ± 5 mph (8.05 km/h) 90 percent of measurements.
- d. Include a simple setup routine that automatically configures and calibrates the unit for proper operation during installation. Use a unit capable of being programmed and updated from a laptop computer or other portable programming device using a local or remote ethernet connection using vendor supplied software. Ensure the software supports TCP/IP connectivity, unit configuration back-up and restore, and Real-time traffic visualization for performance verification and traffic display. Ensure the graphical user interface operates on a Department approved version of Windows.
- e. Ensure the unit that has one full-duplex RS2-232 and one half-duplex RS-485 communication ports and has the ability to upgrade firmware over any communication port.

f. Include surge protection devices, as recommended by the manufacturer, at the pole where the unit is located to protect the unit and in the traffic cabinet to protect the cabinet electronics.

g. Ensure the unit consumes less than 10 W and operates from a DC input between 9 VDC and 28 VDC. Ensure complete and automatic recovery from a power failure is within 15 s after resumption of normal power.

h. Ensure all required inputs cards are included in the traffic cabinet and compatible with CALTRANS, NEMA TS1, and NEMA TS2 detector racks. Ensure the cards provide true presence detector calls or contact closure to the traffic controller.

i. Provide a representative of the manufacturer on site during installation and testing to provide onsite training on the setup, operation and maintenance of the unit.

2. Compliance. Test the unit for conformance to NEMA TS2 environmental standards. Ensure the unit maintains accurate performance in the following operating conditions:

a. Rain up to 4 in (101.6 mm) per hr.

b. Freezing rain.

c. Snow.

d. Wind.

e. Dust.

f. Fog.

g. Changing temperature.

h. Changing lighting.

Ensure the radar design for each unit conforms to the following:

a. Operating frequency from 24.0 GHz to 24.25 GHz (K-band).

b. No manual tuning to circuitry.

c. Transmits modulated signals generated digitally.

d. No temperature-based compensation necessary.

e. Bandwidth stable within 1 percent.

f. Printed circuit board antennas.

- g. Antenna vertical 6 dB beam width (two-way pattern): 65 degrees or greater.
- h. Antenna horizontal 6 dB beam width (two-way pattern): 10.5 degrees or greater.
- i. Horizontal field of view of at least 90 degrees.
- j. Antenna two-way sidelobes: -40 dB.
- k. Transmit bandwidth: 245 MHz or 45 MHz
- l. Un-windowed resolution: 2 ft (0.61 m) or 11 ft (3.35 m).
- m. At least 12 RF channels.
- n. Self-test for verifying hardware functionality.
- o. Diagnostics mode for verifying system functionality

909.10 Communications.

909.10.A Reserved for Future Use.

909.10.B Ethernet Cable, Outdoor Rated. Furnish a CAT 5e or greater ethernet cable that conforms to the following:

1. Footage Markings: Every 3 ft (914.4 mm).
2. Armor: Aluminum with inner jacket.
3. Conductor Insulation: Polyolefin.
4. Jacket: UV and Abrasion Resistant Polyethylene.
5. Conductors: 4 AWG solid bare annealed copper.
6. Cable Diameter: Maximum 0.35 in (8.89 mm).
7. Flooding Compound: Waterproof Gel.
8. Minimum Bend Radius: 1 in (25.4 mm).
9. Maximum Pulling Force: 25 lb (11.3 kg).
10. Shielded or Unshielded.
11. Temperature Rating.

- a. Installation: -22 °F to 140 °F (-30 °C to 60 °C)
- b. Operation: -49 °F to 176 °F (-45 °C to 80 °C)

12. Color Code.

- a. Pair 1: Blue-White/Blue.
- b. Pair 2: Orange-White/Orange.
- c. Pair 3: Green-White/Green.
- d. Pair 4: Brown-White/Brown.

909.11 Emergency Vehicle Preemption. Furnish and install the preemption system in the locations and local controllers as shown in Contract Documents.

Use a system that employs either sound, light or radio detection techniques to determine and log the presence of the emergency vehicle. Use a system that detects the presence of the vehicle through an emitting device located on the emergency vehicle. Ensure the system activates the preemption sequence by applying a signal to one of the controller's preempt discrete inputs. Use a system completely compatible with the controller.

Provide for detection of the emergency vehicle when it clears the crossing and releasing of the traffic signal controller from preemption special control mode.

Use a system that causes the traffic signal controller to select a preprogrammed preemption plan that will display and hold the desired signal phase for the direction of the emergency vehicle upon detection of an emergency priority vehicle. The held phase is typically the phase serving a through movement plus any protected left-turn phase in the same direction. The traffic signal shall remain in these phase(s) until the preemption input goes away or a maximum timer expires.

When the preemption input is first sensed, or after some fixed delay, the current vehicular phase is terminated if it conflicts with the emergency vehicle movement, unless the pedestrian phase is active. If the pedestrian White Walking Person display (symbolizing WALK) is active, such display may be terminated, but the Pedestrian Change interval, displayed as the flashing Orange upraised hand (symbolizing flashing DON'T WALK) shall be displayed in its entirety. Once the Pedestrian Change interval (displayed as the flashing Orange Upraised Hand (symbolizing flashing DON'T WALK)) is displayed, it shall not be shortened and shall be displayed in its entirety.

Provide for traffic signal transitions from designated limited service phases to designated exit phases and normal operations of the traffic signal system.

Use a system that is shelf or rack mounted within the traffic signal cabinet and can be easily removed and replaced. Use a system completely wired and tested in the traffic signal cabinet prior to the Department's acceptance. Use a system capable of preempting and receiving priority for each approach to the intersection. Ensure it is possible to detect the emergency vehicle at least 2000 ft (609.6 m) from the intersection in an 80 dB-A noise environment.

Provide for failure detection of system elements.

1. Preempt Receiving Unit. Use a receiving unit consisting of a lightweight, weatherproof, and directional assembly. Ensure each receiving unit has a 360 degree field of detection. Use a receiving unit capable of sending the proper electrical signal to the traffic signal controller using the preemption detector cable. Use receiving units supplied with mast arm mounting hardware as shown in the Contract Documents.

2. Preempt Detector Cable. Use a preempt detector cable conforming to C&MS 632. Use only one external splice between the preempt receiver unit and controller cabinet. Ensure this splice conforms to C&MS 632.23 using a waterproof epoxy splice kit. Use cable rated for both overhead and underground use. Ensure the jacket withstands exposure to sunlight and atmospheric temperatures and stresses reasonably expected in normal installations.

3. Preempt Phase Selector. Include the extra cabinet space necessary to be located in the local controller cabinets if specified in the Contract Documents.

Use phase selectors consisting of a module or modules providing the necessary inputs to the controller. Supply phase selectors with the necessary quantity of channels to provide preemption for all approaches to the intersection separately. Obtain power from the phase selector or phase selector power supply and not from the local controller timer.

Ensure the phase selectors have front panel indicators for active preempt channel status and test switches to activate all preempt channels.

4. Preempt Confirmation Light, LED. Use a confirmation light that is a weather tight lighting fixture. Supply with a clear globe, LED lamp and mounting hardware to attach to the traffic signal mast arm. Use a confirmation light powered by a load switch in the traffic signal controller. Use signal cable conforming to C&MS 732.19 for confirmation lights, paid separately. Use at least 4-conductor cable with the green wire serving as the safety ground conductor.

909.12 Wrong Way Detection System. Furnish and install products on the TAP.

909.12.A Testing. Notify the Office of Traffic Operations (OTO) at least one week prior to camera installation in order to coordinate the aiming and calibration of the camera. While on-site during installation, call OTO to verify the camera connection and views. Adjust the camera as needed for optimal views.

909.13 Traffic Signal Equipment. Use traffic signal equipment on the TAP.

909.13.A. Closed Loop Arterial Traffic Signal System. Use a system that meets at least the following.

1. Provide for coordination among signals by wired, wireless, or coordinated timing.
2. Capability to be monitored remotely.
3. Provide for programming of coordination plans.
4. Provide for coordination plans with cycle length, phase splits and offsets, pedestrian phases and clearance times.
5. Provide for interconnected communications among signals and a master controller or for programmable clock synchronization at each controller to allow for time-based coordination.
6. Modify the operation in response to traffic and pedestrian detection.
7. Provide for the protection of a pedestrian phase.
8. Provide for traffic actuation.
9. Provide for failure detection of system elements.

909.13.B. Centrally Controlled Arterial Traffic Signal System. Use a system that meets at least the following.

1. Use software that provides intersection control and remote traffic management through a graphical user interface integrating mapping to display detailed information about the system and intersection locations. Provide software supplied with drivers to allow compatibility with traffic signal controllers listed on the TAP.
2. Use a system capable of receiving status, data, uploading, and downloading from each connected device.
3. Provide capability to monitor proper operation of traffic signals in real time.
4. Provide cycle length, phase split and offset monitoring for traffic signals.
5. Provide for parameters to control and remotely implement all functionality and settings in a 909.13.G. ATC Controller.
6. Provide the ability to be responsive to traffic actuations.
7. Provide the capability to check signal timings remotely.
8. Provide the capability to record failures for maintenance and legal purposes.
9. Provide detector surveillance/tabulation for database development for timing plan changes.

10. Provide capability for traffic adjusted operation responsive to volume variations.

11. Provide capability for surveillance of operational efficiency to determine the need for new timing plans.

12. Provide for failure detection of system elements.

13. Provide for future ITS integration.

909.13.C. Highway Rail/ Traffic Signal Preemption. Use a system that meets at least the following.

1. Provide circuitry to interface with the railroad crossing equipment to initiate the railroad preemption special control mode of the traffic signal controller.

2. Provide the termination of any conflicting phases and initiation of the designated track clearance phases through the traffic signal controller.

3. Provide for the traffic signal to hold track clearance phases in green at least until the railroad gate arm for traffic approaching the intersection reaches the horizontal position.

4. Provide for traffic signal transitions from track clearance phases to limited service phases.

5. Respond to inputs from the railroad indicating the crossing has been cleared by releasing of the traffic signal controller from preemption special control mode.

6. Provide for traffic signal transitions from designated limited service phases to designated exit phases and normal operations of the traffic signal system.

7. Provide for failure detection of system elements.

909.13.D. Reserved for future use.

909.13.E. Traffic Signal System with Transit Priority. Use a system that meets at least the following.

1. Provide capability to detect transit vehicles requesting priority and to initiate the transit signal priority control mode of the traffic signal controller.

2. Provide conditional signal priority at intersections if they can effectively use the additional green time.

3. Provide several control techniques under conditional signal priority including the following:

a. Phase / green extension: desired phase green is lengthened by a programmable maximum time.

b. Phase early start or red truncation: desired phase green is started earlier.

c. Red interrupt or special phase: a short special green phase is injected into the cycle. The special phase will permit a queue jump and buses get a special advance.

d. Phase display that allows buses to get through the intersection smoothly and get back into a regular lane of travel easily.

e. Phase suppression / skipping: logic is provided so that fewer critical phases are skipped. This may be used with logic that assesses congestion on the approaches to the skipped phase.

f. Compensation: non-priority phases are given some additional time to make up for the time lost during priority. Other compensation techniques include limiting the number of consecutive cycles that priority is granted.

g. Window stretching: non-priority phases are given a core time, that must be serviced every cycle, and a variable timer, which could be taken away for priority purposes. Flexible window stretching differs in that the core time is not fixed in position relative to the cycle.

4. Provide for the traffic signal to hold the phases that serve the transit vehicle movement (typically the phase serving a through movement plus any protected left-turn phase in the same direction) and remains in these phases until the preemption input goes away or a maximum timer expires. If a transit stop is located in the priority provision zone and the transit doors are open, the priority request is terminated and reinitiated when the doors close.

5. Provide for detection of the transit vehicle when it clears the crossing and releasing of the traffic signal controller from priority special control mode.

6. Provide for traffic signal transitions from designated limited service phases to designated exit phases and normal operations of the traffic signal system.

7. Provide for failure detection of system elements.

909.13.F. Adaptive Traffic Signal Control System. Use a system that meets at least the following.

1. Provide capability to monitor proper operation of traffic signals in real time.

2. Provide cycle length, phase split and offset monitoring for traffic signals.

3. Provide for editable parameters to constrain the implementation of adaptive system signal timing, which include minimum green time, cycle, split, offset, yellow change interval time, red clearance interval time, max pedestrian phase, passage time (gap out) and max out times, and max green times.

4. Responsive to traffic actuations.

5. Provide the capability to check signal timings remotely.
6. Provide the capability to download new timing plans without field visits.
7. Provide the capability to record of failures for maintenance or legal purposes.
8. Provide detector surveillance/tabulation for database development for timing plan changes.
9. Provide capability for traffic adjusted operation because of variability in timing plan selection periods responsive to day-to-day or seasonal volume variations.
10. Capable of analyzing detector data to determine the need for new timing plans.
11. Capable of analyzing detector data to determine an alternate route for diversion.
12. Provide the capability for detector data for planning data.
13. Provide the capability to respond to short term traffic flow irregularities.
14. Require minimal timing plan development support after initial setup.
15. Provide the capability to respond to traffic condition changes, including, at a minimum, special events, street construction, incidents, double parking, and diversion of traffic from a freeway or other arterial.
16. Provide the prevention of a “Yellow Trap” situation.
17. Provide for failure detection of system elements.

909.13.G. ATC Controller. Use an ATC controller that conforms to all requirements of the most up to date Joint Standard of AASHTO, ITE, and NEMA’s ATC.

1. The Department will update and list the version number of the approved ATC Controller on the [Traffic Authorized Products \(TAP\)](#). Provide ATC controllers listed on the TAP and in accordance with Supplemental Specification 1111.

909.14 ITS Communication Conduit and Accessories

These conduits are used for various purposes and are available in many different sizes and configurations.

Conduit spacers shall be PVC or HDPE.

909.14.A. Multiple Cell Conduit and Fittings

Ensure that fittings are factory made couplings that couple inner ducts and the outer conduit simultaneously, maintain the continuity and indexing of the inner ducts and are of a push fit design mechanically locked in place.

1. Reserved for future use.

2. High Density Polyethylene. The outer duct and inner micro-ducts shall conform to ASTM F2160. Outer ducts shall be SDR 11 or better. Ensure that the multiple cell conduit consists of an outer duct with smooth exterior and internal longitudinal ribbing and coextruded permanent friction reducing layer. Ensure inner micro-ducts have a smooth exterior and internal longitudinal ribbing with coextruded permanent friction reducing layer. 4" multicell conduit shall be factory preassembled units.

909.14.B. Micro-Duct Pathways

Furnish a micro-duct pathway for the purpose of installing air-blown/ pushable fiber optic cable.

Ensure all components of the pathway are constructed of clean virgin high density polyethylene (HDPE) conforming to ASTM D3350-98a, Type III, Category 5, Class B or C and Grade P-34 per ASTM D1248-84 or equivalent.

The pathways may consist of multiple micro-ducts within a single jacketed duct.

Ensure all micro-duct oversheathing is orange in color and includes a locate wire.

Ensure the locate wire is installed in the pathway. It is not permitted to be located within a micro-duct.

Ensure all micro-ducts and oversheathing are flexible, lightweight, durable, corrosion resistant, non-conductive and easy to install. Use micro-ducts and oversheath constructed of polymeric materials. Ensure all micro-ducts are smooth on the outside, micro-ribbed on the inside, and have a co-extruded permanent lubrication layer. Ensure all oversheathing is smooth.

Provide a silicone lubricated co-extruded permanent layer of uniform thickness, containing active or polymeric materials that provide a permanent low friction boundary layer between the micro-duct and cable for a minimum service life of 15 years for the micro-duct. Ensure all micro-duct included in the pathway is equipped with silicone super slick permanent liner.

Ensure all micro-duct and oversheath is free from holes, blisters, inclusions, cracks, or other imperfections, that would affect the performance or serviceability

Ensure the micro-duct and oversheath is homogenous throughout and free from dimensional non-conformities as much as possible within the manufacturing process.

Ensure Micro-Duct conform to Table 904.14-1.

Table 909.14-1

Micro-Duct Size	14/10	22/16
Nominal Outside Diameter	14mm	22mm
Nominal Inside Diameter	10mm	16mm

Minimum Inside Diameter	9.8mm	15.4mm
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Ensure the micro-duct pathway contains micro-ducts dissimilar in color and is provided in the following configurations:

A. 7-Cell Pathway. Use a pathway that consists of 7 micro-ducts in a single oversheathed pathway and is sized as follows:

1. 7 micro-ducts sized at 0.87 in (22 mm) OD and 0.63 in (16 mm) ID.
1. 7 micro-ducts sized at 0.55 in (14mm) OD and 0.39 in (10mm) ID.

B. 4-Cell Pathway. Use a pathway that consists of 4 micro-ducts in a single oversheathed pathway and is sized as follows:

1. 4 micro-ducts sized at 0.87 in (22 mm) OD and 0.63 in (16 mm) ID.
2. 4 micro-ducts sized at 0.55 in (14mm) OD and 0.39 in (10mm) ID.

C. 2-Cell Pathway. Use a pathway that consists of 2 micro-ducts in a single oversheathed pathway and is sized as follows:

1. 2 micro-ducts sized at 0.87 in (22 mm) OD and 0.63 in (16 mm) ID.
2. 2 micro-ducts sized at 0.55 in (14mm) OD and 0.39 in (10mm) ID.

D. 1-Cell Pathway. Use a pathway that consists of 1 micro-duct in a single oversheathed pathway and is sized as follows:

1. 1 micro-ducts sized at 0.87 in (22 mm) OD and 0.63 in (16 mm) ID.
2. 1 micro-ducts sized at 0.55 in (14mm) OD and 0.39 in (10mm) ID.

2. Micro-Duct Hybrid Pathway

Furnish a hybrid micro-duct/ traditional duct pathway. The pathway shall consist of three-14/10 Micro-Ducts and three-1.25 in SDR 11 traditional ducts. The overall diameter of the pathway shall be less than 4 in.

Ensure all components of the pathway are constructed of clean virgin high density polyethylene (HDPE) conforming to ASTM D3350-98a, Type III, Category 5, Class B or C and Grade P-34 per ASTM D1248-84 or equivalent.

Ensure all duct oversheathing is orange in color and includes a locate wire.

Ensure the locate wire is installed in the pathway. It is not permitted to be located within a duct.

Ensure all ducts and oversheathing are flexible, lightweight, durable, corrosion resistant, non-conductive and easy to install. Use ducts and oversheath constructed of polymeric materials. Ensure all micro-ducts are smooth on the outside, micro-ribbed on the inside, and have a co-

extruded permanent lubrication layer. Ensure all traditional ducts are smooth on the inside and outside and have a co-extruded permanent lubrication layer. Ensure all oversheathing is smooth.

Provide a silicone lubricated co-extruded permanent layer of uniform thickness, containing active or polymeric materials that provide a permanent low friction boundary layer between the duct and cable for a minimum service life of 15 years for the duct. Ensure all duct included in the pathway is equipped with silicone super slick permanent liner.

Ensure all duct and oversheath is free from holes, blisters, inclusions, cracks, or other imperfections, that would affect the performance or serviceability

Ensure the duct and oversheath is homogenous throughout and free from dimensional non-conformities as much as possible within the manufacturing process.

Ensure Micro-Duct conform to Table 909.14-2.

Table 909.14-2

Micro-Duct Size	14/10
Nominal Outside Diameter	14mm
Nominal Inside Diameter	10mm
Minimum Inside Diameter	9.8mm

Ensure the micro-duct pathway contains micro-ducts dissimilar in color and traditional ducts dissimilar in color. Micro-ducts and traditional ducts may share the same color.

909.14.C. Micro-Duct Innerducts and Raceways.

1. Micro-Duct Innerducts. Furnish a micro-duct for the purpose of installing air-blown/ pushable fiber optic cable. The Micro-Duct Innerducts will be installed in an existing conduit raceway.

Ensure all components of the pathway are constructed of clean virgin high density polyethylene (HDPE) conforming to ASTM D3350-98a, Type III, Category 5, Class B or C and Grade P-34 per ASTM D1248-84 or equivalent.

Provide micro-duct constructed of polymeric materials. Ensure micro-duct is smooth on the outside, micro-ribbed on the inside, and have a co-extruded permanent lubrication layer.

Provide a silicone lubricated co-extruded permanent layer of uniform thickness, containing active or polymeric materials that provide a permanent low friction boundary layer between the micro-duct and cable for a minimum service life of 15 years for the micro-duct. Ensure all micro-duct included in the pathway is equipped with silicone super slick permanent liner.

Ensure all micro-duct is free from holes, blisters, inclusions, cracks, or other imperfections, that would affect the performance or serviceability

Ensure Micro-Duct conform to Table 909.14-3

Table 909.14-3

Micro-Duct Size	10/8	14/10	22/16
Nominal Outside Diameter	10mm	14mm	22mm
Nominal Inside Diameter	8mm	10mm	16mm
Minimum Inside Diameter	8.1mm	9.8mm	15.4mm

2. Conduit Raceway. Furnish an empty conduit raceway for the purpose of installing Micro-Duct Innerducts.

The raceway shall conform to ASTM F2160 and be SDR 11 or better. Ensure the conduit has internal longitudinal ribbing and a coextruded permanent friction reducing layer.

Ensure conduit is orange in color.

909.14.D Communication Cable Markers. Provide one of two types:

Type 1 – COTTMark 511, Frick FlexPost, or Carsonite Curv-Flex marker.

Type 2 – Cott Big Fink, Frick TestPost, or RhinoDome Test Station.

Provide markers that are orange in color and with the following information located on the upper portion of the marker in a readable format:

WARNING
CONTACT OUPS 48 HRS BEFORE DIGGING
“NAME OF OWNING AGENCY” COMMUNICATION/FIBER OPTIC CABLE
“OWNING AGENCY CONTACT #”

909.14.E Tracer Wire. Provide tracer wire no smaller than #20 AWG wire when integrated into conduit or micro-ducts or no smaller than #12 AWG wire if attaching to the top conduit or any conduit that is installed at depths greater than 5 ft (1.52 m). Provide wire that is HDPE insulated, orange in color, and constructed of copper clad steel, such as Pro-Trace HF-CCS, Priority Wire & Cable 12SOLTW-CCS-SF-30, or approved equal.

Use the following connectors, or approved equal, to splice tracer wire (do not use wire nuts):

SnakeBite Locking Connectors.
Pro-Trace TW Connector.

Use $\frac{3}{4}$ in conduit conforming to C&MS 725.052 when running tracer wire from pull box to communication cable marker.

909.15 ITS Pull Boxes and Junction Boxes.

909.15.A Pull Boxes. Ensure that the Portland concrete pull box is constructed of reinforced portland cement concrete. When the box is precast, provide pull boxes from suppliers certified to Supplement 1073. Ensure that the pull box cover is constructed according to 909.15.B and as shown on the plans.

909.15.B Pull Box Covers. Furnish metal pull box covers that conform to the following requirements:

1. Furnish 1/2-inch thick steel plate for the steel cover conforming to 711.01 with a 1/2-inch minimum flange around the edge and galvanized to conform to 711.02. The lid shall not be concave so as to hold water. Display on the steel cover clearly legible block letters 2 – 3 inches in height with the word “TRAFFIC” to designate the circuit(s) contained. Ensure that the word designating the use is in raised letters that are integral to the steel cover.
2. Furnish gray iron with a minimum thickness of 3/8 inch conforming to 711.12. The lid shall not be concave so as to hold water. Certification is required. Ensure that the word “TRAFFIC” is cast in the top surface of the cover forming letters 2 – 3 inches in height.
3. Furnish ductile iron with a minimum thickness of 3/8 inch conforming to 711.13. The lid shall not be concave so as to hold water. Certification is required. Ensure that the word “TRAFFIC” is cast in the top surface of the cover forming letters 2 – 3 inches in height.
4. Hinged pull box covers shall include all the requirements of 909.15.B. Hinged pull box covers shall open to at least 90 degrees and include a mechanism to hold the lid open. The cover shall also be removable.

909.15.C. Junction Boxes. Ensure that the polymer concrete pull box and cover is of aggregate bound with a polymer resin. Ensure that the body of the box is of one-piece construction. Ensure that all surfaces of the box and cover are smooth and that the cover has a molded slip resistant surface. Ensure that the cover is slip resistant and is labeled in clearly legible block letters 2 inches in height integral to the cover with the word “TRAFFIC” to designate the circuit(s) contained. Ensure that the cover closely fits the opening and is secured by stainless steel bolts (hex head unless penta head is specified in the plans) and hardware and that the threaded holes into which the cover bolts fasten are of open bottom design. The load rating of the box shall be permanently denoted on the top surface of the cover. The temperature range of the cover shall be at least -30°C to +80°C. The pull box cover shall be polymer concrete.

909.16 Electrical Equipment.

909.16.A. Step-Down Transformer. The transformer shall be sealed, epoxy-encapsulated, dry type, general purpose outdoor, 185°C insulation, with 304 stainless steel enclosure (NEMA 3R minimum). The transformer and related wiring shall be UL listed for indoor-outdoor applications and shall meet applicable NEMA and IEEE standards.

909.16.B. Disconnect. Provide a NEMA 4X, stainless steel, fused safety switch with door interlock and quick-make/quick-break switch operation.

The enclosure shall have provisions to use a padlock to lock the switch handle in the ON and OFF positions as well as the door. Two padlocks shall be provided per disconnect. Padlocks shall be brass, equal to Wilson Bohannon 660A, and shall be keyed in accordance with CMS 631.06 or ODOT Type A.

909.16.C. Power Service. Furnish risers for power service that are 1 1/2-inch (38 mm) diameter conduit and fittings according to 725.04. Furnish weatherheads that are threaded and made of aluminum or galvanized ferrous metal. Include a disconnect switch with enclosure.

Ensure that each placard to be attached to an apparatus enclosure is of multiple layers of plastic thermally bonded together to provide a plate of at least 1/8 inch (3 mm) in thickness with engraved plain block letters at least 1/2 inch (12 mm) in height. Ensure that placards designating the function of the apparatus contained in an enclosure or other such information are of white letters on a black placard. Ensure that placards warning of high voltage possibly present in an enclosure or other such warning are of white letters on a red placard.

909.17 Variable Speed Limit Signs (VSLs). Furnish a monochromatic light emitting diode (LED) based Variable Limit-Speed Signs (VSL), with the following characteristics:

Viewing angle	30 degrees, both horizontal and vertical
Number of displayed digits	Two
Displayed size	18" high, numerical
Display element	Clusters of white LED forming pixels
Minimum Pixel Pitch	20mm
Full-Color LED	RGB
Display color	Black numbers on white background

The VSL must be designed to NEMA Standards Publication TS 4, Hardware Standards for VSLs.

The VSL housing must be designed, fabricated, welded, and inspected in accordance with the latest revisions of ANSI/AWS D1.2 Structural Welding Code-Aluminum.

High-voltage components and circuits (120 VAC and greater) must be designed, wired, and color-coded per the National Electric Code.

The VSL housing must be designed to comply with Type 3R enclosure criteria as described in the latest revision of NEMA Standards Publication 250, Enclosures for Electrical Equipment (1000 Volts Maximum).

The VSL and all associated equipment and enclosures must be listed by the Underwriters Laboratories (UL) and will bear the UL mark on the outside of the VSL enclosure.

All equipment must be designed in accordance with Federal Communications Commission (FCC) Part 15, Subpart B as a "Class A" digital device. The equipment must be compliant with all relevant OSHA requirements.

The LED display must be designed to comply with Performance Level 1 of UK Highways Agency standard TR-2136, Issue B2, Optical Performance Functional Specification for Discontinuous Variable Message Signs.

The sign housing must be designed and constructed to comply with all applicable sections of AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals, Fourth Draft, latest standards, as well as the fatigue resistance requirements of NCHRP Report 412, Fatigue-Resistant Design of Cantilevered Signal, Sign, and Light Supports.

VSL signs as an assembly shall operate in a minimum temperature range of –30 degrees to +165 degrees Fahrenheit and a relative humidity range of 0 to 99%, non-condensing. VSL and sign controller components shall not be damaged by storage at or temporary operational exposure to a temperature range of –40 degrees to +185 degrees Fahrenheit.

The sign controller hardware/firmware and control software must conform to the relevant portions of the following National Transportation Communication for ITS Protocol (NTCIP) standards: NTCIP 1201, NTCIP 1203, NTCIP 2101, NTCIP 2103.

VSL and sign controller components shall be 100% solid-state, except for the environmental control fan(s) and thermostat(s). All electrical components exceeding 24 VDC shall be UL listed and meet all local NEC codes applicable to VSL applications.

The presence of ambient radio signals and magnetic or electromagnetic interference shall not impair the performance of the VSL system. The VSL system shall not radiate electromagnetic signals that adversely affect any other electronic device, including those located in vehicles passing underneath or otherwise near the VSL.

The complete VSL structural design must be analyzed and certified by a Professional Engineer registered in the State of Ohio for compliance with the applicable requirements of AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals, with the fatigue resistance requirements of NCHRP Report 412, Fatigue-Resistant Design of Cantilevered Signal, Sign, and Light Supports. The Professional Engineer shall also verify that no problem with dissimilar metals will exist and/or affect the structural integrity of the VSL-to-bracket attachment points.

The manufacturer of the VSL shall submit a signed and sealed copy of the certification of the Professional Engineer involved, and all supporting calculations.

The VSL housing shall provide front service access for all LED display modules, electronics, environmental control equipment, air filters, wiring, and other internal components.

The VSL shall contain a full display matrix measuring a minimum of 32 pixel rows high by 48 pixel columns wide. The matrix shall display digits that are continuous, uniform, and unbroken in appearance to motorists and travelers.

The pixel pitch shall be 20 mm, both vertically and horizontally. The pixel matrix shall be capable of displaying alphanumeric 18" high characters. The VSL shall be able to display two-digit speed limits composed of any combination of numeric digits.

Each display pixel shall be comprised of multiple red, green, and blue LEDs that when turned on at the same time, cause the pixels to appear to be emitting white light. Other pixel technologies, such as fiber

optic, flip disk, combination flip disk-fiber optic, combination flip disk-LED, liquid crystal, LED lenses, and incandescent lamp, shall not be accepted.

The dimensions of the VSL housing containing all electronic components shall not exceed 60 inches high by 48 inches wide. The front-to-back housing depth shall not exceed 10 inches at its widest point. The dynamic display shall be a minimum of 26 inches by 35 inches.

The sign housing structural frame shall consist of formed aluminum sheet, minimum 0.090 in thick, made from alloy number 5052-H32. All sides of the VSL housing exterior, except the front, shall be covered with aluminum sheets, minimum 0.090 in thick, made from 5052-H32 aluminum alloy. This external aluminum skin shall be attached to the structural framework using a proven method of attachment, such as chemically bonding structural adhesive or welding.

External component hardware shall be fabricated from hot dipped or mechanically galvanized steel, stainless steel, aluminum, nylon or other durable corrosion-resistant materials suitable for the roadway signage application.

A static white speed limit sign panel with black "SPEED LIMIT" lettering printed on it at appropriate positions shall be mounted to the front of the VSL housing. The static panel shall be MUTCD-compliant. It shall have a cut-out area that matches the size of the active area of the LED display matrix. It shall be constructed of aluminum alloy 5052-H32 sheet, minimum 0.090 in thick.

909.17.A Power Requirements.

The VSL shall operate from a 120 VAC, 60Hz single-phase power source, including neutral and earth ground.

The VSL shall not require more than 200 watts power, when the following circuits are operational and fully loaded:

- LED display pixel matrix, with 100% of the pixels operating at their maximum possible drive current.
- VSL environmental cooling system.
- Sign controller.

Typical AC operating power shall not exceed 150 watts with the following circuit loadings:

- LED display pixel matrix, with 70% of the pixels operating at their maximum possible drive current.
- Sign controller.

909.17.B LED Requirements.

The VSL front face shall be constructed of multiple LED display modules, each of which shall support and protect an array of LED pixels that form a standard display module produced as standard part by the sign manufacturer. The LED display modules shall be placed adjacently in a two-dimensional matrix to form the face of the VSL.

All LED display modules and internal components shall be removable and replaceable by a single technician through the front face of the VSL.

Seams that separate adjacent LED display modules shall be sealed. LED display modules shall not be welded to the VSL housing.

In the presence of wind, rain, and snow commonly experienced in the related deployment sites, the VSL front face shall not distort in a manner that adversely affects LED message legibility.

The LED pixels in the module shall be protected by a silicone elastomer that surrounds the pixels and seals the front face of the module to prevent water penetration and corrosion.

Electrical connections from the LED display module shall use a quick-disconnect locking connector. Removal of an LED display module from the VSL shall not require a soldering operation.

All LED display modules, as well as the LED pixel boards and driver circuit boards, shall be identical and interchangeable throughout the VSL.

Removal of one or more modules shall not affect VSL structural integrity or the structural integrity of the rest of the LED display matrix.

1. Pixel Boards. Each LED pixel board shall be composed of a printed circuit board to which LED pixels are soldered. The LED pixel boards shall conform to the following specifications:

- LED pixel boards shall be manufactured using a laminated fiberglass printed circuit board.
- Each LED pixel circuit board shall contain a minimum of 64 LED pixels configured in a two-dimensional array. The pixel array shall be a minimum of eight pixels high by eight pixels wide.
- The pixel pitch shall be 20 mm, both vertically and horizontally.
- Each pixel shall consist of a minimum of one independent string of discrete LEDs for each color. All pixels shall contain an equal quantity of LED strings.
- The failure of an LED string or pixel shall not cause the failure of any other LED string or pixel in the VSL.
- Each pixel shall contain the quantity of discrete LEDs needed to output white colored light at a minimum luminous intensity of 12,400 candelas per square meter when measured using a photometric meter.
- The circular base of the discrete LEDs shall be soldered so that they are parallel to the surface of the printed circuit board. The longitudinal axis of the LEDs shall be perpendicular to the circuit board.
- All exposed metal on both sides of the LED pixel board, except connector contacts, shall be protected from water and humidity exposure by a thorough application of conformal coating. Bench level repair of individual pixels, including discrete LED replacement and conformal coating repair, shall be possible.
- All LED pixel boards shall be identical and interchangeable throughout the VSL.
- Constant current LED driver ICs shall be used to prevent LED forward current from exceeding the forward current recommended by the LED manufacturer whenever a forward voltage is applied. To maximize LED service life, LED drive currents will not be allowed that exceed the manufacturer's recommendations for the 100,000-hour lifetime requirement.
- The LED pixels shall be directly driven using pulse width modulation (PWM) of the drive current to control the display intensity. This LED driver circuitry shall vary the current pulse width to achieve the proper display intensity levels for all ambient light conditions. The drive current pulse shall be modulated at a frequency high enough to provide flicker-free operation and a minimum of 200 brightness levels.
- The LED driver boards shall receive updated display data at a minimum rate of ten frames per second from the sign controller.
- The LED driver circuitry shall be able to detect that individual LED strings or pixels are stuck off and shall report the pixel status to the sign controller upon request.

2. Discrete LEDs

VSL pixels shall be constructed with discrete LEDs manufactured by Avago Technologies (formerly Agilent Technologies), Toshiba Corporation, Nichia Corporation, or equivalent. Discrete LEDs shall conform to the following specifications:

- All LEDs shall have a nominal viewing cone of 30 degrees with a half-power angle of 15 degrees measured from the longitudinal axis of the LED. Viewing cone tolerances shall be as specified in the LED manufacturer's product specifications and shall not exceed +/- 5 degrees. The use of optical enhancing lenses to help reaching this requirement shall not be permitted.
- Red LEDs shall utilize AlInGaP semiconductor technology and shall emit red light that has a peak wavelength of 615-635nm.
- Green LEDs shall utilize InGaP semiconductor technology and shall emit green light that has a peak wavelength of 520-535nm.
- Blue LEDs shall utilize InGaP semiconductor technology and shall emit blue light that has a peak wavelength of 464-470nm.
- The LED packages shall be fabricated from UV light resistant epoxy.
- The LED manufacturer shall perform color sorting of the bins. Each color of LEDs shall be obtained from no more than two consecutive color "bins" as defined by the LED manufacturer.
- The LED manufacturer shall perform intensity sorting of the bins. Each color of LEDs shall be obtained from no more than two consecutive luminous intensity "bins" as defined by the LED manufacturer.
- The various LED color and intensity bins shall be distributed evenly throughout the sign and shall be consistent from pixel to pixel. Random distribution of the LED bins shall not be accepted.
- The LED package styles shall be through-hole with standoffs. Surface-mount LEDs or LEDs without standoffs will not be accepted.
- The LED manufacturer shall assure color uniformity and consistency on the LED display face within the 30-degree cone of vision.
- All LEDs used in all VSL provided for this contract shall be from the same manufacturer and of the same part number, except for the variations in the part number due to the LED color, intensity and color bin specifications.

909.17.C Environmental Control Requirements.

The VSL shall be equipped with a sensor, mounted on the VSL housing front wall, that measures the outdoor ambient light level. The sign controller shall continuously monitor the output of the light sensor and adjust the LED display matrix intensity to a level that creates a legible message on the sign face.

The VSL shall be equipped with a temperature sensor that is mounted near the top of the sign interior. The sensor shall measure the air temperature in the housing over a minimum range of -30 to +165 degrees Fahrenheit. The sign controller shall continuously monitor the output of the sensor and report the measurements to the control software upon request.

The VSL shall contain a thermostatically controlled ventilation system designed to keep the internal air temperature lower than +140 degrees Fahrenheit.

The exhaust fan shall be the ball-bearing type and shall be mounted to the rear sign housing wall.

One filtered air intake port shall be provided. The intake port shall be covered with a filter that removes airborne particles measuring 500 microns in diameter and larger. Fans and air filters shall be removable and replaceable from the front of the sign housing.

A thermostat used to activate the ventilation system shall be located near the top of the sign interior.

909.17.D Controller Requirements.

The sign controller shall meet the following operational requirements:

- Communicate using embedded NTCIP protocol
- Contain non-volatile electronically changeable memory chip for storing changeable messages, schedules, event logs and other necessary files for controller operation
- Contain a minimum one RS232 communication port, supporting serial baud rates ranging from 1,200 to 38,400 baud.
- Contain a minimum one RS422 communication port
- Contain a minimum one compliant 10/100Base-T Ethernet communication port
- Contain VSL-specific control firmware that monitors all external and internal sensors and communication inputs and control the display modules as directed by external control software

All printed circuit boards shall be sealed with an acrylic conformal coating.

The changeable memory shall retain the data for a minimum of 30 days following a power loss. This memory shall be used to store messages, schedules, and event logs.

The sign controller shall contain a computer-readable clock that has a battery backup circuit. The battery shall keep the clock operating properly for at least 3 years without external power, and the clock shall automatically adjust for daylight savings time and leap year using hardware, software, or a combination of both. The clock shall be set electronically by the sign controller microprocessor and shall be accurate to within one minute per month.

All communication ports shall be NTCIP-compatible as defined in the "Requirements for NTCIP Compatibility" section of these specifications.

The VSL sign controller shall be able to receive instructions from and provide information to a computer containing VSL control software using the following communication modes:

- Remotely via direct or dial-up communications with a remotely located computer.
- Locally via direct connection with a laptop computer that is connected directly to the sign controller.

The VSL sign controller shall use the addressing scheme appropriate for the NTCIP network types used for communications. NTCIP 2101 (PMPP) networks shall be configured with an address in the range 1 to 255 with a default address of 1. NTCIP 2104 (Ethernet) networks shall use a static IP address. Both the IP address and subnet shall be configurable. NTCIP 2103 (PPP) networks shall not require network addressing.

The sign controller shall control the LED drivers in a manner that causes the desired speed limit to display on the VSL sign. At a minimum, the sign controller shall support the following features as described in the VSL specification:

- Display of numeric characters that mimic the FHWA Series E typeface

- The speed limit shall be center justified both horizontally and vertically

All digits displayed on the VSL shall be presented statically. No flashing or scrolling shall be allowed. No more than one page shall be allowed in any speed limit message.

Speed limit messages shall be activated on a VSL in three ways:

- Manual: An operator using NTCIP-compatible control software manually instructing a speed-limit message to be activated.
- Schedule: The internal time-based scheduler in the VSL may be configured to activate messages at programmable times and dates. Prior to activation, these messages and their activation times and dates shall be configured using the control software.
- Events: Certain events, like a power loss, may trigger the activation of pre-configured messages when they occur. These events must be configured using the control software.

A displayed message shall remain on the sign until one of the following occurs:

- The message's duration timeout expires
- The controller receives a command to change the message
- The controller receives a command to blank the sign
- The schedule stored in the controller's memory indicates that it is time to activate a different message.
- A special event, such as a loss of communication, occurs that is linked to message activation

It shall be possible to confer a "priority" status onto any message, and a command to display a priority message shall cause any non-priority message to be overridden.

The VSL sign controller shall support the activation of messages based on a time/date-based schedule. The format and operation of the message scheduler shall be per the NTCIP 1201 and NTCIP 1203 standards.

The VSL controller shall provide means to change the brightness of the display matrix manually or automatically. The manual control will allow the user to select one of at least 100 intensity levels, which will be communicated to the LED drivers in the VSL. The brightness shall remain at that level until the user changes the level or sets the controller to automatic mode.

The automatic intensity control mode will monitor the ambient light sensor of the VSL and will automatically select one of the 100 or more intensity levels. The intensity level will then be transmitted to the LED drivers in the VSL.

The intensity control mode, manual or automatic, shall be settable and monitored via NTCIP using the control software.

The VSL controller shall be capable of monitoring the status of many of the VSL components and subsystems in real-time and/or manual modes, depending on the component or system:

- Upon command via NTCIP from remote control software, the sign controller shall direct all LED modules to perform diagnostic tests of all their pixels. The controller shall then collect and report the results of the pixel testing.
- The VSL controller shall monitor the readings of all light and temperature sensors installed in the VSL housing.

909.17.E Testing Requirements.

The manufacturer shall provide documentation indicating that the VSL product has been tested to the following standards. NTCIP 1201, NTCIP 1203, NTCIP 2101, NTCIP 2103.

The NTCIP testing must have been completed using industry accepted test tools such as the NTCIP Exerciser, Trevilon's NTester, Intelligent Devices' Device Tester, and/or Frontline's FTS for NTCIP. The NTCIP test report(s) shall include testing of sub-network communications functionality, all mandatory objects in all mandatory conformance groups, and a subset of the remaining objects.

The VSL vendor shall prepare and submit test procedures and test data forms for ODOT Office of Traffic Operations approval at least 30 working days before the scheduled testing as required. Test procedures shall be developed specifically in response to these specifications. Do not submit test procedures developed in response to other procurement documents, specifications or for other customers and projects. The Department will review submitted test procedures. At a minimum, the test procedures and data forms shall include the following:

A step-by-step outline of the test sequence to be followed, showing a test of every function of the equipment or system to be tested. For each test, clearly identify in the test procedure the specific function or requirement being addressed.

A description of the expected operation, output and test results. An estimate of the test duration and a proposed test schedule. A data form to be used to record all data and quantitative results obtained during the test. A description of any special equipment, setup, manpower, or conditions required for the test.

As part of the testing requirements, except as otherwise noted, the VSL vendor shall be responsible for furnishing all test facilities, including software, required to complete the required testing. The DMS vendor shall provide documentation and user instructions for use of any required test equipment and test software unless otherwise directed by the Department.

**STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION 921
ARROW BOARDS**

July 19, 2024

921.01 Description. This Supplemental Specification sets forth the requirements for Arrow Boards.

921.02 Materials. The Arrow Board shall consist of the following components: flasher panel, lamps, controls, power supply and mounting.

Furnish materials according to the Department's Approved List.

A. Flasher Panel. The flasher panel shall be of corrosion resistant metal construction of adequate design and strength. The panel shall be finished flat black. The panel type shall be one of the three below.

Table 921.02.A-1 Arrow Board Panel Types

Panel Type	Minimum Size	Minimum Number of Elements
A	48 x 24 in (1200 x 600 mm)	12
B	60 x 30 in (1500 x 750 mm)	13
C	96 x 48 in (2400 x 1200 mm)	15

The Arrow Board shall be designed for operation in 100% humidity and temperatures from -20°F to +130°F (-29°C to +54°C).

B. Lamps. The lamps shall be LED. The lamp shall be fitted with a 360° hood at least 5" (125 mm) long.

Color output of light shall be amber.

The lamps shall be securely mounted and positioned in the panel perpendicular to the panel face and oriented so that the lamp location lug (on the back of the lamp) is on the horizontal center line through the lens.

The lamps shall be wired in circuits that can be switched to display any one of the following messages: left arrow, right arrow, left and right, caution bar, and corner caution.

The following table shows the required photometric requirements for arrow boards. The luminance levels achieve the legibility requirements in the OMUTCD.

Table 921.02.B-1 Luminance Levels for Arrow Boards

	Speed	Minimum On-Axis	Minimum Off-Axis	Maximum On-Axis
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Time of Day	(mph)	candela/ lamp	candela*	candela/ lamp	candela*	candela*
Day	≥ 45	500	4000	100	800	N/A
Night	≥ 45	150	1200	30	240	5500

* Intensity requirements for the entire panel when displaying a left or right flashing arrow (10 lamps illuminated)

C. Controls. Each Arrow Board shall contain a flasher control and a dimmer control unit housed in a cabinet which can be locked.

- 1. Flasher Control.** The flash rate for the sign panel shall be 25 to 40 flashes per minute. The flasher shall not cause electromagnetic interference. The lamps shall have a minimum “on time” of 50% and a maximum of 66%.
- 2. Dimmer Control.** Lamp intensity shall be variable by means of a photoelectrically controlled circuit which shall reduce lamp output during low ambient light conditions. Lamp intensity shall be at the nighttime level whenever the ambient illumination is in or below the range of 2 foot-candle (21 lux) to 5 foot-candle (54 lux) and shall be at daytime level when ambient illumination is in or above the range of 5 foot-candle (54 lux) to 10 foot-candle (108 lux). If controls provide for continuous adjustment of lamp intensity with respect to ambient illumination, then lamp intensity shall increase linearly from nighttime intensity at 5 foot-candle (54 lux) to daytime intensity at 3250 foot-candle (35,000 lux). A time delay shall be built into the control to prevent false operation due to light flashes. The photoelectric control shall contain a switch which shall override the photoelectric control.

D. Power Supply. Battery and solar/battery units shall have a no-charge-life of not less than 30 days. No-charge-life is the number of consecutive days that the system can continue to function (double arrow mode, normal dimming during 12-hour night, full output during 12-hour day) starting with a full battery charge and with no additional charge provided by the solar cells.

E. Mounting. The Arrow Board may be trailer or vehicle mounted or mounted on a rigid supporting device, behind barrier wall, suitable for maintaining it in the designated position. Each of the mounting methods shall be suitably stable such as to prevent movement due to high winds or passage of large vehicles.

When a trailer is used, construction shall be such as to transport the Arrow Board and appurtenances adequately and legally as well as support them properly during operation. The trailer shall be equipped with devices which shall provide leveling and stability during operation.

Minimum Arrow Board mounting height shall be 7 feet (2.1 m) above the pavement surface (measured to the bottom of the panel), except on vehicle-mounted panels, which should be as high as practical.

921.03 Testing Procedure. Luminous intensity is the measure of the strength of a light source. It is expressed in candelas and is sometimes referred to as candlepower. Typically, the intensity of a source is derived from an illuminance measurement; however, at the distances involved in

arrow board assessment, the use of an illuminance meter is not practical. Instead, a luminance meter is used to estimate the source intensity of an arrow board. Utilizing the following formula, the measured panel luminance and area are converted to panel intensity:

$$I = L \times A \quad (4)$$

where: I = total intensity (candela)
L = measured luminance (candela/meter²)
A = area of the aperture at target distance (meter²)

The area of the luminance meter aperture is found using the following:

$$A = \tan\left(APsize \times \frac{D}{2}\right)^2 \times \pi \quad (5)$$

where: APsize = aperture size (radians)
D = distance between target and luminance meter (meter)

To determine a lamp intensity, the panel intensity calculated must be divided by the number of lamps that were illuminated during the test (e.g., 10 for a flashing left or right arrow display). This method assumes that each lamp contributes an equal amount of intensity to the panel reading. However, due to the variation among lamps and the position of the luminance meter with respect to each lamp, this is not necessarily true. Thus, a lamp intensity calculated using the flasher panel testing procedure will not be equal to the on-axis lamp intensity measured during the lamp testing procedure.

When the arrow board is measured during the day or in lit areas, a second luminance measurement must be taken. This second measurement is taken when the arrow board is “off” and represents the ambient light. This measurement is then subtracted from the “on” measurement to yield the panel luminance used to derive the panel intensity in Equation 4. The luminance meter used in the panel testing procedure shall include the following attributes:

- an aperture of 1 degree,
- a continuous reading function,
- a peak reading function,
- allow for mounting on a tripod, and
- a through-the-lens targeting system.

A. Flasher Panel Measurement Procedure

The procedure outlined in this section shall be followed to measure the daytime and nighttime luminance of a Type C arrow board and determine if the panel intensities meet the minimum daytime and nighttime requirements, respectively.

Luminance measurement of an arrow board should be performed at night to ensure a uniform dark background in the luminance meter aperture. In order to measure daytime intensities at night, a manual override of the automatic dimming function will be needed. The arrow board

may be measured during the day or in lighted areas. In these situations, measurements must be taken with the arrow board both “on” and “off” so that the peak luminance values can be adjusted for ambient light. These measurements should not be made on days with partly cloudy conditions as the ambient light changes too rapidly to obtain accurate measurements.

Step 1: Set Up of Arrow Board

Raise the arrow board into position and level it by adjusting the jack stands and stabilizer bars. Turn either a left or right flashing arrow display “on” and ensure all ten lamps (five in the head and five in the stem) are illuminated.

Step 2: Set Up of Luminance Meter

Attach the luminance meter to a tripod and set up the tripod so that the luminance meter is stationed 500 ft upstream of the arrow board. This distance must be measured in a precise manner in order to accurately calculate the luminous intensity. After the distance is verified, document the distance between the arrow board and luminance meter. To measure the panel luminance, the flasher panel must be centered in the aperture of the luminance meter so that the display is completely contained in the aperture. Thus, both the horizontal and vertical position of the meter must be established with respect to the panel. If it is not possible to capture the complete panel within the aperture, check each of the following:

- measuring a Type C arrow board,
- using a one-degree aperture, and
- the distance between the luminance meter and arrow board is 500 ft.

For on-axis measurements, the horizontal position of the luminance meter should be located using a surveying instrument to establish a straight line parallel to the arrow board and a perpendicular crossing line. The flasher panel should be oriented so that the face of the panel is centered on the straight line and directly over the crossing line. For tests of off-axis performance, the crossing line should be set at the desired angle and the face of the panel set directly over the crossing line. A sight tube or other device as provided on the arrow board can be used as an aid to initial aiming efforts, but the use of surveying instruments is recommended to ensure that the luminance meter is in the correct position to record the photometric measurements.

To position the luminance meter vertically, the distance between the road surface and the center of the meter aperture shall be equal to the distance between the road surface and the center of the flasher panel lamps that form the stem in flashing arrow displays. The terrain between the arrow board and luminance meter should be relatively flat.

Step 3: Measuring the Luminance of the Flasher Panel

Turn the luminance meter on and check to ensure that the following settings (if available) are selected:

- measuring luminance without color correction,
- units are in candela/meter²,
- preset calibration,
- absolute measuring mode, and

- peak intensity function (cannot use a continuous measuring method with a flashing device).

Measure the luminance of the flashing display continuously for one minute and record the peak luminance reading. This procedure shall be repeated a minimum of three times.

If the measurements are being collected during the day or in a lighted area, a peak “off” measurement (panel display is not illuminated) shall be taken immediately after each peak “on” measurement (panel display is illuminated) in order to minimize the effects of the sun or movement of clouds on the measurements. However, it is best to eliminate the effects of clouds by taking measurements on an overcast day. In any event, the “off” measurement represents the ambient light of the area, and is subtracted from the “on” measurement to yield the panel luminance.

Step 4: Calculate the Luminous Intensity of the Flasher Panel

Calculate the average peak luminance value and area of the luminance meter aperture using Equation 5. Calculate the peak intensity using Equation 4.

Step 5: Determine if the Flasher Panel Meets the Intensity Requirements

Determine if the calculated peak luminous intensity meets the minimum on- and off-axis requirements, as well as the maximum nighttime requirement.

B. Lamp Testing Procedures

In this test, an individual lamp element complete with hood is tested in a photometric laboratory. A table of intensity values is measured with the hood mounted on the lamp with no tilt. Measurements of lamp intensity are made from $\pm 10^\circ$ vertical to $\pm 25^\circ$ horizontal in one-degree increments.

The performance of the lamp is dependent on the voltage at which it is tested. This voltage should be based on the performance of the arrow board in the field. Measurements shall be made at the daytime and nighttime settings of the arrow board. Covering the photocell of the arrow board should provide a nighttime voltage level if other provisions have not been made by the manufacturer. The measurements are made in a photometric laboratory using a goniometer utilizing Type B geometry in the *Lighting Handbook, Reference and Application*. In this system the light source turns about a fixed vertical axis and also about a horizontal axis following the movement of the vertical axis. All measurements are made with the lamps powered at the specified voltage and with hoods mounted on the lamps. Hoods reduce the luminous intensity of these lamps as the observer moves off-axis with the lamp.

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ITEM 633 - UNINTERRUPTIBLE POWER SUPPLY (UPS), AS PER PLAN

1. GENERAL

Provide and install an Uninterruptible Power Supply (UPS) system in each Intelligent Transportation System (ITS) cabinet as shown on the plans and as specified herein. The UPS shall provide continuous, regulated AC power to all critical ITS equipment in the event of utility power loss or disturbance.

2. FUNCTIONAL REQUIREMENTS

UPS Type: Double-conversion, online UPS, 19" rack-mountable, minimum 2,000 VA / W output,
Power Factor: ≥ 0.7
Input/Output: 120 VAC, single-phase, 60 Hz, 2-wire plus ground
Output Waveform: Pure sine wave, voltage regulation $\pm 2-3\%$ (battery or utility mode)
Frequency Regulation: ± 3 Hz (utility), ± 0.1 Hz (battery)
Transfer Time: < 5 ms
Efficiency: $\geq 98\%$ at full resistive load
Output Voltage THD: $< 3\%$
Load Crest Factor: 3:1 (load dependent)
Output Power Connections: Terminal Block and one dual 5-15R receptacle
Maintenance Bypass: Internal or external bypass/transfer switch for battery maintenance/replacement, capable of isolating UPS from AC input and load output

3. BATTERY SYSTEM

Type: External, valve-regulated, sealed lead-acid (VRLA) AGM or gel batteries, compatible with UPS and approved by manufacturer
Capacity: Sufficient to provide a minimum of one (1) hour of runtime at full load
Life: Minimum 5 years
Mounting: Batteries must be mounted within the ITS cabinet or on a dedicated shelf
Connections: Heavy gauge cable harness with high current DC connectors; daisy-chainable for additional capacity
Certifications: UL Listed, UL94-V0

4. ENVIRONMENTAL AND PHYSICAL

Operating Temperature: -32°F to $+140^{\circ}\text{F}$
Humidity: 5% to 95% non-condensing
Enclosure: NEMA 1 or as required for cabinet environment
Size: Shall fit within standard 19" rack, maximum 3U height for UPS, 4U for bypass switch
Weight: ≤ 40 lbs for UPS (excluding batteries)

5. MONITORING AND COMMUNICATIONS

Display: Backlit LCD for status, metering, and configuration
Remote Monitoring: SNMP, TCP/IP, HTTP, SMTP, NTCIP, SSH, and other standard protocols for integration with ITS network management systems
Alarms: Audible and visual alarms for power failure, battery status, overload, and fan failure
Interface: RJ-45 Ethernet port for remote monitoring and configuration

6. CERTIFICATIONS

- UL 1778 (UPS Systems)
- UL 60950-1 (Information Technology Equipment)
- FCC Part 15, Class A
- CSA 107.3
- EN 62040-1-2

7. FEATURES

- Automatic voltage regulation (AVR)
- Circuit breaker protection (input and battery)
- Variable speed fan with failure alarm
- Remote monitoring and control via PC or network
- Maintenance bypass switch (same manufacturer as UPS)
- Heavy-duty battery harnesses with Anderson-type connectors

8. SUBMITTALS

- Provide catalog cuts, technical data sheets, and manufacturer certifications for all UPS and battery components

9. INSTALLATION

- Install UPS and batteries per manufacturer's instructions and standard details
- All wiring shall be neat, labeled, and comply with NEC standards
- Provide all necessary mounting hardware, cables, and connectors

10. TESTING AND ACCEPTANCE

- Demonstrate proper operation of UPS under utility and battery power
- Demonstrate remote monitoring and alarm functions
- Provide documentation and training to Turnpike personnel as required

11. PAYMENT

Payment will be made at the contract unit price for "ITEM 633 - UNINTERRUPTIBLE POWER SUPPLY (UPS), AS PER PLAN" which price shall be full compensation for furnishing and installing the complete UPS system, including the UPS unit, batteries, maintenance bypass switch, all mounting hardware, cables, connectors, labeling, remote monitoring interface, configuration, testing, documentation, and training. No separate payment will be made for batteries, bypass switch, harnesses, or remote monitoring features; these are incidental to this item.

ITEM 809 - ITS DEVICE, MISC.: SOLAR POWER SYSTEM**1. GENERAL**

Furnish and install a complete off-grid Solar Power System to supply power to an Intelligent Transportation System (ITS) site, including photovoltaic (PV) array, top-of-pole mounting structure, charge controller (MPPT), valve-regulated sealed battery bank, system equipment enclosure(s), surge protection, overcurrent protection, wiring harnesses, labeling, grounding/bonding, and a 120 VAC pure-sine inverter as manufactured by Solar Electric Supply Inc. MAPPS and Offgrid Power Solutions, LLC or approved equal. Provide all accessories necessary for a fully functional system in accordance with the Contract Documents and manufacturer recommendations.

The system shall be nominal 48 VDC with a PV array rating of approximately 3.24 kWp and a battery bank rated not less than 1,075 Ah at the 100-hour rate. Configure for reliable year-round operation at the project location, including low-temperature charging protections, data logging, and remote communications for monitoring and maintenance.

2. MATERIALS

A. Photovoltaic (PV) Modules: Provide eight (8) mono PERC half-cell PV modules, Jinko Solar model JKM405M-72HL-V (or equal), 405 W each, 144 half-cells, UL listed. Modules shall include 3.2 mm AR-coated tempered front glass, anodized aluminum frame, IP67 junction box, 12 AWG output leads, and meet UL 1703/61730. Provide positive power tolerance (0 to +3%).

B. Mounting Structure: Provide a top-of-pole mounting structure for eight (8) modules, DPW/Power-Fab TPR8 (or equal), adjustable tilt 15° to 65° in 10° increments, designed for wind per project requirements (minimum 90 mph Exposure per manufacturer standard). Mounts shall use welded steel strongbacks and sleeves with corrosion-resistant coating and 6000-series aluminum module rails. The nominal 8-inch pole is furnished and installed by the contractor unless noted otherwise.

C. System Equipment Enclosure: Provide SR-BB8-AVR95IL-17-2X4-IN-ECOMP4X (or equal), with NEMA 3R insulated battery compartment and NEMA 4X control compartment, white powder-coated aluminum, sized to house eight (8) AVR95-17IL battery modules and the charge controller. Provide factory-mounted PV/battery/load breakers, internal wiring, surge protective device(s), and engraved schematics. Minimum enclosure dimensions: approximately 32.75 in D × 68 in W × 43.75 in H.

D. Charge Controller (MPPT): Morningstar GenStar GS-MPPT-100M-200V (or equal), 100 A battery charge current, 12/24/48 VDC nominal, max PV input 200 V, built-in 30 A load output with LVD, Ethernet port supporting ModbusIP/HTTP/SNMP, RS-232/EIA-485, USB-C, and SD-card data logging. Provide remote temperature sensor and battery sense leads. Peak efficiency ≥ 99%. Include provisions for lithium compatibility and cold-weather foldback protections.

E. Battery Bank: Provide eight (8) East Penn / DEKA Unigy II sealed AGM VRLA modules, model 3AVR95-17IL (or equal), 6 VDC each, configured for 48 VDC nominal. Minimum capacity 1,075 Ah at 100-hour rate (51.6 kWh nominal energy). Provide interlocking front-access design with epoxy-coated modules, acid-resistant, and seismic anchorage compatible base. Include all interconnects, hardware, and protective shields.

F. Inverter: Samlex PST-1500-48 (or equal), 48 VDC to 120 VAC, 1500W continuous pure sine wave, THD < 3%, peak efficiency ~90%, GFCI duplex receptacle, hardwired output, temperature-controlled fan, wide DC input range (42.0–64.0 VDC), and built-in protections (OV/UV/OT/OL/short-circuit).

G. Surge Protective Devices (SPDs): Provide listed surge protection as follows:

- PV Array DC SPD, UL 1449 Type 1 or 2, MCOV and SCCR suited for array Voc and fault current; install at array combiner or controller input as detailed.
- Battery/Controller DC SPD suitable for 48 VDC systems.
- AC Output SPD, UL 1449 Type 2, 120 VAC single-phase.
- Bond SPD grounds to the enclosure/cabinet ground bus; provide #6 AWG Cu (min) bonding unless noted otherwise.

H. Balance of System: Provide PV array wiring harnesses, battery/control wiring harnesses, listed DC and AC breakers, touch-safe fuse holders (where used), compression lugs, labels/markers, wireways, and strain-relief bushings. Provide all terminations, ferrules, and hardware per manufacturer torque specifications. Provide grounding electrode system and bonding jumpers per NEC and the plans.

3. SYSTEM PERFORMANCE REQUIREMENTS

Array Rating: approximately 3.24 kWp ($8 \times \sim 405$ W modules).

Nominal System Voltage: 48 VDC.

Battery Storage: $\geq 1,075$ Ah @ 100-hr (≈ 51.6 kWh nominal).

Design Daily Load: $\sim 3,168$ Wh/day (DC equivalent) at the site; system sized to maintain availability with Array/Load Ratio ≥ 1.6 in December and ≥ 2.5 annual average, with ≥ 10 days equivalent autonomy at 77 °F based on modeling.

Communications & Monitoring: Ethernet-based access to controller parameters, data logging (SD-card), and alarms; provide IP addressing and port details as directed.

4. INSTALLATION

- Install top-of-pole mount on the foundation/pile and pole. Tilt array 55 degrees toward south, 180 degrees azimuth from north. Provide tilt initially per above leave tilt adjustable for seasonal optimization and final solar vender calculations.
- Route and dress conductors to maintain bend radius and separation; use outdoor-rated UV-resistant cabling and fittings; no splices in PV home runs unless in listed enclosures.
- Mount equipment in the enclosure per manufacturer clearances; provide drip loops, strain relief, and gaskets; maintain NEMA ratings.
- Provide equipment grounding, bonding, and grounding electrode system per NEC; bond module frames, rails, and structure. Furnish and install grounding triad with $\frac{3}{4}$ "x10'-0" ground rods spaced at least 20 feet apart. Rods to be bonded together by a #1/0 cable.
- Label all circuits, disconnects, SPDs, battery strings, and terminations; affix one-line diagram inside the enclosure door.
- Program the MPPT controller charge profiles for the supplied AGM battery per manufacturer published tables; enable temperature compensation and data logging; enable LVD as specified.

- If inverter is provided, wire AC output per plans; verify GFCI operation and neutral-ground bonding requirements per manufacturer.

5. SUBMITTALS

- Product data sheets for PV modules, mount, enclosure, MPPT controller, batteries, inverter (if provided), and SPDs.
- Shop drawings: array layout, rail/mount details, pole size and foundation reactions, enclosure internal layout, and nameplate schedule.
- Electrical: one-line diagram, string sizing (Voc/Vmp/Isc at site temps), overcurrent and conductor sizing, SPD ratings, grounding details.
- Controller configuration file or setpoint schedule, communications plan (IP addressing/ports), and data logging plan.
- O&M manuals, warranty certificates, and spare parts list.

6. TESTING AND ACCEPTANCE

- Visual and Mechanical: verify torque on all structural/electrical fasteners; confirm labeling and clearances; verify enclosure seals.
- Electrical Continuity and Polarity: verify PV polarity, battery polarity, and grounding/bonding continuity.
- Open-Circuit and Operating Tests: record PV Voc and Isc by string at site temperature; verify MPPT tracking under load.
- Functional: demonstrate controller communications (web/Modbus), data logging, LVD operation, and alarms; if inverter provided, demonstrate AC performance with load.
- Record Acceptance Data: controller logs (voltage, current, SOC), array performance snapshot, battery temperature, and commissioning checklist.

7. METHOD OF MEASUREMENT

Solar Power System will be measured as Each complete system installed, configured, tested, and accepted, including PV array, pole, top-of-pole mount, enclosure, charge controller, battery bank, surge protection, overcurrent protection, wiring/labels, grounding, documentation, and inverter, complete in place.

8. BASIS OF PAYMENT

Payment will be made at the contract unit price for “ITEM 809 – ITS DEVICE, MISC.: SOLAR POWER SYSTEM” which price shall be full compensation for furnishing and installing the complete system, including all labor, equipment, and materials described herein. No separate payment will be made for surge protective devices, PV/ battery/inverter breakers, wiring harnesses, labels, or controller configuration; these are incidental to this item.

ITEM 809 - ITS DEVICE, MISC.: VIDEO ANALYTICS SYSTEM**1. GENERAL**

Furnish and install a Derq Video Analytics System for highway system monitoring, including all edge compute devices, software, wiring, communications, power, and grounding, as shown on the plans. Utilizing fixed view CCTV IP cameras described elsewhere, The system shall detect, process, and transmit real-time traffic and incident data to the designated control center and cloud analytics platform.

The system shall be compatible with the OTIC network architecture and video management systems, including integration with Milestone Video Management System.

All licensing/platforms required for the Video Analytics System and software shall be included in the pay item.

2. MATERIALS**1. Edge Compute Device:**

- High-performance 8-core CPU with integrated GPU (e.g., Intel Core i7 13th Gen, NVIDIA Jetson AGX Orin, or equal, 275 TOPS).
- 8GB DDR4 RAM minimum, 128GB SSD minimum, 512GB expandable storage.
- Linux OS, Gigabit Ethernet (PoE+ for up to four devices), USB 3.0, display port, digital I/O, LED status indicators.
- Environmental: IP66, –10°F to 140°F, max 12"W x 10"D x 3"H, shelf or DIN rail mount, 24VDC at 200W peak.

2. Software:

- Supports ingestion of up to 8 high-res camera feeds, multimodal detection, auto-calibration, and multiple camera presets.
- Integrates with the Milestone Video Management System and supports push/pull APIs for data to an ATMS.
- Web-based dashboard for analytics, alerts, and reporting.

3. Power:

- 120VAC input, 24VDC output as required for edge device.

3. FUNCTIONAL REQUIREMENTS**1. Edge Compute Device Capabilities:**

- Ingest up to 8 high-resolution camera video feeds simultaneously.
- Perform multimodal detection (vehicles, pedestrians, cyclists, etc.) in all lighting conditions.
- Adapt to degraded camera views and low visibility conditions (e.g., fog, rain, snow).

2. Video Protocols and Network Integration:

- Video protocols: RTP/RTCP, RTSP, MJPEG, MPEG-4, H.264, H.265.
- Network protocols: TCP/IP, UDP, HTTP/HTTPS, DHCP, DNS, NTP, SSH.
- Interface protocols: ONVIF (Profiles S, T, M), SNMP, NTCIP 1202, NTCIP 1211, NTCIP 1209.
- Must integrate with the OTIC Milestone Video Management System and support push/pull APIs for data to ATMS.

3. Cloud Analytics Platform:

- Vendor-hosted, US-based, with 5-year data retention and configurable policies.
- Secure API and HTTPS access.

4. DETAILED VIDEO ANALYTICS CAPABILITIES**1. General Real-Time Traffic Detection:**

- Provide real-time traffic data per lane and direction at configurable intervals:
 - Vehicle counts
 - Road user class: passenger vehicle, bus, motorcycle, truck

- Speeds (± 5 mph)
- Lane changes (count)
- Occupancy (%) / headway (s)
- Minimum detection accuracy: 95% for general vehicle counts, consistent across day/night and weather conditions.

2. Incident Detection:

- Vulnerable Road User (VRU) Detection: Detects pedestrians, cyclists, or mobility device users in the field of view.
 - Reports user class, event location (lat/long, route, milepost), timestamp.
 - Accuracy: 90% for VRU counts.
- Queue/Stopped Vehicle Detection: Detects stopped vehicles in specified zones based on dwell time.
 - Reports user class, event location, timestamp.
 - Accuracy: 90% for stopped vehicle detection.
- Wrong Way Driving Detection: Detects vehicles moving in the wrong direction in a specified zone.
 - Reports user class, event location, timestamp, speed, direction.
 - Accuracy: 95% for wrong way detection.
- Crash Detection: Detects vehicle crashes using real-time video data.
 - Reports event location, timestamp, user class, speed, movement, direction for all involved.
 - Accuracy: 90% for crash detection.
- Low Visibility Detection: Detects low visibility conditions with user-settable thresholds.
 - Reports event location, timestamp, event start/clear.
- Work Zone Intrusion Detection: Detects intrusions at work zones or restricted lanes.
 - Reports event location, timestamp.
 - Accuracy: 90% for work zone intrusion.

3. System Reporting and Data Integration:

- Direct Real-time data feed from the field to an ATMS to be provided by others.
 - Real-time data feed is defined as data collected and transmitted from the field to the central systems with a maximum latency of 30 seconds to one minute as based on the requirements of the ATMS provider.
- Central reporting application in a cloud environment to collect and analyze data from all video analytics devices.
- Visualization of detected alerts with related images and data (date/time, type, direction, video, etc.).
- Incident statistical reports filterable by date, time, and type.
- Export raw data and reports in CSV and PDF.
- Store data in US-based cloud servers with configurable retention policies (minimum 5 years).
- User-configurable email/SMS notifications for each incident type.
- Real-time and historical volume, speed, and occupancy analytics by vehicle class.

5. INSTALLATION

1. Install edge compute device in the ITS field cabinet.
2. Connect edge compute device to the Ethernet Switch using Ethernet cables as shown on the network plans.
3. Confirm installation and configuration of software on the edge compute device.
4. Ensure camera imagers and detection zones are positioned to detect mainline and ramp traffic in all lanes and directions and to monitor the full field of view for anomalies in the viewing area

(including, but not limited to, shoulders, gore areas, taper zones, and emergency pull offs) as shown on the plans.

5. Label all cabling and connections per OTIC standards.
6. Provide all mounting hardware, surge protection, and grounding per manufacturer and OTIC requirements.

6. TESTING

1. Perform end-to-end testing to confirm:
 - Streaming video feeds from all cameras are received and processed by the edge compute device.
 - All required data feeds (API) to the central system are present and accurate.
 - Cloud analytics platform receives, and processes data as specified.
 - System latency, throughput, and detection accuracy meet or exceed requirements.
 - Security assessments are completed (data integrity, unauthorized access protection).
 - System performs under all environmental conditions.
 - Web dashboard is user-friendly and provides intuitive access to analytics and alerts.
 - System push notifications and alerts are delivered via email, SMS/text, and APIs.
 - System integration with existing OTIC systems is seamless.
2. Provide all test forms and data as required by OTIC.

7. DOCUMENTATION

1. Provide as-built documentation, and configuration files.
2. Deliver operation, maintenance, and troubleshooting manuals.
3. Provide a dedicated support hotline and email for reporting issues and technical support.
4. Provide regular software updates and patches for system security and performance.

8. TRAINING

1. Provide on-site, hands-on, field and classroom training for a minimum of 4 hours for up to 10 people.
2. Training shall cover installation, configuration, operation, and maintenance of the system.
3. Provide training materials, manuals, and guides to all participants.

9. WARRANTY

1. Minimum 5-year warranty for hardware and software for both the edge compute device and central cloud analytics processing.
2. Include 5 years of software operations and maintenance updates, including 2 years of cloud hosting fees, after Final Acceptance.

10. MEASUREMENT AND PAYMENT

1. **Pay Item:** “ITEM 809 - ITS DEVICE, MISC.: VIDEO ANALYTICS SYSTEM” — Each (per location).
2. Payment includes all hardware, software, installation, configuration, testing, documentation, training, and warranty.

ITEM 809 - ITS DEVICE, MISC.: RWIS**1. DESCRIPTION**

Furnish and install a Vaisala-based Roadway Weather Information System (RWIS) to monitor and report roadway and atmospheric conditions at the locations shown on the plans. Provide a complete off-pavement RWIS solution, including sensors, a Pole Mounted ITS Cabinet – RWIS, power and communications interfaces, surge protection, grounding, software, licensing, and integration required to deliver real-time data to the Communications Center. All pavement sensing shall be non-intrusive (off-pavement).

2. MATERIALS**2.1 Pole Mounted ITS Cabinet – RWIS (Stainless Steel)**

Provide and install a Pole Mounted ITS Cabinet – RWIS to house the RWIS Remote Processing Unit (RPU), power supplies, communications equipment, surge protection, and all associated terminations. The cabinet shall be constructed of NEMA 4X stainless steel (AISI 316), with lockable latches, filtered/heated ventilation as required, sunshield as recommended by the manufacturer, and mounting hardware compatible with the provided pole/structure.

All mounting assemblies, brackets, banding, crossarms, and hardware required to secure the cabinet to the pole/structure shall be furnished and installed by the Contractor. All mounting hardware and materials shall be stainless steel.

2.2 Remote Processing Unit (RPU)

Provide a field-hardened RWIS processing unit that collects, buffers, and forwards data from all connected sensors. The RPU shall support NTCIP 1204 objects, IPv4 Ethernet, RS-232/RS-485 serial ports, local maintenance access, watchdog/remote reboot, and time synchronization.

- Environmental: –40 °F to +140 °F operating; 0–100% RH.
- Power: 120 VAC primary with internal 24 VDC distribution.

2.3 Non-Intrusive Pavement Condition and Temperature Sensor

Provide an off-pavement optical/infrared surface-state sensor that measures roadway surface temperature and condition (e.g., dry, damp/wet, chemically wet, ice/snow) and reports water film height and/or friction/grip where supported. Mount on a dedicated sensor arm/pole position to view the nearest travel lane per manufacturer guidelines.

Minimum performance: measurement distance 7–40 ft; road surface temperature –40 °F to +158 °F; IP65 or better; operating –40 °F to +140 °F; serial and/or Ethernet output. Laser-only technologies are not permitted.

2.4 All-in-One Atmospheric Weather Sensor (AIO)

Provide a compact solid-state AIO sensor measuring, at a minimum: air temperature, relative humidity, barometric pressure, ultrasonic wind speed and direction, and precipitation classification (radar-based or equal). The AIO shall be aspirated/heated as required, bird-resistant, and provide digital outputs.

Minimum performance: operating –40 °F to +140 °F; IP66 or better; wind speed 0–134 mph with

accuracy ± 0.67 mph or $\pm 3\%$ (0–78 mph); wind direction accuracy $\leq 3^\circ$ (≥ 2.2 mph). Optical-only precipitation detectors are not allowed.

2.5 Visibility Sensor (Fog)

Provide a forward-scatter or equivalent visibility sensor to measure meteorological optical range for fog/visibility detection. Operating -40°F to $+140^\circ\text{F}$; IP66 or better; digital output.

2.6 Communications, Cabling, and Surge Protection

Provide shielded UV-rated outdoor cables; conduit as shown on the plans; labeled terminations; and surge protective devices on AC mains, Ethernet, and sensor lines. Provide a bonded grounding electrode system per the National Electrical Code and manufacturer requirements. Exterior connectors shall be weatherproofed and strain-relieved.

3. CONSTRUCTION

Install all RWIS components in accordance with manufacturer instructions, and the plans. Neatly route and support conductors; seal all penetrations; and provide drip loops and service slack.

3.1 Submittals

Submit product data (cut sheets), shop drawings (including cabinet layout and mounting details), network addressing plan, sensor aiming details, and a point-to-point I/O and addressing schedule. Provide NTCIP 1204 object mapping and any manufacturer-specific objects.

3.2 Factory Configuration and Field Commissioning

Preconfigure the RPU and sensors prior to shipment. After installation, provide onsite start-up and commissioning by a qualified vendor field engineer to perform final connections, sensor alignment, calibration/verification, software setup, and end-to-end data validation to the OTIC Communications Center.

3.3 Integration and Cybersecurity

Implement role-based access, strong credentials, and encrypted management sessions (e.g., SSH/HTTPS/TLS 1.2+). Provide firewall rules and port/protocol documentation required for acceptance.

3.4 Training and Documentation

Provide a minimum of 8 hours of training for up to 10 OTIC staff covering operation, data interpretation, preventive maintenance, and troubleshooting. Deliver O&M manuals, as-built drawings, configuration backups, and a spare parts list.

3.5 Warranty

Provide a limited onsite warranty covering all installed RWIS equipment for two (2) years from commissioning, plus factory warranties of not less than three (3) years for the RPU and sensors. Provide telephone/email technical support for 12 months at no additional cost.

4. METHOD OF MEASUREMENT

The RWIS will be measured as a complete, functional system at each site, and by each individual component where a separate pay item is provided. Cabling, terminations, labeling, surge protection,

testing, configuration, and incidental hardware, including all mounting assemblies and hardware, are subsidiary to the associated items.

5. PAYMENT

Payment will be made at the contract unit price for “ITEM 809 - ITS DEVICE, MISC.: RWIS” which shall include all labor, materials, equipment, software, licensing, testing, integration, and incidentals necessary for a complete and operational RWIS installation.

ITEM 809 - ITS DEVICE, MISC.: CCTV IP-CAMERA SYSTEM, QUAD MULTI-VIEW FIXED WITH PTZ

1. GENERAL

Furnish and install a Closed-Circuit Television (CCTV) IP-Camera System at the locations shown on the plans, consisting of the following camera assembly: Axis Q6300-E integrated with Axis Q6358-LE PTZ. The system shall include all mounting hardware, cabling, connectors, PoE power delivery, Ethernet surge suppression, and accessories required for a complete and operational system. Provide and install 512 GB industrial SDXC Axis branded memory card(s) at the camera(s) for edge storage. Install, configure, and test the system in accordance with the manufacturer's recommendations, the Contract Documents, and applicable OTIC standards.

Provide a minimum five (5) year warranty for camera assemblies, memory cards, PoE injectors, and surge protection devices.

2. MATERIALS

A. Camera Assemblies – Provide the camera models and features shown on the plans. Camera assemblies shall support PoE input, ONVIF, multiple simultaneous streams (H.264/H.265/AV1 as supported), analytics, and edge recording. Enclosures shall be NEMA 4X / IP66 or better and suitable for the ambient conditions at the site. Provide 512 GB SDXC Axis branded industrial-grade memory card(s).

B. Cabling – Provide outdoor-rated, shielded CAT6A (or better) Ethernet cable from cabinet to camera, continuous with no splices between the camera lowering unit and the cabinet. Provide weatherproof connectors/boots, strain relief, and labeling.

C. Power over Ethernet (PoE) Injector – Provide a midspan PoE injector meeting the following (or plan-specified) requirements:

Standards: IEEE 802.3af (15 W), 802.3at (30 W), and 802.3bt (Type 3/4 up to 60–90 W) Power Sourcing Equipment (PSE) with automatic PD detection/classification; 10/100/1000BASE-T pass-through with auto MDI/MDIX.

Electrical: 20–26 VDC; PoE output nominal 56 VDC delivering required wattage/class.

Interfaces/Indicators: Shielded RJ45 DATA IN and PoE OUT; status LEDs for Power, PoE, and Fault/Alarm.

Mechanical/Environmental: Cabinet-suitable enclosure; wall/shelf/DIN-rail mounting; operating at –20 °C to +40 °C at full 90 W output (higher ambient permitted at derated output).

Regulatory: Listed/Certified to IEC/EN/UL 62368-1; EMC per EN 55032 Class A / FCC Part 15 Class A; immunity per EN 55024 or EN 61000-6-2.

D. Ethernet Surge Protector (PoE) – Provide point-of-use Ethernet surge protective devices (SPDs) on PoE circuits serving the camera(s), meeting:

- Standards: Listed and labeled to UL 497B (Telecommunications Protectors); compliant with IEEE 802.3 PoE (af/at/bt); maintain Category 5e/6/6A performance per ANSI/TIA-568.
- Performance: Multi-stage protection (solid-state and gas discharge or equivalent) providing low let-through voltage; protection in common-mode and differential-mode on all pairs; surge current

rating ≥ 20 kA per pair (8/20 μ s) (or manufacturer demonstration per UL 497B); VPL ≤ 75 V (CM) and ≤ 7.5 V (DM) at specified test current; support data rates ≥ 10 GbE and PoE power to at least 100 W.

- Terminations: Shielded RJ45 female input/output with bonding/grounding terminal. Provide DIN-rail clip or panel-mount as detailed.
- Environmental: Operating -40 °F to $+158$ °F (-40 °C to $+70$ °C), up to 95% RH, non-condensing; compact form suitable for ITS cabinet installation.

E. Hardware & Accessories – Provide all lowering-unit adapters, brackets, fasteners, labels, grounding/bonding conductors, and incidentals required for a complete installation. Provide manufacturer-recommended weatherproofing kits/boots at exterior connectors.

3. INSTALLATION

- Mount cameras on the lowering device as shown on the plans. Orient, aim, and lock hardware to maintain views under vibration and weather.
- Orient fixed quad multiview imagers to ensure clear views of each DMS and VSL Signs (if applicable). Ensure camera imagers are positioned to view mainline and ramp traffic in all lanes and directions and to monitor the full field of view for anomalies in the viewing area (including, but not limited to, shoulders, gore areas, taper zones, and emergency pull offs) as shown on the plans.
- Install PoE injector(s) in the ITS cabinet per manufacturer instructions. Maintain ventilation/service clearance; mount to wall/shelf/DIN-rail as detailed.
- Install Ethernet Surge Protection Devices (SPD) at the protected device location(s) as shown on the plans (e.g., at the cabinet port feeding the field cable). Bond the SPD ground terminal (and cable shield where present) to the cabinet grounding bus with #12 AWG (min) green insulated copper.
- Use shielded twisted-pair patch cords; terminate field cabling to EIA/TIA-568A or 568B. Maintain minimum bend radius, separation from power conductors, and strain relief. No splices are permitted between the camera assembly and the cabinet.
- Provide continuous labeling of all cables, ports, SPDs, and PoE injectors.
- Update camera firmware and analytics to the latest manufacturer-recommended versions; configure edge storage to 512 GB card(s); integrate with the OTIC Milestone VMS and ATMS.

4. SUBMITTALS

- Product data sheets for cameras, PoE injectors, and Ethernet SPDs (model, ratings, environmental, approvals).
- Wiring/termination diagram showing cabinet AC/DC source, overcurrent protection, grounding/bonding, SPD locations, and PoE/data routing.
- Manufacturer installation guides and any required licenses/subscriptions.
- As-built documentation (model/serials, port mapping, labeling photos); configuration backups; firmware versions.

5. TESTING AND ACCEPTANCE

- Power-up and PoE verification: Confirm injector output class/wattage, and stable camera operation.

- Network and video: Verify link speed, latency, and streaming; demonstrate panoramic/PTZ operation and analytics; confirm Milestone VMS/ATMS integration.
- Edge storage: Record/playback from SDXC card; verify storage health and encryption (if enabled).
- Surge protection: Verify SPD installation, bonding continuity to cabinet ground, and labeling. Record SPD model/serial in as-builts.

6. WARRANTY AND LICENSES

- The Contractor shall provide all required software licenses for the Video Management System (VMS), specifically furnishing and installing Milestone XProtect Corporate device licenses for each camera and for all camera feeds transmitted to the OTIC Milestone VMS and on-site network video recorder (NVR). All licensing shall be valid for five (5) years.
- The Contractor shall also provide and maintain Milestone Care Plus for XProtect Corporate for a period of five (5) years from the date of system acceptance. Milestone Care Plus shall include all software updates, technical support, and access to new features as released by Milestone Systems during the coverage period.
- All camera assemblies, memory cards, PoE injectors, surge protection devices, and VMS licenses shall be covered by a minimum five (5) year warranty, including all labor for warranty repairs while the project is active. The warranty shall cover defects in materials and workmanship, and ensure the continued operation of the system as specified.
- Proof of license purchase and active Milestone Care Plus coverage shall be submitted as part of the project submittals and maintained in the as-built documentation.

7. METHOD OF MEASUREMENT

This item will be measured as Each complete system installed, configured, tested, and accepted, including camera assembly, 512 GB SDXC card(s), PoE injector(s), Ethernet surge protection device(s), cabling, connectors, mounting hardware, labeling, documentation, and training, complete in place.

8. BASIS OF PAYMENT

Payment will be made at the contract unit price for “ITEM 809 - ITS DEVICE, MISC.; CCTV IP-CAMERA SYSTEM, QUAD MULTI-VIEW FIXED WITH PTZ” which price shall be full compensation for furnishing and installing the complete system, including camera assembly(ies), 512 GB SDXC card(s), PoE injector(s), Ethernet surge protection device(s), mounting hardware, cabling, connectors, labels, configuration, testing, documentation, training, warranty, licensing and all incidentals necessary to complete the work. No separate payment will be made for PoE injectors or Ethernet surge protection; these are incidental to this item as shown on the plans.

ITEM 809 - ITS DEVICE, MISC.: CELLULAR ROUTER / ANTENNA**Description**

Furnish, configure, install, and test a ruggedized 5G cellular modem–router for ITS field devices, including provision of an industrial DIN-rail AC-to-DC power supply to power the modem from cabinet AC service. The modem and power supply shall be installed in the ITS at locations shown in the plans and shall be fully compatible with the project’s secure cellular APN.

Materials and Performance Requirements**A. Cellular Modem–Router**

- 5G NR FR1 (600 MHz–6 GHz) with NSA/SA support; LTE Advanced Pro fallback; carrier aggregation per manufacturer.
- Dual SIM (2×4FF) and embedded eSIM (MFF2) with multiple carrier profiles; configurable for project secure APN.
- Interfaces: RJ-45 (LAN/WAN switchable), dual-radio Wi-Fi 6 (AP/Client/Wi-Fi-as-WAN), GNSS SMA, USB-A.
- Security/Management: Stateful firewall; optional IDS/IPS; SD-WAN; cloud device management subscription (≥ 5 years).
- Environmental: $-30\text{ }^{\circ}\text{C}$ to $+70\text{ }^{\circ}\text{C}$, IP64, MIL-STD-810H shock/vibration; C1D2 where offered by manufacturer.
- Input Power: 9–36 VDC nominal; ignition sense; typical consumption $\approx 11\text{ W}$.

B. DIN-Rail AC-to-DC Power Supply (for Modem)

- Input: Universal 85–264 VAC, 47–63 Hz; integral inrush limiting and EMI filtering; UL 508 or UL/CSA 62368-1; CE.
- Output: 12 VDC regulated (preferred), $\geq 30\text{ W}$ continuous ($\geq 2.5\text{ A @ }12\text{ V}$) providing $\geq 30\%$ headroom over modem load.
- Performance: Load regulation $\pm 2\%$ or better; ripple/noise $\leq 120\text{ mVpp}$; short-circuit/over-current/over-voltage/thermal protection with auto-recovery.
- Mechanical/Environmental: DIN rail EN 60715 (35 mm); $-30\text{ }^{\circ}\text{C}$ to $+70\text{ }^{\circ}\text{C}$ (derate per manufacturer); 5–95% RH non-condensing; vibration suitable for roadside cabinets; conformal coating where specified.
- Terminations: Pluggable or screw terminals suitable for stranded conductors used in ITS cabinets.
- Modem Power Harness: Provide completed 2-conductor harness compatible with modem DC input (e.g., Molex Micro-Fit 2×2), with inline fuse sized per modem manufacturer (3 A for 9–24 VDC; 2 A for $>24\text{ VDC}$). Clearly label “+12 VDC” and “DC Return”.

C. Antennas & Cables

- Provide external antennas and low-loss cables for cellular, Wi-Fi, and GNSS per manufacturer guidance.
- Include mounting hardware, connectors, weatherproof boots, and labeling; route to maintain bend radius and separation.

Submittals

Provide the following submittals to the engineer;

- Product data sheets, certifications, and dimensional drawings for the modem–router and the DIN-rail power supply.
- Configuration plan detailing APN settings and device management (cloud) enrollment.
- DIN-rail mounting details and cabinet layout showing separation, clearances, wire routing, and labeling.
- Wiring/termination diagram showing AC source, branch overcurrent protection, bonding/grounding, DC polarity, and the fused modem power harness.
- Warranty and support documentation (modem and power supply).

Construction Requirements

- Mount the modem and the DIN-rail power supply in the ITS cabinet using manufacturer-approved hardware; maintain clearances and serviceability.
- Provide branch overcurrent protection, grounding, and bonding per plans and code. Land the power supply DC output to the modem using the fused harness.
- Route, dress, and label all conductors per ITS cabinet standards; weatherproof any exterior RF connections; provide strain relief at terminations.
- Load the approved configuration (APN, security policies), enroll device in cloud manager, and coordinate APN testing with OTIC.

Documentation

- As-built package: modem IMEI, SIM ICCID/eSIM profiles, MACs/serials, configuration backup, firmware versions; power supply make/model/serial, nameplate ratings, source circuit, AC breaker/fuse size, DC inline fuse size, harness part numbers.
- Provide O&M manuals and quick-start procedures for field technicians.

Testing and Acceptance

- Power-up test: Verify AC source, DC output setpoint, polarity.
- RF survey and functional test: Record RSRP/RSRQ/SINR and throughput; verify SIM/eSIM recognition and cloud enrollment.
- Security/Management: Validate firewall policy and remote visibility; demonstrate successful connection to secure APN and data transmission.

Licensing

- Provide 5-year license agreements to support the NetCloud Service Plan and SD-WAN solutions.

Measurement and Payment

Measurement: Each Cellular Modem–Router installed, configured, documented, and accepted, including the DIN-rail AC-to-DC power supply, fused harness, antennas, cabling, licenses, testing, and training, complete in place.

Basis of Payment: Payment will be made at the contract unit price for “ITEM 809 - ITS DEVICE, MISC.: CELLULAR ROUTER / ANTENNA” which price shall be full compensation for the modem–router,

DIN-rail power supply, fused harness, mounting hardware, antennas, cabling, configuration, documentation, and testing.

SPECIAL - ITS DEVICE, MISC.: ETHERNET CABLE, OUTDOOR RATED**1. DESCRIPTION**

Furnish and install extended-distance, four-pair balanced twisted-pair Gamechanger Ethernet cable and accessories to provide data and Power over Ethernet (PoE) connectivity between Intelligent Transportation Systems (ITS) field devices and associated cabinets/hubs at the locations shown on the Plans. The cable shall support 1 Gigabit Ethernet (1000BASE-T) with simultaneous PoE for lengths up to 656 ft without active midspan equipment. Provide all materials, terminations, labels, testing, and documentation as specified herein.

2. REFERENCES

- ANSI/TIA-568.2-D (Balanced Twisted-Pair Telecommunications Cabling and Components Standard).
- ANSI/TIA-1152-A (Requirements for Field Test Instruments and Measurements).
- IEEE 802.3 (including 802.3af/at/bt for PoE).
- National Electrical Code (NEC/NFPA 70).

3. MATERIALS**3.1 General**

Provide factory-new cable and components of current manufacture. Cables and connectors installed for this item shall be listed, labeled, and suitable for the intended environment and installation method.

3.2 Performance Requirements (Extended-Distance)

- A. The cable shall be specifically designed for long-reach Ethernet and PoE without active devices between endpoints. Conventional Category 5e/6/6A cabling not verified to 200 m is not acceptable.
- B. Minimum electrical characteristics (per manufacturer/NRTL verification):
 - Conductor DC resistance: $\leq 6.35 \Omega/100 \text{ m}$.
 - Operating temperature: -20°C to $+75^\circ\text{C}$ (OSP)
 - UL or ETL verification/certification documents showing 1 Gb/s + PoE to 200 m.

3.3 Construction (Cable)

4-pair, solid bare copper conductors; twisted pairs:
OSP-Shielded: Sunlight/UV resistant black jacket; water-resistant design; -20°C to $+75^\circ\text{C}$, with overall shield for EMI mitigation and improved reach margins.
Conductor insulation: low-loss dielectric suitable for extended-distance Ethernet.
Identification: Permanent sequential length markings and manufacturer/jacket rating markings.

3.4 Connectors/Terminations

- A. Provide RJ-45 modular plugs and/or jacks recommended by the cable manufacturer as compatible with the selected long-reach cable design to maintain the required performance at the installed lengths.

- B. Use of field-terminable plugs shall meet TIA-568.2-D and manufacturer's guidance; for GameChanger cable. Platinum Tools ezEX-series or manufacturer-recommended equivalents are acceptable.
- C. Where shielded cable is provided, use shielded connectors and bond the shield to cabinet ground per NEC and Ohio DOT C&MS 625/632.

3.5 Ancillary Materials

- A. Weatherproof strain-relief glands, grommets, and bushings for cabinet entries.
- B. Labels, wraps, and tags for both ends of each cable (see Section 6).

4. SUBMITTALS

- A. Submit the following for review prior to installation:
Product data sheets for cable and connectors indicating jacket type, ratings, and environmental limits.
- B. If proposing an "approved equal," provide cross-reference matrix demonstrating full compliance with Sections 3.2–3.4 and copies of independent verification.

5. CONSTRUCTION REQUIREMENTS

- 1. Install per manufacturer's instructions, TIA-568.2-D, and the Plans.
- 2. Pulling Tension/Bend Radius: Do not exceed manufacturer limits; use lubrication as required; protect from kinks and crushing; cap ends to prevent moisture ingress.
- 3. Grounding/Bonding: Bond shields and metallic pathway components to the cabinet ground bus.
- 4. Transitions: Use rated transition fittings entering cabinets. Provide service loops as shown on Plans (minimum 3 ft at cabinets and 10 ft at pull boxes unless noted otherwise).
- 5. Terminations: Terminate per TIA-568.2-D pinout (T568B unless otherwise shown). Keep jacket and twists to within manufacturer-specified distances of the termination to preserve performance.

6. IDENTIFICATION

Label both ends of each installed cable with durable machine-printed labels indicating:

- Cable ID matching the Plans,
- Origin and destination cabinet/device,

7. FIELD TESTING AND ACCEPTANCE

7.1 Visual and Continuity

- A. Verify jacket integrity, labeling, and workmanship.
- B. Continuity and wire map test per TIA-568.2-D for each terminated link.

7.2 Performance Validation

- A. Perform end-to-end functional continuity and throughput test.

7.3 Documentation

Provide test results identifying cable ID, endpoints, length (as measured), link speed, and pass/fail.

7.4 Remediation

Replace or re-terminate any link failing the above tests at no additional cost to the turnpike.

Re-test until passing.

8. METHOD OF MEASUREMENT

Measured by the foot (FT) along the installed route in place, including service loops and slack as shown on the Plans, from termination to termination. No separate measurement for connectors, labels, test labor, or incidental materials.

9. BASIS OF PAYMENT

1. Pay Item: “ITEM 809 - ITS DEVICE, MISC.: ETHERNET CABLE, OUTDOOR RATED” -- Foot
2. Payment includes furnishing, installing, terminating, labeling, testing, and documenting the extended-distance Ethernet cable complete and in place, including connectors and incidental hardware.

ITEM 809 - ITS DEVICE, MISC.: NETWORK SWITCH**1. DESCRIPTION**

1. Furnish and install a ruggedized, DIN-rail, managed Ethernet switch — Cisco IE-3500-8U3X — with eight (8) PoE/PoE+/4PPoE copper downlinks and three (3) 10-Gigabit SFP+ uplinks, including all accessories, licenses, optics, and cabling necessary for a complete, operational system.
2. Provide a Cisco industrial DIN-rail power supply (PSU) sized to deliver the full 480 W PoE budget supported by the IE-3500-8U3X, plus capacity for the switch's own operating power and any installed expansion module(s). Minimum PSU selection shall be 54 VDC, 480 W (e.g., PWR-IE480W-PCAC-L=) or larger as required by the final PoE loading and device count.
3. Integrate the switch into the Owner's ITS network following project plans and security requirements, with redundant DC power inputs landed per manufacturer instructions.

2. REFERENCES & SUBMITTALS

1. References: (a) Cisco IE3500 Rugged Series Data Sheet (platform features, environmental/EMC, power specs, optics), (b) Cisco Industrial DIN-rail Power Supplies Data Sheet (54 VDC/480 W PSU ratings, environmental, approvals).
2. Submittals prior to procurement: (a) Product cut sheets for IE-3500-8U3X and selected DIN-rail PSU(s) highlighting PoE budget, input/output voltage, and approvals; (b) Completed PoE load calculation showing device count, per-port class, total PoE load (≤ 480 W), switch base consumption, expansion module consumption (if any), and PSU headroom; (c) Bill of materials including optics (SFP/SFP+); (d) Shop drawings showing DIN-rail layout, grounding/bonding, DC distribution, alarm I/O terminations, and label scheme; (e) Configuration plan (VLANs, QoS, NTP/PTP if applicable, management IP, credentials escrow).

3. MATERIALS**3.1 Managed Rugged Ethernet Switch**

1. Model: Cisco IE-3500-8U3X; 8x PoE/PoE+/4PPoE copper downlinks; 3x 10G/1G SFP+ uplinks; DIN-rail mount.
2. PoE Budget: 480 W total supported on IE-3500-8U3X; support up to 90 W per port (IEEE 802.3bt Type 4).
3. Power Inputs: Dual DC power inputs; input voltage nominal 12–54 VDC (9.6–60 V absolute). Base switch (non-PoE) consumption ~49 W at 54 V, exclusive of PoE load.
4. Physical: Approx. 4.38 in W \times 6.00 in H \times 5.29 in D; 5.05 lb; IP30; DIN-rail mount.
5. Environmental: Operating -40 °C to $+70$ °C (vented), up to $+75$ °C with forced air; 5–95% RH non-condensing; industrial EMC/EMI per IEC/EN 61000 series.
6. Certifications: IT equipment UL/CSA 62368-1; industrial control UL/CSA 61010-2-201; Hazardous Locations (Class I, Div 2 / Zone 2) when installed in a suitable enclosure.

7. Software/Management: Cisco IOS-XE with Network Essentials/Advantage as indicated; on-device WebUI/CLI; on-prem via Catalyst Center; optional cloud management via Meraki dashboard; support for 802.1X, MACsec, QoS, Layer-3 features per datasheet.

3.2 DIN-Rail Power Supply (54 VDC PoE)

1. Provide Cisco industrial DIN-rail PSU, 54 VDC nominal, sized for 480 W PoE output plus switch/module overhead. Minimum: PWR-IE480W-PCAC-L= (54 VDC adjustable 48–56 V, ~8.9 A, 480 W), AC input 100–240 VAC, IP20, operating to –40/–20 °C through +75/+80 °C per model.

2. Where calculated load exceeds a single PSU's capacity (e.g., heavy 4PPoE duty cycle + accessories), furnish additional PSU capacity and distribute loads per manufacturer guidance. The PSU selection must power the switch, any expansion module, and the connected PoE load.

3. Approvals/EMC: UL/cUL 62368-1 and UL 508 listings as applicable; EMC emissions/immunity per EN 61000 series.

3.3 Optics and Copper Accessories

1. Provide SFP+ (10G) optics matched to link budget and environment (e.g., SFP-10G-LR/-SR/-ER or bidirectional 10G variants) as indicated on plans; industrial-temperature optics.

2. Provide 1G copper SFPs where indicated on plans.

4. PERFORMANCE & COMPLIANCE

PoE/PoE+/4PPoE: Comply with IEEE 802.3af/at/bt Type 4 on applicable ports; support up to 90 W/port.

Throughput: Line-rate forwarding on all ports, all packet sizes; support jumbo frames per manufacturer specification.

EMC/Immunity: Meet the IE-3500 EMC lists (e.g., EN 61000-4-2 ESD, –4 EFT, –5 Surge, etc.) and emissions (EN 55032/CISPR 32) as specified by manufacturer.

5. CONSTRUCTION & INSTALLATION

1. Mount the IE-3500-8U3X and DIN-rail PSU(s) on DIN rail inside the ITS cabinet; provide clearances per dimensional drawings and thermal guidance.

2. Provide dual DC feeds to the switch from DC distribution protected by appropriately sized breakers/fuses; land returns and protective earth per manufacturer recommendations.

3. Bond DIN rail and all metalwork to the cabinet ground bus; route cabling with strain relief and maintain minimum bend radii.

4. Terminate SFP/SFP+ with specified fiber types.

6. CONFIGURATION

1. Configure management IP addressing, SNMPv3, NTP, syslog, secure user roles, AAA (RADIUS/TACACS+), and Secure Boot settings per OTIC direction.

2. Implement VLANs, QoS, storm control, and port security consistent with OTIC policy.

7. TESTING & ACCEPTANCE

1. Perform factory default verification, apply Owner-approved configuration, and verify: (a) Uplink integrity at 10G or 1G per design with error-free operation; (b) PoE delivery to connected endpoints to cumulative ≤ 480 W, observing per-port class and power draw.
2. Submit a commissioning report with interface status, optics DOM readings, PoE allocation, and final configuration backup.

8. TRAINING & DOCUMENTATION

1. Provide a minimum of 2 hours of orientation covering device access, backup/restore, and basic troubleshooting.

9. METHOD OF MEASUREMENT

1. Measured per each installed IE-3500-8U3X, complete with PSU(s), optics, cabling, configuration, and testing.
2. PSU(s) and optics furnished for the switch are subsidiary to this item.

10. BASIS OF PAYMENT

1. Pay Item: "ITEM 809 - ITS DEVICE, MISC.: NETWORK SWITCH" — Each.
2. Payment includes the Cisco IE-3500-8U3X base system; required network license per plans; DIN-rail mounting; alarm terminations; DIN-rail power supply sized for 480 W PoE plus device overhead (including breakers/fuses, DC distribution wiring, and grounding/bonding); optics (SFP/SFP+), patch cords, cabinet labeling; configuration, testing, documentation, and training.

ITEM 809 - ITS DEVICE, MISC.: POWER DISTRIBUTION UNIT (PDU)**Description**

Furnish, configure, install, and test a 1U, 19-inch rack-mounted, Ethernet-managed, individually switchable outlet strip (PDU) in an outdoor ITS field cabinet for remote power control and monitoring of ITS/network devices. Provide a complete, operational unit integrated into the cabinet power and communications systems as shown on the Plans.

Materials & Performance Requirements**A. Electrical**

Input: 120 VAC, single phase.

Outlets: Minimum (8) individually switchable outlets; NEMA 5-15R for 15A.

Protection: Internal overcurrent protection; MOV/EMI filtering.

Power cord: Minimum 6 ft.

B. Network & Management

- Integrated network controller supporting HTTPS, SNMPv3, SSH, NTP, Syslog, user roles, and password rotation.
- Per-outlet on/off/cycle, delayed power-up sequencing, and outlet groups.
- Event notifications (email/SNMP traps/Syslog) on alarms.
- Watchdog/Auto-Ping to cycle specified outlet(s) upon missed replies.
- IPv4, DHCP/static addressing.

C. Environmental & Physical

Operating temperature: 0 °C to +50 °C minimum.

Humidity: 5–95% non-condensing.

Form factor: 1U high, 19-in EIA-310 rack-mount; depth ≤ 12 in.

Standards: UL 62368-1 or UL 60950-1 listing; FCC Part 15 Class A; RoHS.

D. Security

TLS 1.2+; SNMPv3; role-based access; configurable password policy; audit/log export (Syslog).

Submittals

- Manufacturer datasheets and dimensional drawings.
- Configuration plan (IP addressing, authentication, NTP, SNMP OIDs, email/Syslog recipients, watchdog targets/sequences).
- Warranty statement.

Construction

1. Mount horizontally on the designated 1U rack position with manufacturer brackets.
2. Route the input cord to the dedicated receptacle.
3. Use cord-retention brackets or ties so plugs cannot loosen under vibration.
4. Label the PDU and each outlet with the connected device name.

5. Assign IP address; set time (NTP); load SNMP MIB; configure user roles; enable HTTPS/SSH; set email/SNMP/Syslog targets.

Testing & Acceptance

A. Field Test

- Demonstrate per-outlet control (on/off/cycle).
- Alarm/notification generation.
- Watchdog reboot of a test device.
- Correct labeling/documentation.

Payment

Pay for “ITEM 809 – ITS DEVICE, MISC.: POWER DISTRIBUTION UNIT (PDU)”, which includes the PDU, brackets, installations, labeling, configured, tested, and accepted along with submittal documentation.

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

0 IN State Line

TO

13 Bryan - Montpelier

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	164	230	236	249	245	227	147	174	260	271	264	208	229	159	217	276	286	290	280	294	150
	1 AM - 2 AM	122	186	220	213	219	183	98	127	216	241	208	184	187	116	162	234	245	242	236	231	144
	2 AM - 3 AM	94	157	178	183	179	152	94	108	192	187	193	175	154	102	132	197	208	228	220	186	97
	3 AM - 4 AM	83	144	165	163	174	131	76	92	180	177	174	155	137	90	122	162	175	189	185	154	79
	4 AM - 5 AM	101	152	173	175	168	126	69	114	165	176	176	158	136	91	122	184	189	200	195	139	80
	5 AM - 6 AM	119	198	211	223	206	141	79	145	207	221	209	175	150	85	138	231	238	239	246	169	93
	6 AM - 7 AM	172	270	268	286	283	177	83	196	311	294	283	234	177	103	210	299	320	327	310	204	103
	7 AM - 8 AM	216	328	371	346	349	202	108	260	365	368	326	315	214	147	276	380	386	393	388	229	143
	8 AM - 9 AM	246	385	371	369	349	218	141	299	424	373	377	363	252	194	294	439	444	456	390	288	188
	9 AM - 10 AM	287	394	409	413	387	275	188	344	456	419	402	426	315	250	320	433	479	473	446	351	280
	10 AM - 11 AM	322	434	428	434	393	329	258	385	480	409	442	444	385	331	393	506	498	518	485	429	353
	11 AM - 12 PM	373	489	470	498	438	422	338	450	531	479	490	493	448	396	434	534	565	581	529	511	455
	12 PM - 1 PM	449	537	488	558	496	463	428	504	552	521	529	531	505	496	521	561	599	645	596	575	605
	1 PM - 2 PM	470	550	536	601	523	507	504	523	588	499	558	561	527	540	556	632	650	693	657	627	664
	2 PM - 3 PM	513	562	543	607	575	519	571	544	604	545	562	589	517	587	601	648	642	728	695	637	740
	3 PM - 4 PM	572	561	595	625	578	534	626	621	642	547	563	630	510	639	659	662	685	742	766	653	855
	4 PM - 5 PM	619	604	603	632	590	516	642	658	643	577	567	652	521	679	693	690	713	760	784	648	863
	5 PM - 6 PM	604	638	632	600	618	501	603	673	659	546	533	650	494	660	711	722	718	770	773	612	835
	6 PM - 7 PM	582	589	583	554	555	450	556	614	624	548	488	587	438	583	668	653	679	724	691	536	821
	7 PM - 8 PM	540	520	536	514	473	378	488	545	546	481	430	514	386	517	606	591	581	638	608	474	685
	8 PM - 9 PM	434	421	460	465	419	327	398	490	487	426	356	427	334	436	519	515	511	533	471	384	570
	9 PM - 10 PM	380	379	375	408	356	280	338	436	397	384	309	374	282	348	445	435	446	456	418	310	479
	10 PM - 11 PM	323	321	350	346	306	230	266	380	352	322	261	311	223	276	391	362	381	407	385	259	361
	11 PM - Midnight	289	282	274	303	267	182	191	320	310	296	233	257	189	224	317	326	349	361	364	197	308

Close 2 Lanes	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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	10 PM - 11 PM																					
	11 PM - Midnight																					

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the latest permitted lane closure time and lane closures must be removed (i.e. tear down operations) prior to the earliest prohibited lane closure time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

0 IN State Line

TO

13 Bryan - Montpelier

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	192	280	286	309	342	305	172	238	292	308	338	363	311	209	300	351	359	394	407	357	223
	1 AM - 2 AM	158	228	236	261	263	247	137	184	240	254	290	302	249	170	203	291	288	353	350	309	178
	2 AM - 3 AM	137	185	215	218	223	199	113	138	204	231	242	261	216	144	163	240	252	282	288	234	142
	3 AM - 4 AM	120	171	180	189	191	170	105	118	165	193	216	212	185	108	144	192	215	245	253	216	112
	4 AM - 5 AM	111	172	191	185	209	165	92	129	176	194	195	220	173	93	152	203	199	228	224	211	118
	5 AM - 6 AM	156	236	248	254	239	190	93	141	208	267	238	261	175	104	163	244	249	275	281	201	125
6 AM - 7 AM	213	294	312	333	330	221	119	246	289	328	348	375	231	123	252	328	335	371	366	214	141	
7 AM - 8 AM	276	391	408	396	398	256	161	287	363	419	406	402	272	170	316	411	436	453	429	262	183	
8 AM - 9 AM	329	438	471	468	433	304	217	337	399	458	487	449	320	215	373	481	481	486	487	339	255	
9 AM - 10 AM	339	471	486	495	469	373	287	413	460	521	532	517	418	330	431	552	565	565	573	445	359	
10 AM - 11 AM	420	513	521	546	514	455	389	463	516	551	578	544	479	457	536	590	612	651	630	536	506	
11 AM - 12 PM	483	585	588	616	596	540	539	575	618	650	690	651	574	599	627	682	700	763	743	679	702	
12 PM - 1 PM	536	622	645	705	654	625	629	625	687	701	755	744	681	732	716	765	763	889	832	763	839	
1 PM - 2 PM	581	661	643	742	739	646	708	700	758	751	791	826	687	815	822	810	837	891	893	830	972	
2 PM - 3 PM	656	728	688	795	752	647	821	721	818	756	825	843	705	926	846	846	884	927	924	837	1,066	
3 PM - 4 PM	708	753	706	814	835	679	871	807	863	755	882	887	701	949	867	832	893	952	997	832	1,162	
4 PM - 5 PM	749	749	778	852	822	645	885	853	877	747	897	880	710	1,005	936	871	903	1,014	994	829	1,140	
5 PM - 6 PM	725	757	786	870	795	623	885	827	885	717	899	850	673	983	940	865	865	1,007	956	779	1,139	
6 PM - 7 PM	706	699	756	782	721	573	830	778	841	691	850	810	613	904	902	858	758	921	890	715	1,109	
7 PM - 8 PM	596	646	692	703	628	529	704	704	729	676	728	698	497	812	821	749	672	826	773	679	976	
8 PM - 9 PM	528	521	590	595	533	441	599	581	645	611	618	600	476	727	689	655	577	727	690	581	849	
9 PM - 10 PM	447	467	450	497	441	363	504	510	518	518	544	530	401	575	603	560	507	637	594	499	691	
10 PM - 11 PM	368	391	437	441	380	271	380	418	416	457	467	437	333	446	496	457	486	585	520	401	549	
11 PM - Midnight	367	325	400	409	341	232	286	350	340	384	425	418	266	315	424	391	438	504	419	307	410	

Close 2 Lanes	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
1 AM - 2 AM																						
2 AM - 3 AM																						
3 AM - 4 AM																						
4 AM - 5 AM																						
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8 PM - 9 PM																						
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11 PM - Midnight																						

NOTES:

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Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

0 IN State Line

TO

13 Bryan - Montpelier

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	302	305	327	385	405	380	251	326	359	345	378	404	380	264	263	322	316	348	424	394	248
	1 AM - 2 AM	216	255	280	314	332	280	180	232	291	286	323	302	303	192	204	266	269	298	336	297	159
	2 AM - 3 AM	166	203	230	252	278	243	151	178	249	249	246	276	218	138	154	210	220	241	275	235	145
	3 AM - 4 AM	160	165	191	229	244	202	123	144	191	211	234	235	189	122	134	171	199	208	224	191	113
	4 AM - 5 AM	156	171	212	229	234	197	113	144	212	213	236	230	190	110	145	182	199	210	228	183	112
	5 AM - 6 AM	192	216	245	261	284	198	125	180	253	276	259	273	207	128	166	222	230	248	268	188	107
	6 AM - 7 AM	229	294	334	343	384	248	136	268	341	382	378	380	221	141	236	274	312	337	329	214	132
	7 AM - 8 AM	316	374	424	452	427	267	173	375	463	541	554	499	288	189	299	357	399	431	414	268	177
	8 AM - 9 AM	376	425	479	534	474	345	258	468	562	619	594	540	371	260	327	397	444	479	461	326	250
	9 AM - 10 AM	450	523	561	567	559	426	367	506	585	627	609	616	494	417	376	436	499	521	472	403	369
	10 AM - 11 AM	575	567	618	632	604	551	519	534	620	673	715	657	611	560	462	493	528	568	529	536	509
	11 AM - 12 PM	675	693	720	782	782	721	732	652	712	776	819	800	755	781	533	609	589	647	635	621	689
	12 PM - 1 PM	771	768	814	890	887	854	931	772	794	862	880	942	884	953	637	698	690	767	753	701	836
	1 PM - 2 PM	850	823	862	935	972	919	1,020	847	874	897	996	977	986	1,089	683	695	750	798	786	718	917
	2 PM - 3 PM	878	883	903	980	1,035	957	1,114	902	933	953	1,034	1,043	960	1,138	751	747	756	860	859	812	1,032
	3 PM - 4 PM	953	889	905	1,006	1,095	943	1,077	975	1,010	1,059	1,136	1,068	1,004	1,237	805	782	796	859	935	778	1,021
	4 PM - 5 PM	955	989	907	1,041	1,081	876	1,103	1,057	1,056	1,144	1,187	1,075	957	1,198	857	833	831	912	940	743	1,078
	5 PM - 6 PM	971	949	916	1,064	1,036	863	1,131	1,084	1,095	1,156	1,170	1,053	893	1,191	861	834	853	938	957	715	979
	6 PM - 7 PM	942	949	888	957	943	851	1,031	939	948	975	989	973	846	1,121	814	758	807	861	847	674	941
	7 PM - 8 PM	813	802	825	890	838	761	979	813	806	832	848	869	771	1,056	697	695	689	776	763	652	850
	8 PM - 9 PM	672	669	695	759	732	649	901	688	666	714	693	746	687	902	587	554	612	664	614	670	708
	9 PM - 10 PM	551	563	575	645	652	530	744	584	569	625	618	648	572	718	496	490	519	565	536	661	566
	10 PM - 11 PM	482	480	498	551	561	425	560	514	475	505	563	523	456	581	430	425	454	502	459	562	445
	11 PM - Midnight	419	414	437	474	464	349	437	451	412	448	509	483	337	432	375	361	381	465	452	390	340

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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	10 PM - 11 PM																					
	11 PM - Midnight																					

NOTES:

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2. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the latest permitted lane closure time and lane closures must be removed (i.e. tear down operations) prior to the earliest prohibited lane closure time.

Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

0 IN State Line

TO

13 Bryan - Montpelier

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	260	337	306	328	359	331	219	214	295	289	330	318	304	206	214	314	291	293	316	253	157
	1 AM - 2 AM	199	271	265	279	304	263	203	176	258	264	261	281	236	195	142	253	260	245	285	214	123
	2 AM - 3 AM	162	226	210	237	240	206	166	123	194	209	238	246	184	127	117	212	218	218	216	193	101
	3 AM - 4 AM	128	183	199	217	228	174	126	112	175	192	203	203	171	101	117	187	191	197	216	145	84
	4 AM - 5 AM	140	183	199	209	220	170	119	138	199	203	211	231	177	97	125	200	204	205	231	149	80
	5 AM - 6 AM	165	233	246	250	253	168	111	167	224	237	277	267	191	110	154	235	250	246	268	155	86
	6 AM - 7 AM	229	323	319	345	345	221	130	226	329	339	331	341	223	141	195	305	341	336	327	207	108
	7 AM - 8 AM	271	385	396	394	379	259	162	287	397	392	425	433	279	187	261	376	390	412	390	235	133
	8 AM - 9 AM	323	415	453	468	418	317	231	322	438	461	484	443	302	234	290	406	431	442	400	275	203
	9 AM - 10 AM	374	458	456	493	469	407	324	377	471	480	503	436	380	348	316	469	465	475	427	334	267
	10 AM - 11 AM	444	534	521	541	533	510	481	421	500	535	525	493	464	465	375	514	510	531	492	454	379
	11 AM - 12 PM	531	603	577	633	630	607	691	529	599	589	623	577	573	664	446	563	601	593	549	539	536
	12 PM - 1 PM	632	658	666	731	700	658	823	578	618	619	678	657	665	772	536	642	672	631	657	599	616
	1 PM - 2 PM	672	693	710	787	732	665	911	622	654	677	714	704	716	868	533	695	711	676	668	655	736
	2 PM - 3 PM	746	702	765	855	794	662	942	670	661	677	772	738	692	948	581	720	702	708	729	651	796
	3 PM - 4 PM	848	762	729	868	867	667	998	720	675	702	789	777	714	1,020	584	745	707	755	731	680	845
	4 PM - 5 PM	836	786	783	854	890	655	981	790	749	701	807	803	718	1,003	689	786	726	784	767	680	830
	5 PM - 6 PM	809	779	823	872	866	616	943	756	712	744	829	791	680	945	685	760	713	745	731	627	800
	6 PM - 7 PM	765	740	738	815	795	589	913	691	620	642	738	727	639	829	623	700	659	692	701	552	748
	7 PM - 8 PM	677	655	655	726	661	531	771	638	545	597	645	586	567	720	553	614	639	639	573	463	644
	8 PM - 9 PM	585	545	582	628	601	458	648	517	476	492	545	531	519	613	483	556	577	504	484	368	537
	9 PM - 10 PM	515	458	486	534	505	424	549	474	409	440	471	453	499	505	440	468	541	423	411	346	414
	10 PM - 11 PM	450	425	432	485	437	352	415	391	365	439	423	426	388	368	388	385	417	366	375	270	322
	11 PM - Midnight	372	349	382	398	391	271	328	348	311	376	386	358	313	268	340	342	391	356	332	218	250

Close 2 Lanes	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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	6 PM - 7 PM																					
	7 PM - 8 PM																					
	8 PM - 9 PM																					
	9 PM - 10 PM																					
	10 PM - 11 PM																					
	11 PM - Midnight																					

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the latest permitted lane closure time and lane closures must be removed (i.e. tear down operations) prior to the earliest prohibited lane closure time.

Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

13 Bryan - Montpelier

TO

0 IN State Line

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	108	209	226	236	231	182	81	118	245	267	233	189	182	102	140	257	272	251	236	204	90
	1 AM - 2 AM	90	169	208	220	200	144	65	98	212	219	198	144	161	83	110	224	224	215	231	161	82
	2 AM - 3 AM	76	156	162	185	183	135	63	91	197	183	168	146	132	72	89	192	197	191	199	136	67
	3 AM - 4 AM	76	151	180	179	186	133	51	84	177	184	159	142	119	60	88	186	200	198	174	132	62
	4 AM - 5 AM	92	170	208	210	211	146	57	99	214	224	191	172	149	68	116	206	226	220	223	157	60
	5 AM - 6 AM	116	211	229	233	219	150	58	148	251	237	212	203	153	75	150	248	249	245	254	164	78
	6 AM - 7 AM	162	246	280	265	257	161	75	202	307	284	264	245	171	93	194	312	301	306	291	193	91
	7 AM - 8 AM	205	319	363	369	349	215	102	264	423	362	345	348	232	126	237	374	418	380	386	260	120
	8 AM - 9 AM	254	414	430	446	419	289	161	319	490	430	406	429	322	194	306	500	483	488	477	360	200
	9 AM - 10 AM	302	466	504	480	440	380	217	354	540	494	468	467	408	267	375	540	539	558	560	465	281
	10 AM - 11 AM	352	530	539	526	510	460	293	402	570	509	526	585	484	345	412	585	597	598	637	554	385
	11 AM - 12 PM	392	545	518	556	539	529	378	466	581	539	502	588	506	432	456	615	600	636	695	608	496
	12 PM - 1 PM	411	579	522	578	591	502	426	498	630	536	567	643	535	468	486	653	666	689	707	563	565
	1 PM - 2 PM	462	601	551	582	593	497	464	529	603	553	490	628	504	518	546	661	642	710	725	606	626
	2 PM - 3 PM	465	603	565	612	590	495	476	553	632	559	544	619	495	544	584	676	634	697	730	568	631
	3 PM - 4 PM	489	629	582	633	607	500	514	562	617	542	573	582	481	540	563	686	674	719	747	531	676
	4 PM - 5 PM	508	626	607	617	613	455	511	547	579	559	527	647	455	528	580	660	660	723	728	512	653
	5 PM - 6 PM	467	578	583	586	578	428	430	551	642	542	447	639	388	477	550	632	618	694	700	455	602
	6 PM - 7 PM	406	522	510	520	517	336	396	496	576	472	380	541	347	402	512	590	581	632	610	386	547
	7 PM - 8 PM	387	452	438	472	432	286	344	436	497	412	348	445	304	351	478	520	533	597	553	317	471
	8 PM - 9 PM	350	420	397	420	370	226	283	437	444	367	296	384	230	305	454	457	460	496	466	257	386
	9 PM - 10 PM	316	371	361	349	310	202	231	367	386	345	263	302	210	234	379	399	378	400	355	220	316
	10 PM - 11 PM	301	307	324	303	257	145	171	318	334	293	223	262	155	180	350	352	352	340	311	159	225
	11 PM - Midnight	252	277	271	264	213	107	128	293	261	268	194	203	133	142	294	307	301	299	261	130	163

Close 2 Lanes	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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	8 PM - 9 PM																					
	9 PM - 10 PM																					
	10 PM - 11 PM																					
	11 PM - Midnight																					

NOTES:

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Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

13 Bryan - Montpelier

TO

0 IN State Line

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	117	274	282	276	280	227	109	140	237	241	249	263	248	114	174	263	281	300	302	275	146
	1 AM - 2 AM	80	209	235	242	234	187	71	106	191	246	205	231	188	91	112	242	243	256	238	203	116
	2 AM - 3 AM	60	200	204	207	210	153	75	97	171	213	201	210	161	84	111	182	212	216	223	188	98
	3 AM - 4 AM	156	203	196	192	200	161	58	100	166	206	204	203	148	67	109	199	203	223	226	170	83
	4 AM - 5 AM	111	225	224	227	227	169	66	109	182	250	238	234	163	80	117	212	240	249	233	194	94
	5 AM - 6 AM	160	232	260	259	247	175	72	166	223	270	267	249	164	80	173	256	285	272	276	201	86
	6 AM - 7 AM	205	299	302	324	303	202	105	218	284	328	337	316	226	110	232	336	337	349	335	246	135
	7 AM - 8 AM	280	388	428	407	403	283	155	290	387	433	444	426	319	172	325	448	476	470	454	367	211
	8 AM - 9 AM	336	474	503	523	513	416	238	367	494	552	522	542	447	276	428	557	554	566	592	495	328
	9 AM - 10 AM	429	555	543	603	611	535	343	451	581	624	656	687	578	402	512	670	686	704	750	653	501
	10 AM - 11 AM	462	590	598	647	700	620	439	518	654	665	717	773	644	522	636	746	727	788	822	797	669
	11 AM - 12 PM	524	648	639	743	752	642	522	580	728	678	785	869	724	624	712	815	785	929	982	881	807
	12 PM - 1 PM	541	659	637	747	771	646	551	641	755	717	805	879	718	743	739	857	861	960	1,029	891	904
	1 PM - 2 PM	585	654	631	754	754	625	611	659	766	703	831	960	707	730	775	821	843	950	988	876	995
	2 PM - 3 PM	595	675	649	777	785	628	782	698	816	760	860	903	709	774	794	824	832	947	971	890	995
	3 PM - 4 PM	630	665	647	729	789	637	708	687	795	751	856	870	674	817	762	809	854	996	1,034	805	998
	4 PM - 5 PM	578	642	649	754	782	603	713	689	803	789	874	857	627	772	821	802	879	962	965	771	927
	5 PM - 6 PM	615	651	656	767	784	535	652	656	716	760	783	788	539	700	743	765	812	953	941	654	854
	6 PM - 7 PM	521	633	602	700	659	432	579	592	626	669	682	724	477	603	663	683	693	788	811	570	699
	7 PM - 8 PM	482	536	538	626	539	377	504	533	531	559	632	630	410	519	552	610	592	707	728	461	598
	8 PM - 9 PM	469	503	486	533	455	308	410	471	459	484	531	547	323	415	520	533	540	611	613	394	496
	9 PM - 10 PM	386	407	415	411	428	228	294	386	398	370	410	418	262	393	389	433	419	541	489	305	386
	10 PM - 11 PM	324	357	359	360	320	205	232	344	350	349	383	359	228	250	342	394	368	423	416	259	285
	11 PM - Midnight	258	312	304	322	257	146	153	304	281	306	302	288	148	181	303	337	327	374	343	205	223

Close 2 Lanes	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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	7 PM - 8 PM																					
	8 PM - 9 PM																					
	9 PM - 10 PM																					
	10 PM - 11 PM																					
	11 PM - Midnight																					

NOTES:

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Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

13 Bryan - Montpelier

TO

0 IN State Line

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	163	246	303	287	310	268	165	177	302	300	290	290	268	160	155	266	283	269	285	251	135
	1 AM - 2 AM	142	205	239	255	253	222	133	142	242	252	242	268	230	135	119	210	235	254	236	210	107
	2 AM - 3 AM	114	171	219	226	238	174	104	122	207	202	233	159	178	108	113	188	227	221	210	180	94
	3 AM - 4 AM	102	183	196	212	225	167	90	104	220	211	229	171	178	94	103	185	206	214	222	178	76
	4 AM - 5 AM	127	189	256	241	238	179	92	122	208	239	259	208	186	94	124	198	238	230	242	200	69
	5 AM - 6 AM	167	211	260	275	265	205	99	164	245	257	264	268	184	91	170	228	257	284	280	194	97
	6 AM - 7 AM	245	298	329	355	327	238	140	221	321	324	347	379	237	129	231	294	310	340	323	249	126
	7 AM - 8 AM	322	400	454	466	446	331	210	317	453	449	464	476	357	207	283	383	422	410	408	357	171
	8 AM - 9 AM	404	513	566	583	593	506	332	430	552	562	592	573	483	351	401	512	439	537	535	558	295
	9 AM - 10 AM	554	616	656	697	788	690	557	536	673	653	721	744	643	504	496	612	632	617	664	747	423
	10 AM - 11 AM	663	709	768	857	889	832	702	670	761	751	818	907	800	695	601	667	665	744	759	759	573
	11 AM - 12 PM	757	815	819	925	1,002	974	929	775	837	813	927	1,028	890	930	682	706	705	749	865	806	663
	12 PM - 1 PM	836	855	898	950	1,086	1,007	1,046	825	873	891	995	1,036	945	1,046	743	658	669	770	804	774	794
	1 PM - 2 PM	819	864	884	1,005	1,072	933	1,042	803	866	858	996	1,056	909	1,088	735	659	667	730	845	690	804
	2 PM - 3 PM	859	895	854	991	1,146	969	1,096	824	869	872	967	1,015	865	1,125	717	698	689	718	860	674	809
	3 PM - 4 PM	808	877	874	1,006	1,010	911	1,061	835	856	847	1,007	1,019	773	1,077	745	691	708	698	870	680	796
	4 PM - 5 PM	823	844	909	981	1,057	872	1,090	810	866	888	932	1,016	849	951	695	575	705	739	849	605	780
	5 PM - 6 PM	772	804	819	934	1,046	730	921	763	810	814	881	952	750	881	659	635	696	747	852	571	677
	6 PM - 7 PM	675	677	735	836	932	625	768	694	709	695	836	861	648	779	583	586	597	675	766	505	717
	7 PM - 8 PM	596	623	664	707	781	526	631	603	614	623	740	763	515	687	519	541	558	609	668	424	647
	8 PM - 9 PM	526	555	567	630	676	428	513	518	544	575	637	594	427	534	433	492	470	562	563	328	515
	9 PM - 10 PM	449	477	494	541	528	319	403	433	439	488	513	466	335	412	402	406	401	478	451	274	389
	10 PM - 11 PM	387	416	409	426	433	272	294	360	408	404	425	400	273	303	339	360	338	426	348	219	322
	11 PM - Midnight	350	338	337	369	351	215	245	325	360	363	353	342	206	240	325	319	323	350	340	178	208

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
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	9 PM - 10 PM																					
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	11 PM - Midnight																					

NOTES:

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Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

13 Bryan - Montpelier

TO

0 IN State Line

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

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Close 1 Lane	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	159	272	288	281	294	250	137	133	248	253	237	260	236	118	123	251	263	259	273	211	99
	1 AM - 2 AM	122	224	229	236	243	199	109	103	224	234	244	231	187	118	100	216	249	207	219	179	84
	2 AM - 3 AM	112	193	234	211	218	169	95	92	192	209	196	224	167	70	94	214	191	187	201	153	61
	3 AM - 4 AM	98	209	220	218	215	172	86	90	197	209	216	206	162	68	93	199	174	208	200	173	70
	4 AM - 5 AM	118	227	241	230	241	183	78	122	222	242	243	218	185	68	118	213	211	234	224	164	69
	5 AM - 6 AM	160	260	252	278	264	180	89	166	268	281	290	266	171	83	168	267	257	273	268	167	87
	6 AM - 7 AM	203	306	314	326	317	219	109	215	317	314	321	308	219	121	198	312	373	306	323	200	111
	7 AM - 8 AM	281	397	388	400	403	296	157	282	415	422	410	429	301	157	261	378	406	391	397	281	157
	8 AM - 9 AM	382	508	480	501	518	441	265	341	491	485	490	501	473	256	302	455	486	424	473	393	230
	9 AM - 10 AM	467	576	578	609	666	597	384	390	583	526	609	601	598	352	388	566	579	572	582	477	336
	10 AM - 11 AM	535	659	642	665	787	688	504	512	619	611	675	699	718	463	436	609	648	635	614	579	447
	11 AM - 12 PM	606	693	669	689	840	738	646	519	661	647	708	793	725	525	478	664	662	652	689	656	553
	12 PM - 1 PM	646	729	710	728	810	740	732	574	702	647	743	851	657	614	530	698	703	644	728	644	652
	1 PM - 2 PM	679	708	673	739	843	706	784	563	695	690	761	798	653	646	541	741	718	715	702	644	726
	2 PM - 3 PM	700	680	690	735	821	685	796	593	754	644	774	828	600	645	547	700	700	670	726	639	708
	3 PM - 4 PM	704	674	747	722	695	634	816	602	728	681	774	820	618	635	574	717	727	709	711	598	682
	4 PM - 5 PM	653	614	705	706	651	600	763	600	685	694	805	805	572	693	547	726	700	727	723	549	644
	5 PM - 6 PM	633	643	654	664	617	543	698	585	646	642	709	773	512	556	552	660	666	693	685	498	582
	6 PM - 7 PM	572	605	617	614	674	448	602	519	557	571	644	663	420	529	481	598	610	589	603	410	479
	7 PM - 8 PM	495	522	512	582	640	383	488	477	518	512	546	573	342	469	421	510	532	522	492	359	450
	8 PM - 9 PM	432	484	466	519	531	326	415	424	456	440	532	526	292	349	386	454	471	452	483	274	366
	9 PM - 10 PM	400	432	414	449	415	272	334	365	372	402	449	434	230	283	353	401	394	382	403	223	290
	10 PM - 11 PM	346	348	346	398	359	205	253	295	332	310	346	342	198	221	317	337	335	348	340	179	201
	11 PM - Midnight	292	289	301	323	277	171	191	272	289	310	300	273	145	170	278	302	302	293	260	133	150

Close 2 Lanes	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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	8 PM - 9 PM																					
	9 PM - 10 PM																					
	10 PM - 11 PM																					
	11 PM - Midnight																					

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Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

25 Archbold - Fayette

TO

34 Wauseon

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	164	232	239	249	248	228	149	174	261	275	263	211	230	162	217	276	288	292	281	295	155
	1 AM - 2 AM	120	188	219	214	219	186	99	129	210	242	212	186	188	117	163	234	242	246	238	231	145
	2 AM - 3 AM	95	160	179	185	178	151	94	109	180	189	195	175	153	102	130	196	210	228	220	186	97
	3 AM - 4 AM	84	147	166	163	177	133	79	92	180	179	177	156	138	90	124	161	175	191	187	156	78
	4 AM - 5 AM	106	158	176	179	174	132	70	117	170	183	180	158	140	93	123	188	197	206	203	145	80
	5 AM - 6 AM	127	207	224	235	214	146	81	152	217	231	216	187	155	85	147	242	250	255	263	175	95
	6 AM - 7 AM	208	302	303	318	312	188	87	230	343	324	303	255	189	110	244	332	358	360	340	213	106
	7 AM - 8 AM	241	360	402	380	377	210	111	297	407	398	356	338	226	154	319	419	417	431	423	247	153
	8 AM - 9 AM	272	417	408	402	376	236	154	341	457	405	401	383	273	207	332	464	478	485	428	312	207
	9 AM - 10 AM	314	418	438	439	412	298	212	368	479	437	425	443	349	272	348	461	503	493	469	381	306
	10 AM - 11 AM	347	462	456	454	423	366	284	409	510	436	464	463	419	367	421	533	522	547	513	465	382
	11 AM - 12 PM	397	516	493	530	469	460	363	484	556	506	512	519	496	434	468	563	593	611	565	562	492
	12 PM - 1 PM	473	561	530	585	519	498	458	536	584	549	560	562	549	527	550	595	626	682	633	615	639
	1 PM - 2 PM	497	576	573	634	553	548	530	551	625	530	582	589	564	578	579	669	686	721	696	652	695
	2 PM - 3 PM	546	594	573	638	613	560	595	574	629	578	579	623	560	618	628	679	679	760	735	669	765
	3 PM - 4 PM	607	597	641	663	620	578	647	661	697	590	598	674	545	666	711	719	731	796	819	690	880
	4 PM - 5 PM	657	642	652	689	643	555	663	704	692	623	604	708	560	707	743	748	764	820	850	690	888
	5 PM - 6 PM	648	682	680	656	666	537	621	723	716	593	567	695	525	694	751	769	770	823	833	638	858
	6 PM - 7 PM	610	614	612	585	600	477	578	649	661	573	508	633	466	604	697	679	714	759	745	557	842
	7 PM - 8 PM	552	539	545	537	497	395	508	562	573	497	444	539	406	529	616	605	601	656	642	485	696
	8 PM - 9 PM	452	432	468	479	438	329	403	500	504	439	362	441	340	447	529	521	523	546	480	392	578
	9 PM - 10 PM	383	383	375	414	364	296	339	445	405	383	312	378	283	352	455	437	452	458	426	315	485
	10 PM - 11 PM	325	324	350	351	312	234	268	379	354	321	262	309	229	280	396	363	381	406	379	265	367
	11 PM - Midnight	291	283	278	303	272	183	191	325	313	294	232	257	189	225	317	325	348	362	365	203	308

Close 2 Lanes	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

25 Archbold - Fayette

TO

34 Wauseon

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	195	286	286	307	342	303	176	240	292	313	336	362	313	208	302	353	360	396	406	356	231
	1 AM - 2 AM	158	228	234	265	264	247	135	185	241	255	290	305	247	166	206	291	293	354	348	311	183
	2 AM - 3 AM	138	187	213	218	224	199	115	138	205	233	244	262	220	140	163	240	252	281	289	235	142
	3 AM - 4 AM	118	169	179	192	192	170	104	119	165	191	216	211	183	107	143	195	216	245	254	215	112
	4 AM - 5 AM	113	173	195	189	213	170	95	131	178	196	200	224	174	94	153	205	203	230	226	217	118
	5 AM - 6 AM	168	249	262	261	252	198	99	152	220	282	256	274	181	108	170	262	264	292	295	208	129
	6 AM - 7 AM	248	330	347	370	362	234	127	282	317	370	385	408	239	127	286	359	371	405	393	234	147
	7 AM - 8 AM	318	425	441	429	434	275	172	333	397	455	453	436	290	180	356	451	465	482	463	281	196
	8 AM - 9 AM	366	471	505	501	463	327	234	367	426	491	515	482	353	239	408	519	512	520	523	365	279
	9 AM - 10 AM	374	497	518	516	499	406	309	439	492	552	555	540	456	361	471	592	604	608	617	497	399
	10 AM - 11 AM	450	537	553	572	545	490	422	502	557	580	604	581	528	496	582	626	648	688	684	587	552
	11 AM - 12 PM	508	621	615	647	638	587	578	611	665	676	722	696	630	660	671	718	744	800	792	735	764
	12 PM - 1 PM	576	652	676	742	696	677	675	655	730	731	792	795	731	781	761	793	816	935	883	801	891
	1 PM - 2 PM	607	695	670	775	773	689	747	733	792	794	830	871	723	867	860	850	880	945	947	867	1,030
	2 PM - 3 PM	700	753	710	831	791	694	852	749	856	799	864	891	732	974	892	891	929	993	975	875	1,117
	3 PM - 4 PM	750	803	753	866	886	717	909	860	906	838	933	952	743	992	914	878	945	1,037	1,059	881	1,213
	4 PM - 5 PM	792	802	820	900	885	692	923	903	928	843	957	950	752	1,047	994	934	968	1,097	1,068	872	1,196
	5 PM - 6 PM	765	810	851	926	854	655	914	869	933	842	953	907	708	1,018	991	926	947	1,085	1,032	816	1,184
	6 PM - 7 PM	734	728	793	822	771	599	857	816	887	817	888	849	643	940	933	894	825	966	934	749	1,147
	7 PM - 8 PM	609	670	709	729	656	547	713	723	761	774	750	720	516	837	846	772	729	848	794	703	1,002
	8 PM - 9 PM	533	535	600	604	546	445	606	596	662	658	633	625	494	736	705	670	624	737	701	594	870
	9 PM - 10 PM	451	470	453	499	446	367	508	514	525	534	545	538	414	578	616	568	538	643	595	516	705
	10 PM - 11 PM	377	394	432	448	381	280	385	421	418	458	466	439	340	448	501	464	502	588	526	418	556
	11 PM - Midnight	364	325	404	412	341	241	288	348	341	386	427	413	264	319	423	394	445	504	424	314	416

Close 2 Lanes	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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	9 PM - 10 PM																					
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	11 PM - Midnight																					

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Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

25 Archbold - Fayette

TO

34 Wauseon

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	2

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Revision Date: 9/1/2022

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	305	308	329	389	406	380	258	327	359	343	383	406	378	268	261	318	313	345	412	396	243
	1 AM - 2 AM	213	259	282	314	335	282	180	232	296	292	323	305	303	193	205	269	268	299	333	304	164
	2 AM - 3 AM	165	205	233	254	275	245	152	178	248	251	247	275	219	138	157	208	221	245	277	236	145
	3 AM - 4 AM	161	169	194	228	244	202	121	145	191	210	233	235	189	121	133	175	201	208	225	191	113
	4 AM - 5 AM	162	174	213	234	236	199	113	148	216	217	240	236	190	110	147	186	204	216	240	188	115
	5 AM - 6 AM	198	228	258	278	302	201	125	189	265	289	271	292	213	130	174	232	245	260	282	197	111
	6 AM - 7 AM	266	335	371	382	413	263	145	301	377	416	413	412	232	148	279	312	353	377	365	229	139
	7 AM - 8 AM	365	411	458	487	465	277	182	408	497	570	585	532	306	199	340	401	439	470	456	278	182
	8 AM - 9 AM	410	460	520	564	504	373	276	502	600	655	621	575	394	282	371	428	483	513	494	359	267
	9 AM - 10 AM	490	560	588	605	606	470	404	549	614	660	640	658	552	450	411	472	534	546	507	444	399
	10 AM - 11 AM	614	596	650	680	656	608	566	572	652	710	750	697	668	610	500	525	567	613	564	586	561
	11 AM - 12 PM	715	727	762	828	845	760	806	693	749	815	857	849	800	841	577	648	627	691	675	671	760
	12 PM - 1 PM	810	797	846	945	965	893	1,005	818	829	897	925	987	933	1,022	680	749	731	814	798	767	906
	1 PM - 2 PM	890	865	900	986	1,032	968	1,105	889	911	937	1,042	1,025	1,042	1,158	731	749	796	849	839	780	982
	2 PM - 3 PM	911	928	950	1,025	1,092	998	1,201	936	967	981	1,083	1,092	1,009	1,207	798	803	794	908	920	865	1,089
	3 PM - 4 PM	1,002	938	970	1,063	1,165	984	1,185	1,031	1,060	1,108	1,203	1,117	1,053	1,295	858	845	855	920	1,003	831	1,073
	4 PM - 5 PM	1,015	1,045	983	1,111	1,149	914	1,202	1,103	1,120	1,211	1,254	1,132	992	1,270	933	898	901	989	1,016	798	1,121
	5 PM - 6 PM	1,042	1,020	982	1,134	1,091	908	1,250	1,143	1,167	1,229	1,263	1,111	929	1,261	908	893	925	1,011	1,037	763	1,034
	6 PM - 7 PM	990	991	949	1,002	991	884	1,169	977	993	1,029	1,076	1,016	877	1,183	857	803	855	907	900	713	987
	7 PM - 8 PM	837	823	860	920	864	782	1,097	835	833	852	936	891	800	1,098	728	717	712	806	797	687	884
	8 PM - 9 PM	684	683	722	771	745	665	995	703	684	733	778	764	707	920	608	570	629	682	636	689	725
	9 PM - 10 PM	552	567	592	658	660	555	801	596	586	637	681	665	590	731	509	502	530	569	544	682	581
	10 PM - 11 PM	482	485	500	554	566	436	591	519	480	514	588	559	473	591	440	433	461	506	471	576	448
	11 PM - Midnight	424	418	441	478	475	358	447	455	417	451	512	490	345	434	381	366	383	464	459	397	346

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
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	9 PM - 10 PM																					
	10 PM - 11 PM																					
	11 PM - Midnight																					

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

25 Archbold - Fayette

TO

34 Wauseon

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	2

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Close 1 Lane	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	258	333	303	325	356	331	220	213	293	286	327	316	306	204	212	311	291	293	313	255	157
	1 AM - 2 AM	200	272	267	280	306	264	200	176	258	266	263	281	232	199	142	257	261	247	285	215	124
	2 AM - 3 AM	161	225	212	239	242	207	165	125	197	210	241	249	187	129	116	209	219	217	219	191	100
	3 AM - 4 AM	130	184	199	219	231	175	129	115	180	192	203	204	173	100	118	190	193	199	222	147	84
	4 AM - 5 AM	143	192	209	215	230	175	120	141	205	211	220	244	182	97	128	206	212	217	239	154	81
	5 AM - 6 AM	171	244	262	265	267	176	115	181	238	251	288	281	200	115	159	247	264	257	283	159	88
	6 AM - 7 AM	266	365	369	384	384	234	137	267	370	379	373	389	242	147	240	344	375	378	371	219	113
	7 AM - 8 AM	311	436	439	444	418	272	169	330	444	432	469	472	287	196	302	408	422	449	416	249	137
	8 AM - 9 AM	356	461	495	502	449	339	247	357	474	501	512	475	319	253	325	436	462	476	425	297	214
	9 AM - 10 AM	402	497	494	523	510	454	351	409	501	505	524	453	412	373	345	495	493	507	451	366	291
	10 AM - 11 AM	483	558	562	574	576	566	521	460	525	572	556	522	506	504	398	547	545	559	534	486	414
	11 AM - 12 PM	573	644	623	683	683	659	762	561	630	628	660	606	621	715	470	600	637	620	585	584	580
	12 PM - 1 PM	665	698	708	774	759	717	890	616	660	654	712	697	719	822	575	675	707	676	689	640	655
	1 PM - 2 PM	713	738	756	826	787	718	964	658	697	727	749	743	771	912	560	734	763	708	714	703	776
	2 PM - 3 PM	788	750	824	897	853	706	998	717	696	720	813	782	744	984	622	760	744	745	773	692	844
	3 PM - 4 PM	896	814	785	922	927	717	1,045	759	730	759	840	838	750	1,057	631	785	761	796	785	725	881
	4 PM - 5 PM	902	850	855	917	966	710	1,027	837	802	754	858	859	761	1,035	736	835	786	831	832	732	872
	5 PM - 6 PM	867	842	888	933	952	658	990	801	767	793	878	866	717	981	731	816	767	796	796	660	835
	6 PM - 7 PM	806	777	782	852	867	621	949	728	661	675	782	774	670	859	660	730	691	725	748	596	777
	7 PM - 8 PM	694	675	691	757	708	555	796	663	569	623	670	624	588	756	574	627	652	661	597	488	669
	8 PM - 9 PM	601	569	600	649	632	486	664	530	493	506	567	553	537	628	493	565	586	517	497	383	544
	9 PM - 10 PM	526	470	497	547	526	437	559	481	414	450	477	471	505	511	449	478	546	433	422	359	420
	10 PM - 11 PM	454	433	438	488	461	362	420	397	368	446	425	431	407	371	395	394	421	368	374	273	321
	11 PM - Midnight	375	355	385	399	399	278	333	350	314	381	380	354	322	268	338	345	390	359	330	218	251

Close 2 Lanes	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
	6 AM - 7 AM																					
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	10 PM - 11 PM																					
	11 PM - Midnight																					

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Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

34 Wauseon

TO

25 Archbold - Fayette

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	110	213	232	240	241	186	88	123	254	271	238	195	187	106	146	264	276	256	245	211	100
	1 AM - 2 AM	93	170	211	222	204	148	69	101	214	225	200	147	163	88	113	225	226	217	236	166	89
	2 AM - 3 AM	77	161	170	188	188	139	66	93	200	189	171	148	137	76	89	195	199	192	204	140	70
	3 AM - 4 AM	78	154	182	184	189	137	53	86	182	190	159	147	124	61	89	188	205	204	177	136	65
	4 AM - 5 AM	94	171	212	211	213	148	59	102	218	228	194	176	149	70	121	207	225	223	225	157	61
	5 AM - 6 AM	124	220	239	243	226	155	61	154	257	245	217	211	157	77	157	254	253	251	258	165	79
	6 AM - 7 AM	173	262	298	280	268	170	76	216	328	306	280	251	178	96	227	341	321	331	313	198	93
	7 AM - 8 AM	248	365	409	413	391	224	104	317	477	406	375	377	244	128	286	419	463	421	432	266	121
	8 AM - 9 AM	283	442	460	473	443	307	163	350	523	458	428	445	337	197	342	535	514	515	507	371	200
	9 AM - 10 AM	331	489	536	512	465	397	218	387	572	519	491	480	421	276	408	566	567	587	588	476	278
	10 AM - 11 AM	380	562	571	561	545	486	297	426	607	536	552	601	498	358	441	617	629	630	667	566	394
	11 AM - 12 PM	409	576	549	590	563	546	387	494	613	565	527	613	522	446	480	647	632	664	719	632	505
	12 PM - 1 PM	436	601	552	602	621	530	445	522	655	559	586	668	559	486	517	678	683	715	725	585	589
	1 PM - 2 PM	488	624	573	608	623	528	486	548	634	574	508	654	526	549	573	685	663	729	754	634	656
	2 PM - 3 PM	495	630	590	645	628	523	502	582	658	586	566	651	529	573	611	702	659	728	759	600	665
	3 PM - 4 PM	518	665	617	669	645	529	540	598	648	568	604	609	505	569	606	719	716	756	783	559	713
	4 PM - 5 PM	544	663	643	657	654	494	544	591	615	593	563	684	488	558	620	703	705	758	776	546	691
	5 PM - 6 PM	508	620	622	635	629	463	455	590	698	586	482	669	433	504	603	675	666	743	737	489	636
	6 PM - 7 PM	442	554	536	548	553	368	418	526	612	489	406	577	382	435	548	619	616	665	651	420	585
	7 PM - 8 PM	409	476	461	500	459	316	366	460	521	436	368	472	338	380	504	544	556	625	592	347	504
	8 PM - 9 PM	371	437	414	441	386	255	303	457	462	386	314	400	261	325	478	475	484	521	494	292	420
	9 PM - 10 PM	327	387	378	363	332	220	247	386	402	364	274	324	228	250	396	419	397	415	380	237	334
	10 PM - 11 PM	311	317	338	314	276	165	183	330	354	304	231	281	174	193	363	371	367	357	336	183	239
	11 PM - Midnight	259	282	275	272	227	117	134	298	267	278	202	216	147	148	302	315	307	306	275	143	175

Close 2 Lanes	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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NOTES:

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Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

34 Wauseon

TO

25 Archbold - Fayette

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

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Revision Date: 9/1/2022

Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	120	278	286	285	287	234	119	145	246	250	254	268	259	122	182	270	289	306	312	284	161
	1 AM - 2 AM	86	212	239	244	241	189	77	108	194	248	213	239	188	97	116	246	246	259	244	210	122
	2 AM - 3 AM	61	204	209	210	215	158	81	100	174	219	204	215	167	88	114	184	217	223	229	190	104
	3 AM - 4 AM	161	205	201	197	204	166	63	101	171	210	210	204	155	72	111	204	207	229	230	176	86
	4 AM - 5 AM	112	228	223	231	229	172	68	112	187	246	239	234	166	83	118	210	240	250	235	195	94
	5 AM - 6 AM	165	240	267	267	251	184	77	170	227	276	271	254	166	84	181	266	292	283	281	205	89
	6 AM - 7 AM	234	328	326	345	326	207	105	252	308	351	354	338	232	111	268	372	369	379	355	254	134
	7 AM - 8 AM	330	437	473	453	440	291	154	341	435	491	495	472	322	175	361	481	513	500	488	373	210
	8 AM - 9 AM	364	509	536	555	537	432	237	406	521	596	558	574	462	275	462	593	590	595	619	504	327
	9 AM - 10 AM	451	586	577	629	635	553	347	488	616	671	700	736	597	408	540	699	723	732	766	674	503
	10 AM - 11 AM	491	623	632	685	730	641	446	557	683	716	756	822	688	538	677	782	770	820	860	828	684
	11 AM - 12 PM	552	681	668	780	783	667	543	629	764	728	829	912	761	639	739	837	823	961	1,029	921	832
	12 PM - 1 PM	571	696	672	779	804	672	588	677	794	761	846	932	762	773	773	887	898	993	1,076	936	963
	1 PM - 2 PM	606	695	684	791	799	652	689	702	809	749	873	1,001	743	771	814	858	877	998	1,048	916	1,033
	2 PM - 3 PM	621	721	722	814	834	651	833	736	853	808	908	952	745	807	818	864	871	1,005	1,061	957	1,036
	3 PM - 4 PM	674	724	737	795	851	668	740	740	848	804	918	933	709	862	798	850	901	1,055	1,115	853	1,030
	4 PM - 5 PM	629	730	743	838	857	634	747	744	858	851	937	920	671	808	869	854	933	1,019	1,039	820	970
	5 PM - 6 PM	667	735	752	835	841	573	693	715	775	820	844	855	578	740	798	819	872	1,018	1,037	704	894
	6 PM - 7 PM	546	675	654	739	718	477	618	631	660	716	726	776	510	637	705	713	737	826	873	612	739
	7 PM - 8 PM	506	562	566	654	571	415	535	552	559	586	665	677	438	551	585	634	618	739	775	501	633
	8 PM - 9 PM	487	525	506	554	488	340	438	490	482	509	565	579	353	443	545	556	569	642	655	429	523
	9 PM - 10 PM	401	429	430	435	460	260	316	404	416	392	432	448	287	414	411	455	440	563	515	337	408
	10 PM - 11 PM	335	374	374	375	342	233	250	359	361	360	396	379	248	266	351	407	384	444	434	287	304
	11 PM - Midnight	267	320	307	328	265	166	161	314	294	314	312	307	162	190	312	346	337	387	366	224	234

Close 2 Lanes	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
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	9 PM - 10 PM																					
	10 PM - 11 PM																					
	11 PM - Midnight																					

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

34 Wauseon

TO

25 Archbold - Fayette

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

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Revision Date: 9/1/2022

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	170	255	313	294	321	278	181	185	309	312	300	298	283	173	161	272	289	274	294	264	147
	1 AM - 2 AM	148	213	244	261	261	233	147	149	244	256	245	273	236	148	123	216	239	258	241	219	118
	2 AM - 3 AM	118	178	222	231	243	178	109	126	210	205	238	162	183	115	115	192	231	227	216	187	99
	3 AM - 4 AM	105	189	199	219	232	172	93	109	223	215	233	172	182	98	107	188	210	218	225	182	79
	4 AM - 5 AM	126	188	255	239	238	178	93	124	211	239	260	208	186	96	125	200	239	232	243	202	72
	5 AM - 6 AM	182	226	275	288	273	205	101	177	257	271	277	274	186	94	182	235	264	291	294	196	100
	6 AM - 7 AM	281	335	364	382	352	243	142	261	364	360	380	407	243	130	258	321	338	374	355	264	129
	7 AM - 8 AM	357	438	482	500	478	337	208	357	498	491	511	513	365	205	343	440	481	460	465	373	175
	8 AM - 9 AM	435	531	595	608	614	508	327	459	589	600	623	609	501	353	437	547	499	571	580	577	294
	9 AM - 10 AM	575	652	692	732	821	701	559	563	712	691	759	782	675	505	538	645	703	667	702	780	431
	10 AM - 11 AM	694	728	803	899	939	856	711	708	800	794	864	945	839	721	648	702	749	812	814	872	585
	11 AM - 12 PM	799	843	854	951	1,045	1,017	961	813	877	859	964	1,070	933	951	717	756	750	805	952	910	695
	12 PM - 1 PM	863	899	939	992	1,143	1,047	1,100	872	905	937	1,039	1,086	998	1,081	777	722	757	849	969	860	833
	1 PM - 2 PM	852	884	927	1,035	1,158	976	1,078	843	899	895	1,063	1,116	967	1,125	776	762	776	866	977	754	849
	2 PM - 3 PM	895	927	890	1,034	1,230	1,013	1,162	866	907	915	1,028	1,112	922	1,158	769	790	803	874	986	729	842
	3 PM - 4 PM	874	917	923	1,067	1,116	957	1,133	888	904	907	1,073	1,130	826	1,119	816	763	813	889	994	741	836
	4 PM - 5 PM	871	891	967	1,044	1,152	913	1,156	857	922	951	1,002	1,110	916	996	766	683	808	932	954	650	833
	5 PM - 6 PM	820	865	877	1,003	1,132	777	956	825	872	874	978	1,054	799	917	735	769	782	886	973	621	736
	6 PM - 7 PM	714	717	781	895	996	663	803	733	756	729	890	956	689	818	629	661	653	761	860	552	769
	7 PM - 8 PM	621	653	693	745	836	554	669	625	639	652	775	809	552	723	561	597	598	666	729	453	688
	8 PM - 9 PM	550	583	591	660	716	466	548	543	569	605	672	640	462	561	462	520	503	625	603	369	552
	9 PM - 10 PM	473	495	515	567	569	343	424	450	459	507	543	501	367	430	429	427	428	510	491	311	415
	10 PM - 11 PM	401	435	422	444	459	296	309	371	424	421	448	418	305	322	352	372	358	448	383	242	342
	11 PM - Midnight	361	348	351	378	366	230	256	335	379	374	374	356	223	256	335	326	331	362	359	210	219

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
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	10 PM - 11 PM																					
	11 PM - Midnight																					

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

34 Wauseon

TO

25 Archbold - Fayette

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	166	276	293	286	308	263	150	139	252	261	244	267	249	124	128	255	266	265	277	217	105
	1 AM - 2 AM	127	230	235	244	249	206	120	106	229	240	248	237	188	122	104	218	254	212	225	182	89
	2 AM - 3 AM	115	199	239	216	222	174	102	96	196	212	200	228	172	76	96	218	194	192	204	158	63
	3 AM - 4 AM	99	215	226	223	220	177	91	93	205	212	222	213	166	70	96	207	175	213	206	175	72
	4 AM - 5 AM	117	228	244	232	241	186	81	125	225	246	243	222	187	71	121	212	213	232	226	165	71
	5 AM - 6 AM	172	270	263	286	274	186	94	180	284	290	304	279	185	90	173	276	269	284	274	177	92
6 AM - 7 AM	233	342	345	356	346	236	118	242	348	335	347	334	232	128	217	338	396	328	351	217	122	
7 AM - 8 AM	328	450	444	446	458	308	159	334	464	470	459	480	307	159	301	424	450	433	439	290	161	
8 AM - 9 AM	422	551	525	535	556	460	266	382	525	510	519	534	481	255	340	496	516	448	494	408	233	
9 AM - 10 AM	502	610	619	646	704	627	390	421	612	566	639	633	620	358	423	605	601	609	602	494	344	
10 AM - 11 AM	572	696	688	707	835	735	526	547	658	649	713	730	749	474	466	636	687	659	646	605	459	
11 AM - 12 PM	635	751	712	746	898	796	677	553	697	690	733	827	763	550	505	706	699	686	723	683	575	
12 PM - 1 PM	676	777	755	839	900	785	763	609	725	674	776	885	691	644	554	726	733	663	762	666	681	
1 PM - 2 PM	712	749	706	845	977	758	826	592	722	728	783	838	685	679	563	758	742	732	726	676	755	
2 PM - 3 PM	746	762	746	814	966	732	830	626	800	688	820	881	644	684	581	750	732	717	764	672	734	
3 PM - 4 PM	754	771	805	853	875	676	857	642	775	720	824	869	658	668	607	752	771	743	762	638	711	
4 PM - 5 PM	711	731	779	835	877	653	810	642	725	747	859	867	613	723	601	772	742	788	775	584	674	
5 PM - 6 PM	694	751	725	802	858	582	735	629	700	690	777	826	558	590	593	701	726	741	743	537	619	
6 PM - 7 PM	611	662	672	682	882	491	644	559	597	616	679	725	461	564	522	625	649	618	656	446	511	
7 PM - 8 PM	530	559	548	621	700	423	527	501	547	535	571	610	375	495	443	532	567	551	523	392	478	
8 PM - 9 PM	457	515	502	563	572	355	448	446	477	467	561	557	323	379	408	478	499	477	515	307	389	
9 PM - 10 PM	419	452	436	481	448	298	355	384	388	417	473	459	260	300	366	422	414	405	429	255	314	
10 PM - 11 PM	359	358	367	414	384	230	275	309	342	323	366	366	219	238	334	349	353	360	362	205	217	
11 PM - Midnight	301	299	313	335	300	190	202	279	299	318	309	286	164	177	283	310	305	302	280	148	156	

Close 2 Lanes	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
1 AM - 2 AM																						
2 AM - 3 AM																						
3 AM - 4 AM																						
4 AM - 5 AM																						
5 AM - 6 AM																						
6 AM - 7 AM																						
7 AM - 8 AM																						
8 AM - 9 AM																						
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6 PM - 7 PM																						
7 PM - 8 PM																						
8 PM - 9 PM																						
9 PM - 10 PM																						
10 PM - 11 PM																						
11 PM - Midnight																						

NOTES:

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2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

39 Delta - Lyons

TO

52 Toledo Airport

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	163	230	244	253	252	230	150	175	262	279	267	214	234	162	222	283	294	293	288	298	157
	1 AM - 2 AM	121	189	218	214	218	186	99	132	212	242	212	187	188	119	167	232	243	245	237	230	145
	2 AM - 3 AM	95	156	175	184	177	147	97	114	183	190	196	175	152	104	133	194	209	227	222	182	100
	3 AM - 4 AM	86	151	178	172	187	141	82	97	184	185	179	164	140	91	129	164	176	197	193	161	81
	4 AM - 5 AM	110	166	183	188	181	138	72	125	186	192	190	163	144	94	129	197	205	216	213	150	82
	5 AM - 6 AM	149	235	251	259	238	156	86	172	248	259	242	209	167	88	175	269	272	283	293	187	98
	6 AM - 7 AM	273	371	368	390	372	207	99	292	419	390	361	311	213	122	307	406	427	437	403	239	117
	7 AM - 8 AM	321	447	490	464	458	226	122	391	498	488	433	405	250	166	412	515	512	519	496	265	170
	8 AM - 9 AM	321	464	453	447	430	259	164	393	521	467	448	425	306	220	394	531	543	550	489	331	215
	9 AM - 10 AM	349	454	472	466	446	330	228	403	514	482	462	474	370	296	383	493	555	536	505	413	329
	10 AM - 11 AM	377	497	500	490	463	406	303	440	547	473	496	492	447	386	458	572	571	589	550	504	414
	11 AM - 12 PM	435	548	532	571	514	514	393	526	601	540	549	550	539	477	511	599	638	658	613	621	543
	12 PM - 1 PM	507	607	574	633	577	553	500	585	634	595	594	618	608	579	596	645	685	741	697	666	690
	1 PM - 2 PM	539	632	624	681	613	600	566	600	668	579	624	636	608	625	622	723	736	772	753	700	753
	2 PM - 3 PM	597	653	619	697	675	604	641	617	689	629	623	674	601	662	679	729	739	811	801	714	807
	3 PM - 4 PM	676	687	728	745	715	642	682	752	790	669	661	752	598	706	794	800	815	876	918	746	922
	4 PM - 5 PM	731	724	730	764	720	616	700	790	774	689	668	779	614	749	825	827	858	904	932	733	938
	5 PM - 6 PM	749	791	801	763	769	607	664	833	826	690	644	797	588	729	846	871	877	919	927	700	893
	6 PM - 7 PM	656	657	655	641	650	530	601	697	709	605	539	686	521	638	748	726	762	804	804	607	874
	7 PM - 8 PM	572	561	574	571	536	423	529	596	608	519	469	573	444	549	648	644	648	698	684	509	723
	8 PM - 9 PM	466	453	488	501	456	344	409	519	526	453	378	460	360	462	551	542	541	574	507	407	603
	9 PM - 10 PM	396	392	387	431	388	304	345	457	432	394	323	403	293	362	469	454	461	476	448	326	495
	10 PM - 11 PM	336	334	362	363	328	244	275	387	365	329	260	324	238	283	405	371	391	412	397	275	372
	11 PM - Midnight	293	289	283	309	277	194	194	329	319	300	236	263	193	231	320	333	356	366	369	215	307

Close 2 Lanes	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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	7 PM - 8 PM																					
	8 PM - 9 PM																					
	9 PM - 10 PM																					
	10 PM - 11 PM																					
	11 PM - Midnight																					

NOTES:

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3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

39 Delta - Lyons

TO

52 Toledo Airport

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	198	290	290	312	347	308	181	243	293	316	340	364	311	206	300	354	357	399	408	357	243
	1 AM - 2 AM	160	226	234	266	262	249	138	187	242	250	290	302	249	161	209	289	289	350	350	309	184
	2 AM - 3 AM	138	186	213	221	225	198	119	139	205	234	241	258	216	141	166	239	252	279	284	237	145
	3 AM - 4 AM	120	175	185	193	194	174	107	121	166	194	217	213	185	108	146	193	218	249	259	215	113
	4 AM - 5 AM	119	185	205	200	221	176	97	141	188	206	201	232	182	98	164	215	216	243	237	225	122
	5 AM - 6 AM	196	276	291	287	278	213	108	187	249	312	249	306	201	116	201	291	297	322	324	225	136
	6 AM - 7 AM	317	412	418	440	431	258	137	345	368	432	440	468	260	138	353	427	434	472	453	257	161
	7 AM - 8 AM	431	518	536	531	521	303	186	440	475	554	537	525	312	190	447	541	553	569	547	300	207
	8 AM - 9 AM	429	540	579	566	522	360	246	426	487	562	581	545	392	262	465	582	577	581	571	395	297
	9 AM - 10 AM	415	538	565	559	542	439	337	482	534	607	604	587	493	392	525	639	650	654	663	530	429
	10 AM - 11 AM	488	583	599	616	598	532	450	547	607	630	650	630	589	522	627	663	695	735	739	626	587
	11 AM - 12 PM	542	664	660	702	690	651	619	650	698	724	776	756	683	708	728	763	793	853	850	789	807
	12 PM - 1 PM	624	708	730	796	760	734	710	700	783	791	843	855	786	829	811	848	885	992	945	854	939
	1 PM - 2 PM	656	747	724	819	838	737	800	776	832	843	879	934	785	903	911	896	937	1,009	1,014	910	1,073
	2 PM - 3 PM	754	804	758	880	870	741	884	804	901	854	921	942	782	1,017	956	943	984	1,051	1,056	924	1,162
	3 PM - 4 PM	843	884	841	951	971	777	946	937	961	924	1,012	1,035	795	1,041	993	972	1,026	1,117	1,154	929	1,264
	4 PM - 5 PM	886	893	898	989	980	749	963	969	987	926	1,047	1,036	807	1,085	1,073	1,012	1,047	1,185	1,154	914	1,244
	5 PM - 6 PM	852	898	951	1,016	944	704	957	949	995	920	1,043	987	745	1,067	1,051	999	1,030	1,173	1,101	857	1,220
	6 PM - 7 PM	774	770	841	875	828	639	893	859	924	864	936	908	681	975	978	945	872	1,023	997	787	1,175
	7 PM - 8 PM	639	699	735	761	697	580	735	744	783	798	780	756	552	858	880	799	760	875	825	731	1,027
	8 PM - 9 PM	547	559	615	636	568	465	625	611	679	678	657	640	510	755	725	690	648	764	720	618	882
	9 PM - 10 PM	467	484	468	517	466	378	520	535	547	552	561	554	415	595	627	587	554	663	620	545	711
	10 PM - 11 PM	385	403	442	460	398	296	390	431	426	464	477	459	350	454	509	477	512	593	544	441	560
	11 PM - Midnight	368	329	410	417	347	243	290	347	344	390	428	415	269	320	423	398	450	504	438	334	420

Close 2 Lanes	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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	7 PM - 8 PM																					
	8 PM - 9 PM																					
	9 PM - 10 PM																					
	10 PM - 11 PM																					
	11 PM - Midnight																					

NOTES:

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3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

39 Delta - Lyons

TO

52 Toledo Airport

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

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Revision Date: 9/1/2022

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	310	307	327	387	404	384	262	337	358	345	381	408	378	270	262	324	317	348	425	394	254
	1 AM - 2 AM	218	260	277	313	336	283	187	237	290	295	320	303	301	194	207	269	269	297	336	303	169
	2 AM - 3 AM	171	203	231	253	273	245	157	183	250	248	249	271	221	141	158	205	217	248	273	232	144
	3 AM - 4 AM	164	167	194	229	243	205	123	148	194	215	237	237	196	121	137	182	212	214	235	195	121
	4 AM - 5 AM	170	183	224	245	244	205	114	155	223	228	249	242	194	114	155	194	211	228	254	193	118
	5 AM - 6 AM	226	257	284	306	327	212	133	219	295	317	302	318	224	137	206	266	273	295	314	209	118
	6 AM - 7 AM	327	398	437	445	474	279	158	365	450	482	485	469	254	154	336	379	413	433	431	245	152
	7 AM - 8 AM	451	499	544	568	534	294	193	490	589	666	667	607	319	207	429	499	533	565	545	297	199
	8 AM - 9 AM	463	483	579	616	552	401	298	556	662	722	687	634	417	294	425	496	545	581	548	374	284
	9 AM - 10 AM	533	572	646	659	643	516	427	604	655	710	689	706	594	476	454	508	573	594	549	477	433
	10 AM - 11 AM	665	589	689	723	697	653	601	619	693	768	795	752	713	643	549	566	617	659	622	638	596
	11 AM - 12 PM	771	720	806	874	901	818	862	753	793	857	907	904	864	879	617	688	671	750	724	730	810
	12 PM - 1 PM	865	790	900	987	1,020	953	1,056	874	882	962	982	1,048	987	1,076	728	799	790	872	867	828	964
	1 PM - 2 PM	948	862	949	1,042	1,093	1,022	1,163	946	958	989	1,094	1,088	1,091	1,210	773	801	855	907	906	836	1,026
	2 PM - 3 PM	974	936	1,014	1,080	1,157	1,058	1,249	988	1,012	1,033	1,135	1,162	1,057	1,243	843	859	866	969	988	912	1,119
	3 PM - 4 PM	1,079	1,005	1,045	1,147	1,259	1,046	1,226	1,097	1,133	1,190	1,283	1,193	1,108	1,343	996	997	998	1,063	1,157	894	1,110
	4 PM - 5 PM	1,078	1,116	1,050	1,194	1,226	977	1,256	1,169	1,203	1,292	1,335	1,212	1,032	1,313	1,030	990	1,000	1,083	1,120	849	1,166
	5 PM - 6 PM	1,117	1,084	1,047	1,209	1,186	962	1,284	1,206	1,248	1,310	1,367	1,194	978	1,303	1,001	990	1,026	1,102	1,145	820	1,076
	6 PM - 7 PM	1,021	1,026	990	1,055	1,062	929	1,202	1,019	1,047	1,075	1,142	1,084	916	1,213	908	861	911	968	970	756	1,022
	7 PM - 8 PM	864	844	879	948	908	814	1,110	854	860	882	960	919	826	1,118	756	750	752	836	851	721	901
	8 PM - 9 PM	698	700	742	794	782	692	1,003	716	703	750	795	790	717	932	632	611	667	721	680	687	744
	9 PM - 10 PM	563	573	611	676	691	566	806	611	602	658	710	689	604	751	523	527	561	602	568	686	595
	10 PM - 11 PM	488	495	510	565	587	453	596	521	488	525	598	572	481	620	452	444	475	525	488	573	456
	11 PM - Midnight	420	422	438	478	484	369	450	456	421	453	515	492	351	460	380	365	392	482	465	407	347

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
	6 AM - 7 AM																					
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	10 AM - 11 AM																					
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	4 PM - 5 PM																					
	5 PM - 6 PM																					
	6 PM - 7 PM																					
	7 PM - 8 PM																					
	8 PM - 9 PM																					
	9 PM - 10 PM																					
	10 PM - 11 PM																					
	11 PM - Midnight																					

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

39 Delta - Lyons

TO

52 Toledo Airport

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Close 1 Lane	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	262	338	308	330	360	332	220	214	296	286	330	320	305	208	214	313	295	295	317	255	158
	1 AM - 2 AM	203	269	267	280	304	262	196	178	260	264	263	280	233	204	145	259	261	248	287	216	128
	2 AM - 3 AM	164	225	210	237	241	206	168	128	196	209	240	245	182	131	120	206	217	212	212	188	104
	3 AM - 4 AM	132	196	212	229	245	187	137	117	199	213	221	220	188	106	121	203	208	212	234	158	90
	4 AM - 5 AM	150	199	216	228	236	179	121	145	216	221	229	253	187	98	135	219	218	228	247	157	82
	5 AM - 6 AM	201	271	293	298	292	188	120	209	267	272	312	311	213	117	186	277	293	285	312	178	94
	6 AM - 7 AM	321	428	424	450	437	253	146	327	431	440	430	446	261	156	296	407	433	438	426	233	126
	7 AM - 8 AM	404	527	539	535	494	289	177	431	539	531	563	564	302	204	388	494	517	538	508	260	144
	8 AM - 9 AM	417	526	562	566	509	362	258	418	536	567	571	539	341	272	386	496	525	545	484	315	230
	9 AM - 10 AM	441	536	539	573	549	490	376	451	540	541	574	500	449	403	383	532	545	548	492	393	317
	10 AM - 11 AM	521	592	602	625	625	623	557	502	569	614	612	568	548	527	432	588	583	597	576	526	450
	11 AM - 12 PM	614	675	661	724	746	719	794	603	666	665	704	657	675	752	515	646	688	672	643	630	606
	12 PM - 1 PM	703	754	751	831	819	779	938	657	706	697	769	750	773	865	618	724	760	717	752	697	704
	1 PM - 2 PM	760	784	805	881	851	780	1,011	701	742	771	802	789	822	946	616	785	810	765	768	747	824
	2 PM - 3 PM	840	805	882	958	915	758	1,038	767	750	763	862	838	795	1,024	680	825	807	803	851	743	890
	3 PM - 4 PM	1,017	931	908	1,045	1,045	787	1,082	855	834	865	954	953	810	1,079	728	900	873	907	894	792	931
	4 PM - 5 PM	992	941	946	1,024	1,044	760	1,062	911	880	853	947	955	823	1,067	820	911	882	926	928	791	919
	5 PM - 6 PM	959	937	1,003	1,031	1,058	724	1,037	902	876	905	980	978	784	1,016	834	923	875	900	904	722	875
	6 PM - 7 PM	853	830	835	910	929	662	977	777	718	727	825	843	715	884	698	786	745	779	806	645	801
	7 PM - 8 PM	716	692	722	792	747	578	814	692	610	658	698	658	597	764	599	666	682	697	633	515	691
	8 PM - 9 PM	623	586	622	671	658	501	676	553	510	536	584	575	553	643	512	599	605	540	522	403	567
	9 PM - 10 PM	550	481	514	559	544	447	567	490	424	467	490	488	514	517	468	493	560	453	439	372	430
	10 PM - 11 PM	460	437	447	498	469	373	427	409	376	454	430	443	411	377	405	404	433	376	386	284	328
	11 PM - Midnight	379	360	394	407	410	282	334	356	318	383	380	362	328	271	340	350	395	363	333	230	257

Close 2 Lanes	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
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	7 PM - 8 PM																					
	8 PM - 9 PM																					
	9 PM - 10 PM																					
	10 PM - 11 PM																					
	11 PM - Midnight																					

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

52 Toledo Airport

TO

39 Delta - Lyons

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	115	222	241	248	256	197	99	126	268	280	249	199	199	117	153	274	287	268	257	221	109
	1 AM - 2 AM	95	177	217	231	213	154	76	107	221	234	209	155	171	94	120	236	235	228	249	177	95
	2 AM - 3 AM	81	171	180	199	193	149	69	98	212	198	180	158	147	79	95	208	209	201	216	148	76
	3 AM - 4 AM	81	156	180	190	188	136	53	93	184	194	167	150	122	66	94	190	205	205	176	136	69
	4 AM - 5 AM	103	182	221	213	221	152	64	108	220	236	197	177	156	76	132	213	233	227	232	157	67
	5 AM - 6 AM	152	250	276	272	257	167	66	182	288	277	246	235	170	86	177	288	287	276	279	172	83
	6 AM - 7 AM	272	372	415	398	377	212	83	320	440	405	359	335	204	101	333	463	442	443	400	222	108
	7 AM - 8 AM	289	427	464	470	449	232	109	375	532	456	422	414	251	134	341	483	523	488	488	269	123
	8 AM - 9 AM	313	477	502	504	466	316	171	385	558	492	463	472	348	205	380	568	548	554	540	378	207
	9 AM - 10 AM	370	524	570	556	506	426	232	429	612	561	522	512	437	289	442	606	614	637	629	496	289
	10 AM - 11 AM	412	609	616	605	587	525	325	469	663	587	587	637	534	377	489	670	683	691	720	602	409
	11 AM - 12 PM	447	615	599	637	608	582	414	537	661	612	567	656	564	475	531	693	677	707	763	661	527
	12 PM - 1 PM	476	642	599	644	660	565	475	564	706	602	617	702	597	523	571	723	723	765	776	629	627
	1 PM - 2 PM	516	664	607	641	674	574	524	592	679	618	546	699	562	584	617	730	716	778	803	679	699
	2 PM - 3 PM	531	674	640	679	672	567	530	624	694	630	601	690	574	601	641	741	704	777	810	648	701
	3 PM - 4 PM	568	712	665	716	700	576	571	661	701	617	642	665	540	606	656	775	775	805	847	611	754
	4 PM - 5 PM	628	752	726	747	735	542	578	677	704	675	641	755	533	605	708	786	793	852	856	590	744
	5 PM - 6 PM	577	698	709	719	710	500	486	674	780	654	546	742	473	547	700	756	754	827	819	541	682
	6 PM - 7 PM	488	607	585	601	602	409	441	575	672	532	446	622	420	475	608	678	675	736	700	456	631
	7 PM - 8 PM	439	500	485	530	493	349	392	488	557	461	396	518	375	410	542	579	590	667	634	382	540
	8 PM - 9 PM	396	463	436	465	416	283	322	489	486	407	339	429	294	347	505	504	509	554	527	320	451
	9 PM - 10 PM	347	404	403	384	351	246	262	421	424	387	292	345	249	265	418	440	425	437	411	261	351
	10 PM - 11 PM	326	330	358	333	303	187	191	344	371	316	249	296	192	202	375	386	384	374	363	200	253
	11 PM - Midnight	269	294	289	286	244	131	140	309	282	286	217	236	160	156	316	328	322	319	288	153	185

Close 2 Lanes	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
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Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

52 Toledo Airport

TO

39 Delta - Lyons

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	2

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xxx Lane Closure Not Permitted

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Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	126	286	296	297	299	246	132	149	256	259	262	282	276	133	192	284	302	315	324	304	174
	1 AM - 2 AM	93	221	248	255	252	200	89	113	204	265	227	253	201	103	120	261	258	273	256	227	129
	2 AM - 3 AM	67	211	217	220	225	170	89	104	180	226	211	220	181	94	120	188	223	228	231	194	108
	3 AM - 4 AM	170	212	205	203	207	165	66	106	176	214	213	208	153	74	115	206	209	233	237	179	92
	4 AM - 5 AM	123	232	231	236	234	176	69	122	191	257	250	249	168	85	130	217	254	263	247	201	100
	5 AM - 6 AM	181	262	291	283	274	193	84	182	239	306	287	269	171	89	202	285	321	305	298	212	91
	6 AM - 7 AM	331	427	434	439	416	230	117	339	387	447	438	414	244	118	341	440	446	448	419	262	142
	7 AM - 8 AM	376	479	533	500	480	295	158	387	464	530	538	507	329	184	394	522	551	544	527	382	211
	8 AM - 9 AM	390	542	569	591	569	444	244	438	544	627	588	611	473	288	499	623	620	631	654	527	335
	9 AM - 10 AM	484	621	628	659	675	587	366	529	652	713	746	784	628	431	578	735	764	773	818	711	522
	10 AM - 11 AM	532	673	686	741	780	676	470	598	724	775	795	872	733	567	724	829	817	870	906	869	710
	11 AM - 12 PM	590	726	712	834	833	710	581	680	804	769	875	951	806	676	793	882	871	1,011	1,077	964	850
	12 PM - 1 PM	624	738	718	834	851	729	635	731	840	813	894	990	806	814	830	932	948	1,040	1,123	982	1,002
	1 PM - 2 PM	661	742	739	841	846	701	733	751	858	797	915	1,048	810	822	865	899	933	1,054	1,090	975	1,080
	2 PM - 3 PM	668	763	774	865	878	703	881	780	896	860	966	1,000	788	862	865	923	926	1,062	1,129	1,009	1,093
	3 PM - 4 PM	737	781	792	855	917	719	785	796	910	860	982	1,006	755	899	862	908	969	1,112	1,195	902	1,074
	4 PM - 5 PM	722	822	825	928	936	680	796	820	933	919	1,019	991	709	858	943	935	1,011	1,103	1,120	867	1,015
	5 PM - 6 PM	745	823	839	934	921	623	746	801	855	909	933	937	616	783	897	911	957	1,116	1,138	764	953
	6 PM - 7 PM	605	730	709	801	774	529	657	690	712	772	773	824	550	676	768	772	791	893	936	674	780
	7 PM - 8 PM	540	606	598	696	613	456	568	586	588	626	706	724	474	584	624	671	658	777	832	541	673
	8 PM - 9 PM	517	553	544	586	529	369	459	527	508	545	605	614	375	474	572	582	597	680	680	460	546
	9 PM - 10 PM	431	455	459	456	487	283	339	427	441	419	467	477	314	432	437	485	465	595	548	361	424
	10 PM - 11 PM	348	385	393	392	367	259	265	375	374	379	415	402	270	279	370	419	405	465	455	304	324
	11 PM - Midnight	282	335	322	345	290	184	172	327	304	327	322	333	177	197	325	362	350	401	390	237	246

Close 2 Lanes	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
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Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

52 Toledo Airport

TO

39 Delta - Lyons

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	178	271	325	310	335	296	203	194	318	328	315	309	299	195	173	284	298	286	306	279	163
	1 AM - 2 AM	155	224	255	271	274	245	151	153	259	270	260	280	251	159	131	226	249	269	249	229	131
	2 AM - 3 AM	122	183	226	236	250	190	111	131	215	212	243	168	185	122	122	201	241	238	228	198	105
	3 AM - 4 AM	111	196	201	224	234	168	96	118	228	216	237	167	185	104	110	192	206	218	226	186	81
	4 AM - 5 AM	138	194	269	249	248	183	98	132	222	252	271	180	189	97	136	207	250	241	252	200	75
	5 AM - 6 AM	206	246	302	310	292	213	105	197	278	299	303	250	191	97	209	265	298	320	320	206	105
	6 AM - 7 AM	350	396	429	441	409	251	143	319	423	423	429	402	243	133	429	493	511	536	515	288	128
	7 AM - 8 AM	395	487	528	555	535	346	209	397	540	550	561	536	370	207	399	486	535	521	519	374	185
	8 AM - 9 AM	470	556	619	657	657	519	335	486	618	627	654	628	508	363	475	580	539	617	613	575	302
	9 AM - 10 AM	615	683	731	767	866	741	564	591	750	740	800	822	701	525	584	686	746	710	747	802	450
	10 AM - 11 AM	729	770	838	945	997	897	719	751	852	851	909	990	878	762	697	740	803	858	870	899	604
	11 AM - 12 PM	850	894	901	1,011	1,112	1,043	986	855	919	910	1,009	1,118	980	1,000	785	828	814	861	1,025	958	727
	12 PM - 1 PM	914	954	984	1,044	1,194	1,093	1,125	912	950	979	1,095	1,138	1,044	1,132	851	770	812	920	1,035	914	880
	1 PM - 2 PM	898	929	970	1,081	1,221	1,016	1,109	893	941	947	1,120	1,175	1,010	1,170	843	829	829	933	1,057	813	893
	2 PM - 3 PM	928	977	951	1,098	1,284	1,046	1,191	916	957	963	1,089	1,169	964	1,200	851	841	866	943	1,065	801	888
	3 PM - 4 PM	932	968	993	1,138	1,196	1,005	1,171	953	967	978	1,142	1,219	875	1,164	892	843	880	977	1,106	813	886
	4 PM - 5 PM	935	979	1,052	1,142	1,253	956	1,188	927	1,003	1,020	1,090	1,202	976	1,044	877	782	915	1,057	1,089	723	890
	5 PM - 6 PM	909	952	970	1,096	1,213	817	1,009	913	965	970	1,071	1,145	851	956	837	876	897	1,021	1,086	678	786
	6 PM - 7 PM	776	782	834	947	1,063	699	844	786	813	791	952	1,030	740	870	689	716	726	843	933	607	826
	7 PM - 8 PM	653	693	737	794	874	597	704	653	669	697	821	849	591	758	594	641	642	704	787	486	740
	8 PM - 9 PM	582	612	630	694	742	486	578	572	596	637	714	670	489	591	492	555	538	663	641	405	587
	9 PM - 10 PM	499	518	541	597	598	370	446	472	485	533	569	532	398	452	451	453	454	537	514	338	449
	10 PM - 11 PM	416	450	439	466	480	318	328	382	446	438	469	446	326	338	375	384	383	468	413	267	367
	11 PM - Midnight	377	363	366	395	389	256	265	346	414	395	397	378	244	264	351	339	345	377	371	225	235

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
	6 AM - 7 AM																					
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	7 PM - 8 PM																					
	8 PM - 9 PM																					
	9 PM - 10 PM																					
	10 PM - 11 PM																					
	11 PM - Midnight																					

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

52 Toledo Airport

TO

39 Delta - Lyons

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Close 1 Lane	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	177	288	307	301	322	279	166	145	268	270	261	279	264	134	137	265	276	279	289	224	113
	1 AM - 2 AM	134	242	243	250	258	219	139	111	237	247	256	248	200	128	108	229	261	220	237	194	93
	2 AM - 3 AM	122	210	248	224	234	183	113	100	204	220	209	235	178	78	103	230	201	202	215	168	67
	3 AM - 4 AM	105	216	227	226	218	176	97	98	202	210	220	209	166	75	104	208	176	213	204	176	77
	4 AM - 5 AM	130	239	253	239	252	188	85	138	237	260	251	231	190	76	130	220	217	235	230	170	77
	5 AM - 6 AM	201	303	299	316	302	197	99	213	317	322	336	306	195	90	196	299	296	317	296	190	93
	6 AM - 7 AM	378	492	500	500	474	274	122	376	496	490	484	450	274	131	342	466	503	462	472	246	125
	7 AM - 8 AM	377	497	507	498	507	317	169	388	524	531	509	521	313	161	351	480	503	499	492	294	164
	8 AM - 9 AM	455	577	547	568	578	476	275	411	552	532	552	562	489	258	372	536	556	475	522	421	240
	9 AM - 10 AM	531	646	659	685	741	654	411	461	649	602	684	678	656	376	464	650	634	648	639	527	361
	10 AM - 11 AM	611	753	737	764	882	774	550	588	719	693	764	776	783	497	521	678	725	704	696	635	486
	11 AM - 12 PM	685	801	765	796	946	845	707	598	742	735	780	866	793	576	549	758	750	740	783	723	602
	12 PM - 1 PM	714	824	800	892	948	828	809	653	763	717	811	918	732	683	595	772	775	700	803	714	717
	1 PM - 2 PM	768	790	754	897	1,028	803	863	640	760	770	820	890	727	719	613	798	789	769	765	727	793
	2 PM - 3 PM	796	807	803	877	1,012	787	877	666	836	735	872	929	693	709	630	793	779	757	826	723	771
	3 PM - 4 PM	805	819	854	906	958	733	896	694	824	784	888	930	703	701	663	810	826	812	839	686	755
	4 PM - 5 PM	797	821	865	938	987	718	852	731	805	836	949	956	660	769	682	871	838	877	867	631	721
	5 PM - 6 PM	789	852	807	896	956	635	772	729	780	783	858	917	590	614	669	790	822	824	827	578	652
	6 PM - 7 PM	661	720	726	751	948	529	677	620	657	682	733	778	505	601	570	683	708	672	698	478	545
	7 PM - 8 PM	560	595	589	662	740	453	557	531	583	573	604	652	403	518	476	571	600	584	565	426	510
	8 PM - 9 PM	477	543	539	590	600	385	477	469	498	493	585	593	340	399	437	509	531	515	546	332	409
	9 PM - 10 PM	438	467	454	505	475	322	376	402	406	436	498	490	290	315	389	448	448	435	466	278	334
	10 PM - 11 PM	383	376	390	436	410	251	290	324	358	339	383	393	241	250	357	363	373	382	390	222	235
	11 PM - Midnight	317	312	326	348	320	212	218	292	315	336	329	305	185	185	295	326	319	315	306	166	165

Close 2 Lanes	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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	6 PM - 7 PM																					
	7 PM - 8 PM																					
	8 PM - 9 PM																					
	9 PM - 10 PM																					
	10 PM - 11 PM																					
	11 PM - Midnight																					

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

52 Toledo Airport

TO

59 Maumee - Toledo

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	162	230	246	254	251	229	150	174	260	279	265	212	232	162	216	282	295	293	287	293	157
	1 AM - 2 AM	120	189	219	212	217	184	99	133	212	242	211	187	185	118	166	231	242	244	235	231	142
	2 AM - 3 AM	96	157	176	186	177	144	96	115	186	191	195	172	149	102	133	193	209	225	219	181	101
	3 AM - 4 AM	90	154	181	176	191	140	84	101	187	186	184	167	140	94	134	172	180	204	194	162	82
	4 AM - 5 AM	121	179	194	204	190	141	73	137	198	200	198	172	145	96	143	210	219	231	227	152	85
	5 AM - 6 AM	179	267	276	289	264	168	90	196	279	286	265	233	178	95	205	295	299	308	320	199	104
	6 AM - 7 AM	337	449	451	468	448	229	116	382	505	470	431	378	243	134	396	499	518	525	491	268	135
	7 AM - 8 AM	422	565	598	576	561	253	133	501	627	608	535	484	274	182	531	627	629	638	609	301	187
	8 AM - 9 AM	382	521	511	510	485	278	178	453	593	532	495	470	321	234	455	593	613	618	551	356	232
	9 AM - 10 AM	368	476	489	486	466	349	245	421	538	504	480	498	385	314	400	526	572	557	520	430	342
	10 AM - 11 AM	380	511	513	505	477	412	324	453	555	486	505	500	456	409	474	583	582	607	549	513	424
	11 AM - 12 PM	445	555	545	582	518	530	408	525	609	557	556	552	544	480	509	606	647	675	621	615	542
	12 PM - 1 PM	510	616	591	642	580	565	509	595	647	607	602	618	611	584	602	648	691	736	698	666	694
	1 PM - 2 PM	545	644	630	688	621	610	577	609	680	593	639	651	610	620	633	744	746	775	758	703	748
	2 PM - 3 PM	610	663	635	700	685	596	649	636	714	635	635	685	596	664	691	737	748	807	805	716	807
	3 PM - 4 PM	693	704	745	774	734	646	689	774	812	689	677	762	597	710	814	824	839	891	938	740	913
	4 PM - 5 PM	764	762	776	793	744	618	701	817	811	720	707	794	614	751	857	865	888	935	951	735	930
	5 PM - 6 PM	781	829	838	795	789	616	670	870	867	727	678	812	595	740	881	914	922	960	957	713	905
	6 PM - 7 PM	661	674	678	654	655	542	610	715	723	623	554	692	532	643	768	752	787	826	815	628	866
	7 PM - 8 PM	581	570	589	585	545	432	537	610	624	530	474	569	454	547	659	658	656	704	698	519	713
	8 PM - 9 PM	465	457	492	497	455	346	401	519	532	457	384	463	359	459	558	553	547	581	516	406	587
	9 PM - 10 PM	403	402	394	440	391	304	344	461	437	402	327	403	298	365	471	461	470	490	450	334	483
	10 PM - 11 PM	337	342	363	363	334	241	273	390	368	331	261	325	238	284	402	369	389	412	397	284	367
	11 PM - Midnight	294	292	289	313	279	193	195	335	322	301	238	264	195	232	325	333	360	365	369	213	306

Close 2 Lanes	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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	7 PM - 8 PM																					
	8 PM - 9 PM																					
	9 PM - 10 PM																					
	10 PM - 11 PM																					
	11 PM - Midnight																					

NOTES:

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2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

52 Toledo Airport

TO

59 Maumee - Toledo

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	198	291	291	310	342	304	182	240	290	315	339	361	312	205	297	350	361	396	404	318	238
	1 AM - 2 AM	162	225	236	266	260	245	137	186	239	252	289	299	245	157	203	287	289	346	345	255	177
	2 AM - 3 AM	136	185	210	220	226	197	115	140	204	236	240	259	215	133	167	239	252	281	284	195	141
	3 AM - 4 AM	123	179	193	200	197	173	110	123	169	199	222	217	187	109	146	195	222	253	260	175	113
	4 AM - 5 AM	136	203	217	215	231	180	100	158	205	221	223	246	186	101	181	232	233	262	254	178	123
	5 AM - 6 AM	231	310	322	323	310	230	114	226	283	351	298	348	220	122	243	330	336	365	365	200	143
	6 AM - 7 AM	397	499	501	521	505	281	149	435	440	525	528	550	282	148	428	510	519	549	525	270	173
	7 AM - 8 AM	553	649	662	665	631	329	200	561	586	690	671	644	340	211	540	649	664	676	633	321	220
	8 AM - 9 AM	499	600	633	620	579	379	256	498	541	628	654	601	412	272	521	627	634	638	618	418	310
	9 AM - 10 AM	436	566	584	584	564	461	354	498	557	619	639	606	506	410	551	654	664	671	689	552	435
	10 AM - 11 AM	489	594	619	635	608	549	472	556	619	646	662	638	613	530	635	677	706	743	744	638	597
	11 AM - 12 PM	547	672	670	708	699	657	615	663	701	736	792	766	704	703	729	777	804	858	853	795	787
	12 PM - 1 PM	630	719	738	801	767	731	722	702	788	795	852	873	804	839	805	852	903	1,003	960	854	928
	1 PM - 2 PM	660	769	747	835	857	746	791	780	843	857	893	952	806	904	915	906	945	1,021	1,027	914	1,066
	2 PM - 3 PM	763	818	778	896	877	747	875	827	914	878	940	961	798	1,005	962	951	990	1,074	1,069	938	1,139
	3 PM - 4 PM	858	901	864	973	994	783	946	963	973	953	1,037	1,062	801	1,034	1,008	982	1,027	1,132	1,179	930	1,254
	4 PM - 5 PM	912	928	939	1,033	1,000	749	962	1,009	1,004	960	1,088	1,059	817	1,060	1,089	1,039	1,078	1,220	1,180	929	1,217
	5 PM - 6 PM	891	933	990	1,052	964	717	969	992	1,018	961	1,087	1,003	756	1,059	1,076	1,018	1,067	1,211	1,121	868	1,194
	6 PM - 7 PM	787	795	855	888	837	651	882	874	923	887	951	910	677	969	985	954	883	1,037	988	790	1,135
	7 PM - 8 PM	643	715	744	770	706	585	741	763	789	810	800	760	565	838	876	809	768	885	821	728	995
	8 PM - 9 PM	553	569	617	637	569	461	615	616	675	696	666	636	510	742	725	701	653	768	716	618	843
	9 PM - 10 PM	468	491	476	529	469	380	511	538	554	561	567	548	417	583	626	598	559	666	619	532	686
	10 PM - 11 PM	384	402	438	454	394	299	379	429	423	460	467	456	345	446	508	473	507	586	538	425	545
	11 PM - Midnight	372	333	412	416	346	248	283	351	346	392	424	411	273	318	422	394	447	499	420	330	416

Close 2 Lanes	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
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	5 AM - 6 AM																					
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	10 PM - 11 PM																					
	11 PM - Midnight																					

NOTES:

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3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

52 Toledo Airport

TO

59 Maumee - Toledo

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	304	305	326	381	392	381	258	329	357	346	380	404	380	261	261	326	318	346	423	391	249
	1 AM - 2 AM	217	260	273	313	333	278	183	233	288	292	317	300	298	193	207	268	269	296	339	304	169
	2 AM - 3 AM	170	202	230	251	274	241	149	181	251	248	248	269	217	137	163	208	221	250	275	231	148
	3 AM - 4 AM	164	172	203	232	245	203	122	149	198	224	241	245	193	121	140	185	215	218	236	197	121
	4 AM - 5 AM	184	195	239	263	257	208	114	167	237	242	263	254	198	114	168	209	223	241	262	195	119
	5 AM - 6 AM	262	294	321	346	364	224	141	262	336	353	347	353	238	143	235	302	304	328	348	224	124
	6 AM - 7 AM	409	479	512	527	553	294	169	434	533	556	566	541	271	159	412	453	500	516	508	269	159
	7 AM - 8 AM	539	596	642	665	627	322	210	598	685	793	778	703	329	213	545	621	649	684	658	331	215
	8 AM - 9 AM	523	539	627	676	594	426	319	609	712	783	754	690	433	301	508	569	626	658	617	402	304
	9 AM - 10 AM	546	604	669	674	671	544	435	626	680	724	719	726	610	486	472	542	591	618	566	510	450
	10 AM - 11 AM	675	621	700	737	715	669	602	633	707	785	802	767	722	643	566	588	633	672	640	668	609
	11 AM - 12 PM	771	756	811	879	899	838	850	757	805	870	920	920	874	862	623	695	681	763	733	757	801
	12 PM - 1 PM	872	844	912	1,009	1,019	956	1,038	878	898	961	992	1,059	998	1,056	741	813	797	880	888	844	943
	1 PM - 2 PM	959	918	949	1,058	1,115	1,027	1,142	958	973	1,001	1,107	1,094	1,095	1,183	786	829	871	920	918	862	1,018
	2 PM - 3 PM	982	983	1,020	1,093	1,174	1,069	1,225	1,001	1,035	1,055	1,153	1,182	1,056	1,216	863	881	877	989	1,018	929	1,096
	3 PM - 4 PM	1,086	1,047	1,057	1,154	1,276	1,039	1,214	1,111	1,156	1,206	1,303	1,210	1,107	1,319	1,017	1,012	1,019	1,089	1,182	909	1,106
	4 PM - 5 PM	1,095	1,161	1,065	1,213	1,252	976	1,241	1,189	1,238	1,319	1,367	1,238	1,043	1,277	1,073	1,036	1,031	1,126	1,164	862	1,165
	5 PM - 6 PM	1,133	1,118	1,081	1,229	1,212	970	1,258	1,237	1,278	1,345	1,399	1,217	979	1,268	1,046	1,023	1,056	1,141	1,187	824	1,075
	6 PM - 7 PM	1,023	1,029	1,001	1,067	1,060	924	1,173	1,019	1,064	1,089	1,161	1,093	897	1,187	922	875	929	992	979	766	1,022
	7 PM - 8 PM	869	853	875	954	905	804	1,074	850	867	886	966	918	817	1,088	766	758	762	849	851	710	884
	8 PM - 9 PM	698	697	748	792	774	675	966	718	703	752	805	790	700	907	631	611	672	725	683	645	724
	9 PM - 10 PM	566	578	606	669	686	551	775	611	603	655	706	699	596	734	524	530	561	600	563	610	576
	10 PM - 11 PM	484	487	509	557	578	439	579	521	492	524	598	577	472	609	453	442	475	521	482	515	448
	11 PM - Midnight	410	416	437	472	481	355	444	457	419	452	511	482	348	458	384	364	390	478	455	384	347

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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	5 PM - 6 PM																					
	6 PM - 7 PM																					
	7 PM - 8 PM																					
	8 PM - 9 PM																					
	9 PM - 10 PM																					
	10 PM - 11 PM																					
	11 PM - Midnight																					

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Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

52 Toledo Airport

TO

59 Maumee - Toledo

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	262	338	309	328	358	324	221	218	298	286	327	322	305	208	214	310	294	297	316	251	155
	1 AM - 2 AM	202	266	264	279	303	257	182	175	262	265	265	282	232	200	144	260	261	249	287	215	128
	2 AM - 3 AM	163	229	213	237	242	204	163	130	199	213	243	245	183	129	121	206	218	214	213	185	102
	3 AM - 4 AM	136	197	215	229	246	186	136	119	200	213	225	227	185	106	125	204	211	216	235	159	91
	4 AM - 5 AM	163	208	226	243	242	180	122	157	226	228	233	258	186	100	144	225	227	240	255	158	84
	5 AM - 6 AM	230	311	328	330	322	197	125	236	298	303	337	333	219	121	220	311	326	317	343	186	102
	6 AM - 7 AM	399	515	516	539	518	281	156	413	520	523	509	530	285	166	372	493	514	522	501	255	145
	7 AM - 8 AM	525	649	664	661	600	321	186	549	660	652	672	671	332	215	501	612	631	660	610	280	153
	8 AM - 9 AM	497	603	640	648	571	392	272	494	617	632	651	605	363	292	457	568	594	618	553	337	244
	9 AM - 10 AM	467	564	574	613	569	520	394	471	560	567	603	523	469	421	407	559	567	575	505	398	332
	10 AM - 11 AM	538	606	618	652	641	653	573	520	590	630	622	585	554	545	452	600	601	618	591	534	465
	11 AM - 12 PM	616	687	677	741	755	739	794	615	681	674	718	672	683	766	520	655	696	670	650	629	611
	12 PM - 1 PM	716	773	762	842	833	790	932	658	718	698	777	759	784	865	620	729	765	725	763	703	708
	1 PM - 2 PM	768	801	825	905	855	796	1,004	709	759	788	820	802	830	948	636	803	821	771	779	748	814
	2 PM - 3 PM	854	828	899	978	942	767	1,031	781	774	782	887	851	790	1,018	695	833	827	810	866	743	888
	3 PM - 4 PM	1,048	949	937	1,081	1,073	800	1,078	885	861	886	986	982	811	1,083	753	919	890	930	925	794	928
	4 PM - 5 PM	1,037	988	978	1,072	1,089	770	1,054	954	920	896	989	1,008	839	1,081	857	939	908	965	962	784	920
	5 PM - 6 PM	1,003	981	1,049	1,072	1,090	744	1,048	942	926	958	1,033	1,007	805	1,021	877	962	910	939	941	738	881
	6 PM - 7 PM	863	852	857	934	954	668	972	793	741	748	856	870	723	872	715	808	769	812	828	653	796
	7 PM - 8 PM	716	704	731	806	760	585	809	706	628	677	709	665	601	753	600	677	696	714	645	512	687
	8 PM - 9 PM	621	589	633	679	660	495	663	559	519	542	592	572	539	644	521	601	605	546	526	408	556
	9 PM - 10 PM	553	490	518	559	545	443	557	493	430	473	496	487	496	509	475	498	565	462	446	369	425
	10 PM - 11 PM	464	441	445	496	469	382	421	416	379	456	432	445	405	371	408	402	435	382	391	290	329
	11 PM - Midnight	379	366	403	408	404	293	337	360	318	386	378	357	326	277	342	353	393	362	334	230	255

Close 2 Lanes	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

59 Maumee - Toledo

TO

52 Toledo Airport

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	115	225	245	255	258	200	101	129	270	283	253	204	207	123	160	278	289	272	260	230	114
	1 AM - 2 AM	98	180	220	233	212	157	79	109	223	237	211	159	172	97	122	239	238	233	253	182	97
	2 AM - 3 AM	80	170	179	201	194	151	74	99	212	199	181	162	151	81	96	208	211	204	217	151	81
	3 AM - 4 AM	82	158	181	193	188	136	55	94	184	194	169	152	121	67	94	190	204	204	175	136	69
	4 AM - 5 AM	105	188	225	215	222	149	64	112	226	240	201	179	155	77	134	215	237	230	233	156	68
	5 AM - 6 AM	160	260	289	286	267	171	69	190	303	293	260	241	178	94	187	304	304	291	291	178	90
	6 AM - 7 AM	299	408	445	435	409	221	92	351	480	449	387	355	212	112	368	490	481	478	426	236	122
	7 AM - 8 AM	335	469	505	513	491	238	118	426	574	500	469	448	263	141	383	531	570	538	528	275	134
	8 AM - 9 AM	327	503	519	533	486	313	176	412	582	515	479	481	348	214	396	588	568	575	557	380	210
	9 AM - 10 AM	379	537	587	576	513	436	252	434	627	576	536	523	440	301	448	628	625	651	629	496	297
	10 AM - 11 AM	420	613	635	618	595	544	338	475	681	602	598	638	546	391	488	681	688	697	721	599	415
	11 AM - 12 PM	457	621	610	637	621	595	425	546	668	626	578	663	572	486	541	704	687	718	768	666	534
	12 PM - 1 PM	480	648	608	657	665	573	488	577	714	615	627	705	601	548	585	734	741	768	786	643	635
	1 PM - 2 PM	523	682	627	660	691	577	531	600	694	627	561	704	565	598	630	749	735	793	806	691	713
	2 PM - 3 PM	544	687	656	705	690	589	538	642	718	653	618	699	587	613	659	766	721	801	818	662	707
	3 PM - 4 PM	619	778	728	776	761	593	580	714	771	684	693	705	561	608	713	845	846	865	910	633	760
	4 PM - 5 PM	703	830	804	828	802	562	584	756	796	743	720	813	559	615	788	874	879	930	925	615	759
	5 PM - 6 PM	652	791	788	805	780	509	499	758	865	726	611	799	490	559	790	840	839	908	878	558	703
	6 PM - 7 PM	528	642	622	635	632	426	455	606	717	577	469	647	440	486	649	713	712	772	731	471	650
	7 PM - 8 PM	457	523	497	545	508	357	398	502	580	473	409	530	374	419	559	593	604	688	637	391	549
	8 PM - 9 PM	402	476	445	474	422	291	329	505	494	416	345	441	295	355	503	518	524	570	530	326	452
	9 PM - 10 PM	355	423	415	393	358	253	271	434	442	402	299	348	257	273	432	448	442	451	417	271	360
	10 PM - 11 PM	335	338	363	342	310	204	199	360	381	321	256	300	207	213	388	396	397	385	372	212	266
	11 PM - Midnight	271	300	297	295	252	142	144	316	291	291	225	248	170	159	321	335	331	329	297	162	192

Close 2 Lanes	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
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	10 PM - 11 PM																					
	11 PM - Midnight																					

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Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

59 Maumee - Toledo

TO

52 Toledo Airport

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

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Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	128	288	299	303	301	253	137	154	259	262	264	285	282	144	192	288	309	320	329	309	181
	1 AM - 2 AM	93	224	252	259	252	205	93	114	207	267	230	253	204	107	122	264	262	276	256	235	134
	2 AM - 3 AM	69	210	219	221	226	173	92	108	182	226	213	220	184	99	124	190	226	231	234	199	115
	3 AM - 4 AM	173	211	201	201	207	166	68	105	176	211	212	205	150	76	116	207	208	231	236	178	92
	4 AM - 5 AM	127	234	243	244	237	176	71	125	190	258	250	247	166	86	131	218	253	266	245	204	103
	5 AM - 6 AM	193	277	305	298	287	195	89	197	258	330	310	289	182	100	218	300	341	322	315	221	99
	6 AM - 7 AM	372	467	474	480	445	246	137	378	425	494	479	446	267	137	371	471	479	481	442	276	158
	7 AM - 8 AM	433	516	576	538	519	304	170	427	497	566	575	540	339	199	432	543	575	570	555	389	230
	8 AM - 9 AM	405	563	585	610	586	445	248	460	557	638	618	620	473	293	514	634	637	649	665	524	335
	9 AM - 10 AM	476	640	645	668	675	577	368	541	669	735	763	787	628	431	576	737	770	785	820	695	516
	10 AM - 11 AM	545	680	705	746	779	667	476	606	730	788	803	871	748	573	726	835	828	873	897	852	704
	11 AM - 12 PM	599	735	721	833	830	709	588	685	811	778	874	945	817	685	794	894	891	1,013	1,066	957	848
	12 PM - 1 PM	638	756	728	842	858	743	646	746	846	832	898	997	817	836	825	942	957	1,050	1,113	983	1,002
	1 PM - 2 PM	674	757	759	852	852	716	741	770	870	823	941	1,053	815	839	881	912	945	1,062	1,093	983	1,088
	2 PM - 3 PM	691	789	799	882	899	722	884	804	923	882	993	1,017	803	879	886	945	940	1,078	1,134	1,017	1,102
	3 PM - 4 PM	792	842	860	915	956	725	774	853	971	935	1,062	1,060	768	905	914	977	1,035	1,170	1,223	918	1,078
	4 PM - 5 PM	809	915	911	1,011	1,001	700	803	918	1,028	1,031	1,100	1,060	730	871	1,024	1,041	1,094	1,184	1,186	883	1,031
	5 PM - 6 PM	823	902	931	1,012	980	632	762	894	935	1,007	1,020	978	641	797	977	992	1,047	1,204	1,168	774	965
	6 PM - 7 PM	635	762	746	827	796	545	680	728	756	816	810	848	577	689	795	811	821	911	950	683	796
	7 PM - 8 PM	564	635	613	706	624	474	577	613	611	652	721	725	490	606	638	705	673	788	828	563	690
	8 PM - 9 PM	528	567	554	594	534	376	464	539	524	562	609	618	383	495	574	590	603	685	684	465	560
	9 PM - 10 PM	437	464	472	466	493	285	349	435	453	432	482	487	320	443	446	498	479	602	554	371	439
	10 PM - 11 PM	359	394	401	409	377	277	272	389	389	390	427	409	285	284	378	440	415	484	466	321	330
	11 PM - Midnight	283	340	332	354	302	194	182	329	307	334	327	346	192	201	333	372	360	407	398	254	252

Close 2 Lanes	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
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Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

59 Maumee - Toledo

TO

52 Toledo Airport

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

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Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	183	277	329	314	341	305	214	197	323	336	320	313	308	204	180	288	300	291	309	284	174
	1 AM - 2 AM	156	225	258	277	278	251	156	156	261	273	264	284	254	170	137	228	250	273	258	233	142
	2 AM - 3 AM	123	184	228	236	251	195	114	131	216	213	246	178	188	126	122	204	242	242	227	203	111
	3 AM - 4 AM	112	194	200	223	233	170	101	118	228	216	237	217	185	106	113	192	206	223	226	187	86
	4 AM - 5 AM	138	194	274	254	251	186	101	132	219	253	277	243	189	98	141	214	254	249	259	208	83
	5 AM - 6 AM	213	258	311	327	306	222	110	207	290	315	316	336	194	100	224	284	316	332	331	213	109
	6 AM - 7 AM	372	426	458	461	430	263	150	354	461	462	466	433	256	144	475	537	556	575	550	300	140
	7 AM - 8 AM	409	506	555	580	548	357	213	422	571	575	588	556	374	210	449	547	571	571	566	374	200
	8 AM - 9 AM	473	571	622	661	667	516	334	497	640	637	665	652	512	358	494	587	557	630	630	539	314
	9 AM - 10 AM	607	686	736	775	857	718	562	594	763	744	807	820	700	517	585	697	748	718	743	758	446
	10 AM - 11 AM	718	776	837	946	991	877	712	749	849	852	908	990	864	753	705	743	802	859	858	847	612
	11 AM - 12 PM	841	894	901	1,009	1,101	1,022	976	853	927	919	1,021	1,097	972	997	796	840	830	868	1,027	938	728
	12 PM - 1 PM	923	951	990	1,043	1,197	1,084	1,130	921	959	988	1,098	1,138	1,035	1,130	878	780	833	936	1,049	932	910
	1 PM - 2 PM	914	943	981	1,084	1,219	1,019	1,117	910	958	959	1,120	1,175	1,010	1,180	860	845	846	938	1,065	827	926
	2 PM - 3 PM	954	1,002	980	1,119	1,295	1,060	1,210	933	979	994	1,108	1,170	966	1,197	881	877	891	976	1,086	809	906
	3 PM - 4 PM	981	1,024	1,061	1,191	1,234	1,018	1,174	1,015	1,043	1,053	1,206	1,275	884	1,169	963	913	953	1,055	1,160	835	908
	4 PM - 5 PM	1,015	1,075	1,153	1,235	1,304	976	1,195	1,027	1,105	1,128	1,189	1,278	978	1,054	955	886	1,007	1,152	1,165	749	902
	5 PM - 6 PM	991	1,026	1,053	1,178	1,257	833	1,031	1,001	1,059	1,064	1,160	1,192	858	971	925	971	988	1,117	1,139	697	804
	6 PM - 7 PM	803	823	867	976	1,065	718	862	821	847	836	999	1,055	753	890	728	758	769	880	937	634	851
	7 PM - 8 PM	667	706	749	805	865	614	710	671	692	716	842	850	607	778	623	661	656	720	788	503	755
	8 PM - 9 PM	592	619	643	707	745	499	585	584	613	647	726	677	499	610	504	577	556	677	647	420	600
	9 PM - 10 PM	507	529	552	608	603	383	457	483	498	541	580	536	408	464	472	469	467	554	515	350	466
	10 PM - 11 PM	425	465	451	476	490	342	335	389	460	450	476	458	342	345	386	397	396	480	421	282	378
	11 PM - Midnight	383	370	376	404	400	278	275	355	418	402	403	392	263	271	356	342	352	386	383	241	235

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
	6 AM - 7 AM																					
	7 AM - 8 AM																					
	8 AM - 9 AM																					
	9 AM - 10 AM																					
	10 AM - 11 AM																					
	11 AM - 12 PM																					
	12 PM - 1 PM																					
	1 PM - 2 PM																					
	2 PM - 3 PM																					
	3 PM - 4 PM																					
	4 PM - 5 PM																					
	5 PM - 6 PM																					
	6 PM - 7 PM																					
	7 PM - 8 PM																					
	8 PM - 9 PM																					
	9 PM - 10 PM																					
	10 PM - 11 PM																					
	11 PM - Midnight																					

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

59 Maumee - Toledo

TO

52 Toledo Airport

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	184	291	310	305	325	286	180	148	269	274	265	286	273	140	140	267	276	279	294	230	116
	1 AM - 2 AM	138	245	246	253	263	224	151	115	237	246	260	248	203	134	112	227	264	222	239	197	96
	2 AM - 3 AM	121	210	247	226	237	186	120	99	204	219	210	234	180	80	104	230	200	204	215	172	70
	3 AM - 4 AM	107	218	227	229	218	178	101	100	204	213	222	207	168	77	104	206	171	212	207	176	79
	4 AM - 5 AM	139	246	259	249	260	197	91	145	241	261	257	233	192	79	130	221	217	237	231	172	77
	5 AM - 6 AM	218	320	322	335	314	201	101	226	340	344	358	324	200	96	207	308	297	331	305	198	95
	6 AM - 7 AM	415	530	547	549	504	285	124	417	527	536	526	478	296	145	385	509	522	508	500	262	135
	7 AM - 8 AM	425	549	555	552	549	329	179	427	574	573	560	564	323	175	390	515	540	536	529	306	178
	8 AM - 9 AM	480	596	564	606	591	481	292	435	587	559	594	595	496	273	391	559	572	507	550	426	257
	9 AM - 10 AM	533	659	669	701	751	635	420	467	666	621	692	689	647	386	470	665	639	659	644	532	359
	10 AM - 11 AM	609	758	748	777	881	768	560	591	725	702	764	776	789	500	532	694	732	708	715	649	483
	11 AM - 12 PM	697	810	780	801	931	858	718	611	746	744	780	878	790	580	563	777	758	733	782	738	607
	12 PM - 1 PM	730	839	812	905	945	844	827	655	770	731	820	925	748	702	608	773	795	702	812	723	720
	1 PM - 2 PM	792	809	767	916	1,031	826	893	651	783	776	825	899	747	727	617	807	803	779	787	743	796
	2 PM - 3 PM	816	836	831	913	1,038	798	902	689	853	748	888	928	715	723	638	816	797	778	857	736	788
	3 PM - 4 PM	876	873	930	978	1,029	757	920	768	887	839	955	985	724	727	724	884	889	878	898	696	764
4 PM - 5 PM	867	912	966	1,036	1,069	754	862	822	911	935	1,032	1,025	684	775	763	954	920	961	931	649	728	
5 PM - 6 PM	876	945	917	995	1,021	667	790	828	888	906	950	982	620	631	760	876	908	906	885	591	658	
6 PM - 7 PM	702	765	775	791	984	562	701	650	707	726	778	811	517	629	612	730	746	713	733	489	557	
7 PM - 8 PM	579	616	614	681	744	466	577	543	598	575	619	664	410	537	501	587	616	599	584	429	518	
8 PM - 9 PM	494	554	558	602	601	398	489	477	512	499	598	600	342	411	459	523	543	522	559	333	422	
9 PM - 10 PM	453	486	475	517	485	334	393	410	423	450	508	496	293	323	399	453	456	442	467	281	346	
10 PM - 11 PM	392	386	404	453	424	269	303	333	370	352	399	406	252	257	366	379	383	396	398	229	239	
11 PM - Midnight	321	317	330	357	333	231	228	296	320	342	333	316	193	186	304	335	327	324	324	172	169	

Close 2 Lanes	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
1 AM - 2 AM																						
2 AM - 3 AM																						
3 AM - 4 AM																						
4 AM - 5 AM																						
5 AM - 6 AM																						
6 AM - 7 AM																						
7 AM - 8 AM																						
8 AM - 9 AM																						
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10 AM - 11 AM																						
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2 PM - 3 PM																						
3 PM - 4 PM																						
4 PM - 5 PM																						
5 PM - 6 PM																						
6 PM - 7 PM																						
7 PM - 8 PM																						
8 PM - 9 PM																						
9 PM - 10 PM																						
10 PM - 11 PM																						
11 PM - Midnight																						

NOTES:

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Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

71 Stony Ridge - Toledo

TO

81 Elmore - Woodville

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	114	164	174	175	184	162	119	138	188	206	177	142	183	132	167	200	200	206	214	215	155
	1 AM - 2 AM	90	131	144	140	155	134	92	100	152	165	143	126	147	97	121	157	163	163	172	163	138
	2 AM - 3 AM	77	105	114	118	121	100	74	84	129	130	121	108	109	73	96	130	132	152	155	125	80
	3 AM - 4 AM	66	100	111	117	120	102	58	75	108	126	118	108	96	63	96	119	125	143	138	112	73
	4 AM - 5 AM	77	112	121	134	130	89	57	89	122	135	132	112	100	66	94	137	142	149	149	113	68
	5 AM - 6 AM	108	161	167	176	168	109	62	130	175	178	162	140	117	69	132	192	183	196	200	134	72
	6 AM - 7 AM	193	257	266	267	250	157	76	206	288	280	251	192	156	96	229	289	295	293	305	180	99
	7 AM - 8 AM	258	342	369	353	352	194	106	314	390	396	323	295	215	138	336	401	414	402	382	240	136
	8 AM - 9 AM	306	399	412	397	394	245	146	376	458	418	374	341	285	195	389	467	463	486	452	312	202
	9 AM - 10 AM	351	428	432	429	416	324	214	419	468	443	399	388	374	267	419	469	502	522	491	409	304
	10 AM - 11 AM	377	461	440	449	451	427	317	456	494	460	431	438	482	389	492	518	522	560	553	535	443
	11 AM - 12 PM	433	505	501	515	507	550	420	538	532	505	497	512	582	511	544	565	600	633	636	663	602
	12 PM - 1 PM	488	527	523	553	547	585	496	587	554	523	518	564	620	598	614	584	613	681	701	707	701
	1 PM - 2 PM	503	549	550	583	591	587	570	594	578	526	541	612	614	660	615	633	642	697	756	708	796
	2 PM - 3 PM	548	555	547	592	643	585	623	604	606	552	563	693	602	700	636	640	654	728	820	704	879
	3 PM - 4 PM	594	588	596	651	685	584	679	697	666	596	595	747	606	720	693	690	720	787	891	724	940
	4 PM - 5 PM	607	602	648	685	725	577	693	704	692	633	612	766	585	733	724	723	766	814	937	691	925
	5 PM - 6 PM	575	611	643	654	737	518	616	673	679	597	571	765	545	713	692	722	750	791	923	641	871
	6 PM - 7 PM	497	538	542	539	646	461	536	561	569	506	462	682	481	601	591	596	633	706	810	553	800
	7 PM - 8 PM	430	425	430	446	552	401	468	467	482	421	383	560	420	503	486	505	515	573	697	456	680
	8 PM - 9 PM	346	355	379	396	460	321	377	403	422	358	313	478	344	427	431	429	439	492	561	373	534
	9 PM - 10 PM	290	289	301	340	358	268	304	341	332	306	266	375	283	321	357	349	368	411	456	312	425
	10 PM - 11 PM	235	233	247	274	281	220	223	273	285	236	212	287	231	247	285	275	303	335	357	257	314
	11 PM - Midnight	198	207	205	231	218	161	156	232	229	198	188	219	192	185	247	238	240	262	282	181	239

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	227	328	349	350	369	323	238	276	376	412	353	284	366	264	333	399	401	412	427	430	309
	1 AM - 2 AM	181	262	288	280	309	267	184	200	304	330	287	252	295	194	243	315	326	325	344	326	276
	2 AM - 3 AM	153	211	228	237	242	199	147	168	257	260	241	215	218	146	193	260	264	304	310	250	161
	3 AM - 4 AM	132	200	223	235	240	203	115	151	216	252	235	217	193	126	192	238	251	286	276	223	146
	4 AM - 5 AM	153	224	241	268	260	178	113	178	245	269	264	225	201	132	187	274	283	298	297	226	136
	5 AM - 6 AM	216	322	335	352	336	217	124	260	350	357	323	279	233	138	264	383	367	391	400	267	144
	6 AM - 7 AM	385	515	532	535	500	313	152	413	576	560	501	384	313	192	459	577	589	585	609	359	198
	7 AM - 8 AM	516	684	737	707	704	389	212	629	781	792	645	589	429	275	673	802	827	804	765	479	273
	8 AM - 9 AM	611	798	824	793	789	489	291	752	915	836	748	682	570	389	778	934	926	973	905	625	403
	9 AM - 10 AM	702	855	865	858	832	648	428	838	935	887	798	777	747	533	839	938	1,003	1,044	983	818	608
	10 AM - 11 AM	755	921	881	899	901	853	634	911	989	919	863	875	963	778	985	1,037	1,044	1,119	1,105	1,069	885
	11 AM - 12 PM	865	1,010	1,002	1,029	1,014	1,100	839	1,076	1,064	1,010	994	1,024	1,164	1,022	1,088	1,130	1,200	1,266	1,272	1,326	1,204
	12 PM - 1 PM	976	1,054	1,046	1,106	1,093	1,170	992	1,175	1,109	1,046	1,036	1,129	1,239	1,196	1,228	1,168	1,225	1,362	1,402	1,414	1,402
	1 PM - 2 PM	1,006	1,098	1,100	1,167	1,181	1,174	1,140	1,188	1,157	1,052	1,082	1,225	1,228	1,319	1,230	1,267	1,284	1,393	1,512	1,417	1,593
	2 PM - 3 PM	1,095	1,109	1,093	1,184	1,285	1,171	1,247	1,208	1,211	1,104	1,126	1,386	1,204	1,399	1,273	1,280	1,307	1,457	1,640	1,408	1,758
	3 PM - 4 PM	1,187	1,175	1,192	1,302	1,371	1,168	1,358	1,394	1,332	1,193	1,190	1,494	1,212	1,440	1,386	1,379	1,439	1,574	1,782	1,448	1,881
	4 PM - 5 PM	1,215	1,203	1,297	1,369	1,451	1,153	1,385	1,408	1,385	1,267	1,224	1,532	1,170	1,466	1,448	1,446	1,531	1,628	1,873	1,381	1,850
	5 PM - 6 PM	1,150	1,222	1,286	1,307	1,473	1,037	1,233	1,347	1,358	1,194	1,142	1,531	1,091	1,427	1,384	1,444	1,500	1,582	1,847	1,281	1,741
	6 PM - 7 PM	994	1,077	1,085	1,078	1,292	921	1,071	1,122	1,137	1,011	924	1,363	962	1,203	1,182	1,191	1,266	1,412	1,621	1,106	1,600
	7 PM - 8 PM	860	851	860	892	1,105	802	935	934	964	842	767	1,121	840	1,006	973	1,009	1,030	1,146	1,395	913	1,360
	8 PM - 9 PM	692	711	757	792	919	643	754	806	843	716	627	956	687	854	862	858	878	984	1,122	747	1,068
	9 PM - 10 PM	581	579	603	680	715	536	608	682	665	611	532	749	566	643	714	698	737	821	912	625	850
	10 PM - 11 PM	470	466	493	547	563	440	447	546	570	472	423	574	461	495	571	549	606	670	714	514	627
	11 PM - Midnight	396	414	410	463	436	322	312	464	458	396	375	438	384	369	494	476	481	524	564	361	478

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

71 Stony Ridge - Toledo

TO

81 Elmore - Woodville

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	160	206	214	230	252	230	163	181	198	218	231	252	245	165	227	236	247	251	290	269	190
	1 AM - 2 AM	126	160	165	170	187	179	118	129	180	176	185	196	179	125	155	186	191	220	231	192	136
	2 AM - 3 AM	101	131	134	147	156	136	90	104	137	143	153	167	140	96	124	157	163	185	193	151	106
	3 AM - 4 AM	91	126	127	135	140	130	84	96	120	131	152	156	132	77	103	136	149	169	171	141	84
	4 AM - 5 AM	98	128	146	146	159	124	78	103	130	145	157	169	122	75	115	148	147	168	162	141	88
	5 AM - 6 AM	141	194	198	200	200	142	77	143	179	216	199	214	147	83	151	207	212	234	224	156	93
	6 AM - 7 AM	235	285	299	308	306	182	107	251	268	314	295	324	198	113	265	310	321	336	336	200	125
	7 AM - 8 AM	346	405	414	397	402	253	151	351	384	441	437	422	285	162	379	443	454	461	451	284	188
	8 AM - 9 AM	414	469	504	504	467	325	224	431	435	508	537	514	405	258	473	532	535	544	548	420	309
	9 AM - 10 AM	439	512	511	542	532	430	327	528	507	555	621	604	545	420	630	628	638	661	690	614	486
	10 AM - 11 AM	497	539	573	606	625	571	460	575	579	599	654	669	636	548	684	659	684	747	774	749	627
	11 AM - 12 PM	561	605	626	671	705	686	638	660	651	687	758	770	738	740	756	716	739	823	893	878	798
	12 PM - 1 PM	613	628	656	723	787	739	737	697	713	701	785	845	823	848	802	773	768	890	944	911	930
	1 PM - 2 PM	614	639	677	763	829	727	819	744	735	733	803	913	816	902	854	788	814	914	1,012	930	1,040
	2 PM - 3 PM	670	702	707	806	895	748	879	760	789	768	836	971	799	971	900	803	842	954	1,054	947	1,098
	3 PM - 4 PM	704	742	752	858	984	719	915	817	827	839	904	1,022	780	976	929	862	880	1,023	1,164	868	1,155
	4 PM - 5 PM	734	753	771	883	983	713	910	825	819	832	930	1,054	757	1,007	953	872	900	1,051	1,136	815	1,120
	5 PM - 6 PM	713	730	783	878	927	673	899	766	809	803	880	976	691	975	867	813	887	1,010	1,067	754	1,074
	6 PM - 7 PM	594	620	689	750	803	591	815	686	712	703	794	877	602	898	775	746	728	884	942	654	979
	7 PM - 8 PM	501	534	581	648	682	524	679	574	585	610	675	743	512	777	668	587	605	747	774	580	847
	8 PM - 9 PM	435	450	467	550	551	432	549	484	520	544	578	624	456	663	580	518	510	635	657	505	711
	9 PM - 10 PM	360	378	386	453	463	355	434	408	414	449	469	508	368	514	492	445	432	555	554	424	575
	10 PM - 11 PM	291	297	344	366	358	281	316	312	319	352	396	408	301	374	379	342	371	445	443	332	434
	11 PM - Midnight	241	244	297	299	275	224	230	257	256	284	306	329	233	261	299	280	300	355	345	259	320

Close 2 Lanes	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	320	411	429	460	505	460	325	362	395	435	462	505	490	330	455	472	495	501	580	538	379
	1 AM - 2 AM	253	319	331	341	373	359	235	258	359	352	370	392	357	249	309	371	382	440	461	383	271
	2 AM - 3 AM	201	263	269	293	312	272	179	209	274	285	307	334	279	193	247	315	325	370	386	302	211
	3 AM - 4 AM	182	251	253	269	280	260	167	193	239	262	304	311	264	154	205	272	299	338	342	283	169
	4 AM - 5 AM	196	257	291	292	319	247	155	207	259	290	315	338	245	150	231	297	294	337	323	282	176
	5 AM - 6 AM	281	389	396	401	401	284	153	287	358	431	397	428	294	165	303	413	425	468	447	312	187
	6 AM - 7 AM	470	569	598	616	612	363	213	501	536	629	589	648	397	225	530	619	642	672	672	400	250
	7 AM - 8 AM	692	810	828	795	803	506	302	702	768	882	875	843	570	325	759	886	908	922	902	569	375
	8 AM - 9 AM	828	938	1,008	1,009	935	651	449	863	870	1,017	1,075	1,029	809	516	947	1,065	1,070	1,088	1,095	841	618
	9 AM - 10 AM	879	1,024	1,023	1,085	1,063	860	654	1,056	1,013	1,109	1,242	1,207	1,089	841	1,260	1,256	1,276	1,323	1,380	1,228	972
	10 AM - 11 AM	993	1,077	1,146	1,212	1,250	1,142	919	1,149	1,158	1,198	1,308	1,337	1,272	1,096	1,368	1,319	1,368	1,495	1,548	1,497	1,254
	11 AM - 12 PM	1,121	1,209	1,252	1,342	1,410	1,373	1,276	1,319	1,301	1,373	1,516	1,541	1,476	1,481	1,513	1,432	1,478	1,646	1,785	1,756	1,596
	12 PM - 1 PM	1,226	1,256	1,313	1,446	1,574	1,477	1,474	1,393	1,426	1,403	1,570	1,689	1,646	1,697	1,603	1,547	1,537	1,779	1,888	1,822	1,860
	1 PM - 2 PM	1,227	1,279	1,354	1,526	1,658	1,454	1,638	1,488	1,469	1,466	1,606	1,826	1,632	1,805	1,709	1,575	1,628	1,827	2,024	1,861	2,079
	2 PM - 3 PM	1,339	1,403	1,413	1,613	1,790	1,497	1,757	1,520	1,577	1,536	1,672	1,941	1,599	1,942	1,799	1,607	1,685	1,907	2,108	1,894	2,195
	3 PM - 4 PM	1,407	1,484	1,505	1,717	1,969	1,438	1,829	1,634	1,653	1,679	1,808	2,044	1,560	1,953	1,857	1,723	1,759	2,045	2,329	1,736	2,310
	4 PM - 5 PM	1,468	1,506	1,542	1,766	1,967	1,427	1,820	1,649	1,638	1,663	1,859	2,108	1,513	2,014	1,906	1,744	1,800	2,101	2,272	1,631	2,240
	5 PM - 6 PM	1,426	1,460	1,565	1,755	1,853	1,347	1,798	1,531	1,618	1,607	1,760	1,951	1,381	1,951	1,733	1,626	1,773	2,021	2,134	1,508	2,147
	6 PM - 7 PM	1,189	1,241	1,378	1,500	1,605	1,182	1,629	1,372	1,424	1,406	1,588	1,754	1,204	1,796	1,549	1,491	1,455	1,767	1,884	1,308	1,959
	7 PM - 8 PM	1,002	1,068	1,162	1,297	1,364	1,048	1,358	1,148	1,170	1,221	1,351	1,487	1,024	1,554	1,337	1,173	1,209	1,493	1,549	1,161	1,693
	8 PM - 9 PM	869	901	935	1,101	1,101	863	1,098	968	1,040	1,088	1,155	1,249	912	1,326	1,161	1,037	1,020	1,270	1,314	1,010	1,423
	9 PM - 10 PM	720	756	771	906	926	710	868	816	828	899	937	1,015	736	1,028	984	891	865	1,110	1,108	848	1,150
	10 PM - 11 PM	582	594	688	732	715	561	631	625	639	704	792	816	603	749	758	684	742	890	887	664	867
	11 PM - Midnight	483	488	594	599	549	449	460	513	511	569	611	657	465	522	597	561	601	709	689	517	641

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

71 Stony Ridge - Toledo

TO

81 Elmore - Woodville

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	228	221	228	257	276	272	207	247	241	233	255	271	281	210	191	223	221	244	283	273	199
	1 AM - 2 AM	161	177	184	211	223	189	142	185	185	191	209	200	206	153	148	177	180	199	223	215	135
	2 AM - 3 AM	119	141	149	171	180	161	116	137	163	163	165	175	156	109	111	140	144	164	172	160	113
	3 AM - 4 AM	114	119	137	159	169	143	86	110	139	144	163	169	138	95	97	121	139	149	160	131	89
	4 AM - 5 AM	124	131	159	164	171	137	86	117	155	159	180	168	135	83	108	140	145	164	173	135	80
	5 AM - 6 AM	160	187	199	224	228	155	94	163	202	219	214	222	163	95	144	187	192	205	213	149	82
	6 AM - 7 AM	249	283	308	313	336	208	121	264	301	329	331	315	190	116	263	280	298	321	327	187	107
	7 AM - 8 AM	370	399	423	450	446	271	176	395	443	490	498	461	282	178	359	403	424	437	426	271	182
	8 AM - 9 AM	469	490	524	563	534	420	285	492	555	580	574	568	433	286	408	464	482	505	500	389	282
	9 AM - 10 AM	637	650	662	696	722	649	478	622	649	690	698	724	692	503	467	522	547	585	552	541	490
	10 AM - 11 AM	715	689	709	767	824	816	666	681	693	761	783	800	852	702	557	554	595	636	651	756	748
	11 AM - 12 PM	797	764	781	863	926	954	867	784	745	808	860	935	996	915	621	665	646	739	773	878	874
	12 PM - 1 PM	863	823	815	950	1,021	1,033	1,029	861	797	837	885	1,002	1,071	1,060	694	716	704	796	859	901	948
	1 PM - 2 PM	896	841	830	972	1,088	1,039	1,143	913	836	871	940	1,056	1,104	1,173	722	723	740	824	926	893	995
	2 PM - 3 PM	918	884	893	1,014	1,151	1,024	1,208	912	866	902	1,016	1,118	1,058	1,197	784	762	763	888	1,018	937	1,043
	3 PM - 4 PM	948	940	903	1,035	1,260	1,037	1,184	981	933	998	1,105	1,181	1,072	1,279	819	801	804	915	1,091	856	1,048
	4 PM - 5 PM	935	966	929	1,063	1,256	943	1,197	993	982	1,040	1,146	1,176	1,002	1,188	850	849	867	983	1,145	802	1,046
	5 PM - 6 PM	878	879	886	1,045	1,121	846	1,155	965	952	1,002	1,085	1,133	870	1,120	799	795	829	948	1,152	755	986
	6 PM - 7 PM	775	784	802	904	993	744	1,001	795	797	841	914	1,014	774	1,050	704	676	716	835	1,008	658	916
	7 PM - 8 PM	638	640	688	776	844	643	884	614	654	685	770	859	668	933	553	576	571	698	830	595	798
	8 PM - 9 PM	543	537	585	665	693	530	803	515	537	568	651	707	578	774	484	464	495	596	674	492	651
	9 PM - 10 PM	430	439	473	551	583	447	619	439	451	479	574	587	475	600	405	391	419	504	543	446	521
	10 PM - 11 PM	355	352	391	443	459	346	452	375	352	381	464	464	382	491	314	316	356	423	412	372	378
	11 PM - Midnight	298	303	308	346	355	284	342	310	299	311	364	375	286	346	269	246	290	341	349	301	270

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	456	441	457	514	551	544	414	494	481	465	511	543	562	421	383	446	443	487	565	545	399
	1 AM - 2 AM	323	354	367	423	447	379	283	370	369	381	419	401	412	305	296	353	360	398	446	430	270
	2 AM - 3 AM	238	281	299	342	361	322	232	274	325	326	331	350	312	219	222	280	288	328	344	320	226
	3 AM - 4 AM	228	238	275	318	338	286	172	220	278	287	326	337	277	189	195	242	278	298	319	262	177
	4 AM - 5 AM	248	263	317	329	342	273	173	234	311	318	361	337	270	165	217	280	289	327	345	270	159
	5 AM - 6 AM	319	373	397	448	455	309	188	325	404	437	427	444	326	191	288	373	384	411	426	299	163
	6 AM - 7 AM	497	566	616	627	671	415	241	528	601	657	662	631	380	231	526	559	596	642	653	374	213
	7 AM - 8 AM	740	798	846	900	891	541	351	789	885	979	996	923	565	356	717	807	848	874	853	541	364
	8 AM - 9 AM	938	980	1,047	1,126	1,068	839	571	985	1,110	1,160	1,149	1,136	866	571	817	928	965	1,009	1,000	778	564
	9 AM - 10 AM	1,274	1,299	1,324	1,391	1,445	1,297	956	1,243	1,298	1,379	1,395	1,448	1,385	1,007	934	1,045	1,094	1,169	1,105	1,082	980
	10 AM - 11 AM	1,429	1,378	1,417	1,534	1,647	1,633	1,332	1,362	1,385	1,521	1,565	1,600	1,703	1,405	1,114	1,107	1,191	1,272	1,301	1,513	1,495
	11 AM - 12 PM	1,595	1,528	1,562	1,725	1,852	1,908	1,734	1,568	1,490	1,616	1,720	1,870	1,993	1,831	1,241	1,330	1,293	1,477	1,546	1,755	1,748
	12 PM - 1 PM	1,725	1,645	1,629	1,901	2,041	2,066	2,058	1,723	1,595	1,675	1,771	2,005	2,142	2,119	1,388	1,433	1,408	1,592	1,718	1,801	1,897
	1 PM - 2 PM	1,792	1,683	1,659	1,944	2,177	2,078	2,285	1,827	1,672	1,741	1,880	2,111	2,208	2,345	1,443	1,445	1,481	1,648	1,853	1,785	1,990
	2 PM - 3 PM	1,835	1,768	1,786	2,028	2,302	2,047	2,416	1,824	1,733	1,805	2,032	2,236	2,117	2,393	1,567	1,523	1,526	1,776	2,036	1,875	2,086
	3 PM - 4 PM	1,896	1,880	1,806	2,070	2,521	2,075	2,367	1,961	1,866	1,996	2,209	2,362	2,143	2,557	1,638	1,602	1,607	1,830	2,182	1,712	2,096
	4 PM - 5 PM	1,869	1,932	1,857	2,125	2,511	1,885	2,395	1,987	1,963	2,080	2,292	2,352	2,004	2,376	1,700	1,699	1,733	1,965	2,291	1,604	2,092
	5 PM - 6 PM	1,756	1,757	1,771	2,091	2,242	1,693	2,310	1,930	1,903	2,004	2,169	2,266	1,741	2,240	1,598	1,590	1,658	1,897	2,303	1,509	1,972
	6 PM - 7 PM	1,550	1,568	1,604	1,807	1,987	1,489	2,002	1,589	1,594	1,681	1,827	2,029	1,548	2,101	1,408	1,351	1,433	1,670	2,016	1,317	1,833
	7 PM - 8 PM	1,276	1,281	1,375	1,552	1,687	1,287	1,767	1,227	1,308	1,371	1,540	1,717	1,336	1,867	1,106	1,151	1,141	1,396	1,659	1,190	1,596
	8 PM - 9 PM	1,085	1,074	1,170	1,329	1,386	1,060	1,605	1,031	1,074	1,137	1,302	1,415	1,155	1,548	969	927	989	1,191	1,348	984	1,301
	9 PM - 10 PM	859	878	945	1,103	1,165	895	1,238	877	901	958	1,147	1,175	950	1,201	809	782	838	1,009	1,087	891	1,043
	10 PM - 11 PM	710	704	781	887	917	692	903	751	704	762	927	928	764	981	629	632	712	846	824	744	755
	11 PM - Midnight	596	606	617	692	710	568	684	620	598	622	729	751	572	692	539	493	579	681	698	602	540

NOTES:

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Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

71 Stony Ridge - Toledo

TO

81 Elmore - Woodville

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	199	221	219	238	250	248	168	158	205	204	228	219	228	186	156	204	201	203	214	203	131
	1 AM - 2 AM	138	184	166	176	200	182	125	127	181	175	167	192	169	163	106	165	170	161	186	165	105
	2 AM - 3 AM	108	149	137	151	177	146	104	95	141	142	151	165	133	91	92	141	142	146	148	136	76
	3 AM - 4 AM	97	133	134	147	157	125	92	86	127	134	142	147	126	75	90	128	138	138	157	116	67
	4 AM - 5 AM	108	145	153	152	164	127	85	103	146	152	157	174	131	76	103	155	155	158	167	120	68
	5 AM - 6 AM	145	190	201	208	209	132	86	148	190	198	215	211	146	82	130	190	198	193	210	124	69
	6 AM - 7 AM	246	294	301	311	302	178	110	250	308	318	311	333	191	120	226	292	304	309	301	161	101
	7 AM - 8 AM	349	401	430	429	397	250	153	349	405	412	430	441	258	170	339	390	403	422	413	214	134
	8 AM - 9 AM	403	455	502	505	476	364	240	414	473	485	512	487	331	266	389	443	467	455	439	298	218
	9 AM - 10 AM	465	515	528	546	573	561	417	465	492	513	540	506	459	429	422	498	505	512	482	395	337
	10 AM - 11 AM	548	551	574	614	667	786	655	502	513	563	569	576	621	576	465	526	561	535	546	514	492
	11 AM - 12 PM	633	634	647	718	789	881	839	583	584	628	657	701	768	766	526	597	650	604	620	647	689
	12 PM - 1 PM	711	670	687	792	845	909	936	634	625	638	711	764	800	845	600	636	681	648	712	711	792
	1 PM - 2 PM	716	681	723	830	866	857	1,018	669	646	664	741	810	802	892	633	648	710	667	739	721	855
	2 PM - 3 PM	773	705	761	894	947	825	1,038	706	663	694	806	878	785	939	660	691	731	707	790	737	888
	3 PM - 4 PM	855	767	789	953	1,025	797	1,038	754	706	732	830	942	756	987	681	759	766	774	863	736	893
	4 PM - 5 PM	849	798	833	974	1,084	728	1,001	776	761	769	865	979	734	938	720	788	790	794	885	691	856
	5 PM - 6 PM	773	755	828	949	1,095	677	956	725	719	775	844	965	697	895	659	737	741	759	831	650	773
	6 PM - 7 PM	676	663	710	825	966	617	890	619	597	643	723	842	594	769	559	631	617	666	762	564	700
	7 PM - 8 PM	558	524	587	685	777	538	734	529	485	538	610	677	507	654	481	519	534	561	626	467	597
	8 PM - 9 PM	468	437	500	564	671	446	604	455	406	430	524	598	438	552	414	460	465	464	524	373	489
	9 PM - 10 PM	412	365	414	486	531	370	480	370	326	362	425	476	379	431	338	370	434	393	428	332	377
	10 PM - 11 PM	324	315	351	399	414	312	352	309	278	340	338	382	315	294	281	295	329	300	347	257	292
	11 PM - Midnight	271	252	279	314	333	225	251	245	224	274	273	295	257	210	236	238	273	260	280	197	197

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	397	442	437	475	500	497	335	316	409	409	456	438	455	371	311	407	401	405	428	406	262
	1 AM - 2 AM	277	368	333	353	401	363	250	255	362	351	334	384	337	325	211	330	340	321	372	330	210
	2 AM - 3 AM	216	298	274	303	354	291	208	191	283	284	301	330	266	183	183	281	285	292	295	271	153
	3 AM - 4 AM	193	265	268	294	314	249	184	171	254	268	284	293	253	149	181	255	275	277	314	233	135
	4 AM - 5 AM	216	291	305	304	328	254	171	205	291	304	314	348	263	152	206	310	311	315	334	239	136
	5 AM - 6 AM	290	379	403	415	419	264	172	297	380	396	430	421	292	164	261	380	397	387	420	249	138
	6 AM - 7 AM	492	589	602	623	605	356	220	501	617	636	623	665	382	240	453	584	608	619	601	321	202
	7 AM - 8 AM	699	803	860	857	793	501	306	698	811	823	860	881	516	340	679	780	806	843	827	428	267
	8 AM - 9 AM	806	911	1,005	1,011	953	729	481	828	946	969	1,025	975	662	532	778	886	934	910	879	597	436
	9 AM - 10 AM	929	1,031	1,056	1,091	1,147	1,121	835	930	984	1,025	1,080	1,012	917	858	844	996	1,010	1,023	964	790	673
	10 AM - 11 AM	1,097	1,101	1,147	1,228	1,333	1,573	1,310	1,004	1,027	1,126	1,138	1,151	1,243	1,152	929	1,052	1,122	1,070	1,092	1,029	984
	11 AM - 12 PM	1,265	1,267	1,294	1,435	1,578	1,762	1,678	1,167	1,168	1,255	1,314	1,401	1,535	1,532	1,052	1,194	1,301	1,208	1,240	1,294	1,378
	12 PM - 1 PM	1,423	1,340	1,374	1,584	1,690	1,818	1,872	1,268	1,251	1,277	1,422	1,527	1,599	1,690	1,201	1,272	1,362	1,296	1,423	1,422	1,583
	1 PM - 2 PM	1,433	1,363	1,445	1,659	1,732	1,713	2,036	1,338	1,292	1,328	1,481	1,621	1,604	1,784	1,266	1,296	1,420	1,334	1,477	1,442	1,711
	2 PM - 3 PM	1,545	1,411	1,521	1,789	1,894	1,649	2,076	1,411	1,327	1,389	1,611	1,756	1,569	1,878	1,320	1,382	1,462	1,414	1,579	1,475	1,776
	3 PM - 4 PM	1,711	1,534	1,578	1,905	2,050	1,593	2,075	1,509	1,413	1,465	1,660	1,885	1,511	1,973	1,362	1,519	1,532	1,547	1,726	1,471	1,786
	4 PM - 5 PM	1,698	1,596	1,667	1,949	2,168	1,456	2,002	1,553	1,523	1,538	1,730	1,958	1,468	1,876	1,439	1,576	1,580	1,587	1,770	1,381	1,712
	5 PM - 6 PM	1,546	1,510	1,655	1,898	2,191	1,354	1,912	1,450	1,439	1,550	1,689	1,930	1,394	1,791	1,317	1,474	1,482	1,518	1,662	1,301	1,546
	6 PM - 7 PM	1,353	1,326	1,419	1,650	1,933	1,233	1,780	1,238	1,194	1,286	1,446	1,684	1,187	1,538	1,118	1,262	1,233	1,332	1,525	1,128	1,399
	7 PM - 8 PM	1,115	1,047	1,174	1,369	1,553	1,076	1,468	1,057	970	1,076	1,220	1,353	1,014	1,307	961	1,038	1,068	1,122	1,251	934	1,193
	8 PM - 9 PM	935	874	1,000	1,128	1,342	892	1,208	910	811	859	1,047	1,196	875	1,103	828	919	930	928	1,048	746	979
	9 PM - 10 PM	824	730	828	973	1,062	740	959	741	653	724	851	953	757	862	675	739	867	786	855	663	755
	10 PM - 11 PM	647	630	701	797	828	624	703	618	557	679	675	764	629	588	562	591	658	600	693	513	583
	11 PM - Midnight	542	505	559	628	666	449	502	490	447	549	546	590	515	420	472	475	546	520	559	394	394

NOTES:

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- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

81 Elmore - Woodville

TO

71 Stony Ridge - Toledo

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	103	183	198	200	199	168	92	123	207	214	199	160	171	112	145	226	215	218	207	185	120
	1 AM - 2 AM	83	136	152	176	156	127	71	94	171	166	153	118	135	78	110	184	173	175	175	141	84
	2 AM - 3 AM	66	129	132	142	139	111	55	85	155	150	128	117	111	61	78	150	152	155	146	108	62
	3 AM - 4 AM	69	123	137	135	133	99	48	74	134	139	123	113	89	57	80	139	139	134	127	100	53
	4 AM - 5 AM	84	133	152	149	153	99	49	94	160	160	138	117	104	52	107	157	163	153	158	102	55
	5 AM - 6 AM	108	172	176	190	181	113	46	134	197	196	163	152	118	58	141	204	202	198	198	123	58
	6 AM - 7 AM	191	274	285	288	251	144	64	245	310	283	264	218	147	79	251	323	302	319	284	167	77
	7 AM - 8 AM	260	358	367	372	345	185	99	347	437	390	343	306	219	114	345	422	426	417	397	229	115
	8 AM - 9 AM	294	433	418	432	400	273	135	389	490	435	395	344	314	170	384	492	482	482	464	339	177
	9 AM - 10 AM	338	463	459	468	443	377	205	423	531	476	423	420	399	253	432	521	517	530	530	460	269
	10 AM - 11 AM	378	500	493	499	504	475	310	491	556	490	470	505	510	380	487	566	558	580	597	557	405
	11 AM - 12 PM	427	531	508	536	555	562	406	524	570	514	489	540	587	509	519	591	589	628	692	653	558
	12 PM - 1 PM	439	571	516	551	598	582	512	539	597	532	509	607	612	559	568	621	612	676	739	705	699
	1 PM - 2 PM	480	582	530	566	650	588	571	572	584	542	496	647	604	635	588	636	635	688	762	693	764
	2 PM - 3 PM	503	601	556	614	660	608	643	597	601	550	534	624	589	666	610	651	653	709	799	671	772
	3 PM - 4 PM	522	626	575	648	684	593	643	619	538	564	559	622	574	676	621	668	678	736	843	663	825
	4 PM - 5 PM	548	633	593	629	696	560	632	630	597	578	545	721	559	675	648	680	687	766	828	626	852
	5 PM - 6 PM	533	591	596	593	679	518	588	613	630	546	506	712	508	657	631	651	661	733	839	574	797
	6 PM - 7 PM	457	522	505	536	630	438	539	533	542	464	430	614	441	578	579	596	595	660	754	491	739
	7 PM - 8 PM	413	442	421	474	506	344	461	479	475	405	363	515	369	489	485	495	516	553	617	410	634
	8 PM - 9 PM	342	374	355	371	389	277	374	406	406	337	294	406	299	395	417	413	426	456	496	324	477
	9 PM - 10 PM	282	315	306	305	312	221	281	334	331	305	249	303	254	296	349	341	342	369	371	271	370
	10 PM - 11 PM	258	272	287	269	252	174	187	292	289	253	223	252	195	220	321	321	316	315	310	211	270
	11 PM - Midnight	221	239	244	234	206	131	134	259	238	235	167	204	145	168	268	262	273	270	242	147	197

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	205	367	396	400	398	336	184	246	414	429	398	319	343	225	291	451	430	435	415	370	241
	1 AM - 2 AM	166	273	304	351	312	254	142	189	343	333	306	236	270	156	221	369	346	349	350	283	169
	2 AM - 3 AM	131	257	264	284	277	222	109	171	310	299	257	233	223	121	156	301	304	309	292	217	125
	3 AM - 4 AM	139	247	273	270	265	198	96	148	267	277	245	225	178	114	160	279	277	267	254	200	106
	4 AM - 5 AM	169	266	304	298	306	199	97	189	319	320	277	233	208	104	215	313	326	307	316	204	111
	5 AM - 6 AM	216	344	352	381	361	226	92	267	395	392	326	304	235	116	282	407	404	396	396	246	116
	6 AM - 7 AM	382	548	571	577	503	288	128	490	621	566	527	435	293	158	501	645	604	637	568	334	154
	7 AM - 8 AM	520	715	734	744	690	371	197	694	873	780	687	613	438	228	689	844	852	834	794	457	230
	8 AM - 9 AM	588	865	836	865	800	546	270	779	979	870	790	688	629	341	768	984	965	965	927	677	354
	9 AM - 10 AM	677	925	917	936	887	753	410	847	1,063	952	846	840	799	507	865	1,043	1,034	1,060	1,060	920	539
	10 AM - 11 AM	755	999	986	998	1,009	950	620	982	1,111	981	941	1,010	1,021	761	974	1,131	1,117	1,160	1,194	1,113	809
	11 AM - 12 PM	853	1,061	1,017	1,073	1,110	1,123	811	1,047	1,140	1,027	978	1,080	1,174	1,019	1,038	1,183	1,178	1,255	1,383	1,306	1,115
	12 PM - 1 PM	878	1,141	1,031	1,103	1,195	1,164	1,024	1,078	1,194	1,065	1,017	1,214	1,224	1,119	1,135	1,242	1,223	1,352	1,478	1,411	1,399
	1 PM - 2 PM	959	1,165	1,059	1,131	1,300	1,176	1,141	1,143	1,168	1,083	992	1,295	1,208	1,271	1,177	1,273	1,269	1,375	1,525	1,387	1,529
	2 PM - 3 PM	1,007	1,202	1,113	1,228	1,319	1,217	1,286	1,195	1,202	1,100	1,068	1,249	1,177	1,331	1,221	1,302	1,307	1,418	1,599	1,341	1,545
	3 PM - 4 PM	1,044	1,252	1,150	1,296	1,368	1,186	1,285	1,238	1,075	1,128	1,119	1,243	1,149	1,353	1,242	1,336	1,356	1,471	1,687	1,327	1,649
	4 PM - 5 PM	1,097	1,266	1,185	1,258	1,393	1,119	1,264	1,261	1,193	1,157	1,090	1,443	1,119	1,350	1,295	1,359	1,374	1,531	1,655	1,252	1,704
	5 PM - 6 PM	1,066	1,183	1,192	1,185	1,359	1,035	1,175	1,227	1,261	1,093	1,012	1,424	1,016	1,314	1,261	1,302	1,322	1,466	1,679	1,148	1,593
	6 PM - 7 PM	914	1,043	1,010	1,071	1,260	876	1,079	1,066	1,084	927	861	1,229	883	1,157	1,157	1,192	1,189	1,320	1,508	982	1,478
	7 PM - 8 PM	826	883	842	948	1,012	688	922	958	949	810	725	1,030	737	977	969	990	1,032	1,105	1,234	819	1,268
	8 PM - 9 PM	683	749	709	743	778	553	748	811	811	674	588	811	598	790	835	826	853	913	991	648	953
	9 PM - 10 PM	564	630	611	609	624	442	561	668	663	610	498	606	507	592	697	682	684	738	742	543	741
	10 PM - 11 PM	516	544	574	537	504	347	375	584	579	507	445	503	390	440	643	641	632	630	620	423	541
	11 PM - Midnight	441	478	488	468	412	261	268	519	476	470	333	407	290	337	536	525	546	540	483	293	393

NOTES:

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Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

81 Elmore - Woodville

TO

71 Stony Ridge - Toledo

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	3

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xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

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Revision Date: 9/1/2022

Close 1 Lane	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	139	245	236	248	235	216	142	154	225	230	229	236	239	140	175	257	257	255	280	275	190
	1 AM - 2 AM	95	185	186	187	191	162	97	111	174	187	185	196	171	101	121	198	201	206	206	189	129
	2 AM - 3 AM	74	163	154	163	169	132	83	91	144	168	159	166	129	75	98	162	166	178	184	162	93
	3 AM - 4 AM	111	147	141	144	145	119	59	87	132	149	153	163	112	63	92	153	159	171	167	130	73
	4 AM - 5 AM	104	169	168	162	171	124	60	107	145	179	172	168	125	61	108	165	184	184	179	142	68
	5 AM - 6 AM	150	202	208	207	205	150	71	163	191	214	216	213	135	64	172	223	247	244	234	154	68
	6 AM - 7 AM	267	338	323	331	317	183	92	289	309	343	349	332	195	94	287	339	359	356	334	205	111
	7 AM - 8 AM	364	435	431	422	411	264	131	391	407	457	450	422	283	159	377	453	460	465	434	295	172
	8 AM - 9 AM	391	499	505	517	478	384	195	438	474	533	528	503	397	225	452	552	551	566	544	418	268
	9 AM - 10 AM	452	555	553	557	574	510	318	498	533	582	595	620	545	352	536	610	629	654	654	573	429
	10 AM - 11 AM	521	595	593	641	668	648	462	575	615	658	660	731	671	541	652	675	683	725	781	727	643
	11 AM - 12 PM	556	644	623	696	731	733	640	633	688	673	734	833	767	672	720	743	770	848	912	871	836
	12 PM - 1 PM	586	646	641	716	769	771	732	666	729	711	773	892	768	833	757	782	805	887	994	900	980
	1 PM - 2 PM	595	650	667	745	795	745	828	702	768	714	800	947	769	860	802	773	812	916	1,005	881	1,052
	2 PM - 3 PM	641	695	707	791	857	751	888	728	809	764	845	948	754	923	802	814	820	946	1,044	883	1,067
	3 PM - 4 PM	669	699	707	798	896	771	909	736	813	778	878	963	742	956	814	802	852	970	1,091	836	1,095
	4 PM - 5 PM	661	719	740	822	929	748	944	767	853	816	869	968	701	931	852	818	880	934	1,034	820	1,106
	5 PM - 6 PM	642	710	707	836	920	672	886	739	782	782	796	895	631	896	822	812	834	943	1,019	749	1,032
	6 PM - 7 PM	575	621	645	733	782	586	783	648	696	673	731	867	592	811	723	707	729	784	907	692	940
	7 PM - 8 PM	513	533	542	616	650	513	682	566	595	561	641	728	541	705	617	607	625	709	801	627	801
	8 PM - 9 PM	425	443	434	490	532	404	531	484	496	458	519	617	418	631	522	511	528	639	660	547	674
	9 PM - 10 PM	348	368	372	402	435	324	408	399	416	377	437	469	373	499	434	430	424	542	558	473	557
	10 PM - 11 PM	296	313	301	341	341	274	308	350	338	320	359	371	292	327	366	374	358	421	444	394	405
	11 PM - Midnight	244	272	273	289	263	192	207	280	268	285	288	303	196	225	318	311	306	359	368	300	288

Close 2 Lanes	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	278	489	472	495	469	432	283	307	450	459	458	471	479	280	350	513	514	509	560	551	381
	1 AM - 2 AM	189	369	372	373	382	323	194	221	349	374	369	392	342	202	241	396	403	412	413	378	257
	2 AM - 3 AM	148	326	308	326	338	263	166	182	289	336	318	332	258	151	196	324	333	356	369	324	186
	3 AM - 4 AM	223	295	281	288	291	239	117	173	263	298	305	326	224	126	183	305	318	342	335	259	145
	4 AM - 5 AM	208	337	336	324	341	248	120	214	290	357	344	336	249	122	215	329	369	367	357	283	136
	5 AM - 6 AM	299	403	415	415	410	301	141	325	382	428	432	425	270	128	345	445	494	487	469	307	136
	6 AM - 7 AM	535	676	646	663	634	366	183	579	617	686	698	664	390	188	575	679	718	712	667	410	222
	7 AM - 8 AM	728	871	863	845	821	527	261	781	814	913	900	844	565	318	754	907	919	930	867	590	344
	8 AM - 9 AM	782	998	1,011	1,033	956	768	389	876	948	1,066	1,056	1,007	794	450	905	1,103	1,101	1,131	1,088	835	535
	9 AM - 10 AM	903	1,110	1,107	1,114	1,148	1,021	637	995	1,066	1,165	1,190	1,240	1,089	704	1,072	1,220	1,257	1,308	1,307	1,145	859
	10 AM - 11 AM	1,042	1,190	1,186	1,282	1,336	1,296	924	1,151	1,230	1,316	1,320	1,463	1,341	1,083	1,303	1,349	1,365	1,450	1,562	1,455	1,286
	11 AM - 12 PM	1,112	1,289	1,246	1,392	1,461	1,467	1,280	1,267	1,375	1,347	1,467	1,666	1,533	1,344	1,441	1,486	1,539	1,697	1,824	1,743	1,672
	12 PM - 1 PM	1,172	1,292	1,282	1,432	1,538	1,542	1,463	1,333	1,457	1,421	1,546	1,784	1,535	1,665	1,514	1,563	1,610	1,774	1,988	1,799	1,961
	1 PM - 2 PM	1,190	1,300	1,333	1,491	1,590	1,490	1,655	1,403	1,537	1,428	1,600	1,894	1,538	1,720	1,605	1,546	1,625	1,833	2,010	1,762	2,104
	2 PM - 3 PM	1,282	1,390	1,413	1,582	1,714	1,502	1,776	1,456	1,617	1,528	1,690	1,895	1,507	1,846	1,604	1,628	1,640	1,892	2,088	1,767	2,134
	3 PM - 4 PM	1,338	1,397	1,413	1,596	1,791	1,541	1,818	1,472	1,626	1,555	1,757	1,925	1,483	1,912	1,627	1,604	1,704	1,941	2,182	1,671	2,189
	4 PM - 5 PM	1,322	1,437	1,479	1,645	1,857	1,497	1,888	1,533	1,707	1,633	1,738	1,936	1,403	1,862	1,705	1,635	1,761	1,868	2,069	1,641	2,212
	5 PM - 6 PM	1,284	1,421	1,415	1,673	1,841	1,345	1,771	1,478	1,563	1,564	1,591	1,936	1,261	1,792	1,644	1,625	1,668	1,886	2,038	1,497	2,065
	6 PM - 7 PM	1,151	1,241	1,290	1,465	1,564	1,171	1,566	1,295	1,392	1,347	1,461	1,734	1,183	1,623	1,446	1,414	1,457	1,569	1,814	1,384	1,880
	7 PM - 8 PM	1,025	1,066	1,085	1,231	1,299	1,026	1,365	1,132	1,191	1,121	1,283	1,455	1,083	1,411	1,233	1,213	1,250	1,419	1,601	1,255	1,602
	8 PM - 9 PM	849	885	868	981	1,064	809	1,062	968	991	916	1,037	1,234	836	1,262	1,045	1,022	1,055	1,278	1,320	1,094	1,347
	9 PM - 10 PM	696	735	743	804	869	649	816	799	831	754	873	939	746	997	868	859	847	1,085	1,116	946	1,115
	10 PM - 11 PM	593	625	601	681	682	549	617	699	677	639	718	741	583	654	733	748	716	842	888	788	810
	11 PM - Midnight	488	544	546	578	526	383	414	560	535	571	575	606	392	450	635	622	611	718	737	600	577

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

81 Elmore - Woodville

TO

71 Stony Ridge - Toledo

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	187	257	269	267	292	288	261	197	260	260	265	279	302	269	173	233	229	231	250	267	218
	1 AM - 2 AM	133	189	194	210	214	207	162	136	196	212	200	198	204	183	124	180	191	205	193	208	161
	2 AM - 3 AM	108	146	169	181	181	147	97	106	172	167	186	158	149	116	99	139	172	171	165	155	90
	3 AM - 4 AM	97	140	144	157	165	125	77	97	166	149	167	150	132	80	95	137	144	153	156	136	68
	4 AM - 5 AM	107	146	183	177	179	134	77	118	164	182	182	175	137	70	106	155	168	168	178	133	61
	5 AM - 6 AM	176	197	230	231	237	157	81	164	218	208	225	250	149	76	166	210	206	225	239	148	70
6 AM - 7 AM	286	313	325	329	330	203	105	266	325	322	337	330	191	102	302	334	332	353	321	203	98	
7 AM - 8 AM	369	416	428	452	422	263	157	364	446	423	442	416	281	154	392	429	444	441	427	272	149	
8 AM - 9 AM	431	495	534	559	543	405	264	434	535	534	566	530	433	275	453	483	490	520	497	418	241	
9 AM - 10 AM	550	579	622	648	684	606	440	533	604	632	649	659	615	423	538	558	581	587	597	573	384	
10 AM - 11 AM	642	663	707	771	824	786	668	647	683	710	772	804	797	677	637	632	629	678	699	694	571	
11 AM - 12 PM	740	767	780	869	952	921	938	758	766	805	890	934	923	932	712	676	675	737	835	785	760	
12 PM - 1 PM	806	815	850	908	1,067	983	1,087	812	797	855	938	1,016	963	1,099	759	689	676	785	912	831	897	
1 PM - 2 PM	804	823	865	944	1,068	951	1,131	805	800	853	962	1,087	945	1,144	744	713	720	799	951	802	922	
2 PM - 3 PM	819	861	841	963	1,139	964	1,167	837	837	863	963	1,101	879	1,165	752	738	748	843	983	778	911	
3 PM - 4 PM	856	869	888	1,008	1,117	950	1,216	864	842	876	1,000	1,099	884	1,116	787	743	761	845	981	795	962	
4 PM - 5 PM	876	873	915	998	1,104	922	1,183	858	839	895	937	1,066	913	1,116	756	710	768	884	982	728	953	
5 PM - 6 PM	828	839	863	982	1,060	840	1,123	822	829	844	950	1,070	860	1,038	726	749	764	868	987	675	955	
6 PM - 7 PM	743	734	773	842	991	746	1,001	737	724	743	855	985	797	1,005	644	646	668	755	883	644	1,050	
7 PM - 8 PM	622	651	658	746	850	638	859	631	615	659	764	831	701	886	523	547	545	614	766	545	883	
8 PM - 9 PM	573	557	538	630	684	579	711	534	529	552	638	626	572	713	388	446	445	526	573	460	745	
9 PM - 10 PM	477	459	452	537	565	499	542	427	442	480	525	523	476	553	348	362	384	437	454	432	630	
10 PM - 11 PM	406	411	389	443	473	412	406	362	393	411	418	471	404	415	323	318	323	378	388	339	399	
11 PM - Midnight	369	363	342	405	380	321	314	316	328	338	354	390	329	291	292	274	284	329	329	299	241	

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	374	513	537	534	585	576	522	393	520	519	530	558	604	538	346	467	458	462	500	533	437
	1 AM - 2 AM	265	378	388	420	429	414	324	272	392	424	400	396	408	366	247	360	381	411	385	416	323
	2 AM - 3 AM	215	292	338	362	363	294	194	211	343	333	372	317	297	232	198	277	343	343	330	309	181
	3 AM - 4 AM	193	280	287	314	330	251	153	194	331	298	333	301	265	160	191	275	288	307	312	272	135
	4 AM - 5 AM	214	292	366	355	358	269	153	237	328	364	364	350	275	140	212	309	335	335	356	266	122
	5 AM - 6 AM	351	395	461	461	474	315	162	328	435	415	451	500	297	153	333	421	411	449	478	297	141
6 AM - 7 AM	573	626	649	658	659	406	210	532	650	644	674	660	382	203	604	668	664	706	641	407	197	
7 AM - 8 AM	738	831	855	904	844	527	315	727	892	845	885	832	562	309	784	858	888	881	854	544	298	
8 AM - 9 AM	862	989	1,069	1,119	1,085	810	529	868	1,070	1,068	1,133	1,059	867	551	905	965	979	1,039	993	836	481	
9 AM - 10 AM	1,100	1,158	1,243	1,296	1,368	1,213	881	1,066	1,208	1,263	1,299	1,318	1,231	846	1,075	1,115	1,161	1,174	1,193	1,146	768	
10 AM - 11 AM	1,285	1,327	1,414	1,542	1,648	1,573	1,336	1,294	1,365	1,420	1,544	1,609	1,595	1,353	1,274	1,265	1,258	1,355	1,399	1,388	1,142	
11 AM - 12 PM	1,479	1,533	1,561	1,739	1,903	1,842	1,877	1,515	1,532	1,610	1,781	1,868	1,846	1,864	1,423	1,352	1,349	1,473	1,670	1,569	1,521	
12 PM - 1 PM	1,612	1,630	1,699	1,815	2,135	1,966	2,174	1,625	1,594	1,709	1,875	2,033	1,927	2,197	1,519	1,378	1,352	1,570	1,824	1,663	1,794	
1 PM - 2 PM	1,608	1,646	1,731	1,888	2,135	1,903	2,262	1,610	1,600	1,707	1,924	2,174	1,890	2,288	1,488	1,425	1,440	1,599	1,901	1,604	1,844	
2 PM - 3 PM	1,639	1,722	1,681	1,927	2,277	1,928	2,334	1,674	1,674	1,726	1,926	2,203	1,758	2,331	1,504	1,475	1,495	1,687	1,965	1,555	1,823	
3 PM - 4 PM	1,712	1,738	1,776	2,015	2,233	1,900	2,431	1,729	1,683	1,752	2,001	2,197	1,767	2,231	1,573	1,486	1,522	1,690	1,961	1,589	1,924	
4 PM - 5 PM	1,751	1,746	1,831	1,996	2,209	1,844	2,366	1,716	1,678	1,790	1,875	2,132	1,827	2,231	1,512	1,420	1,537	1,768	1,963	1,456	1,906	
5 PM - 6 PM	1,657	1,677	1,725	1,965	2,120	1,680	2,246	1,644	1,657	1,688	1,901	2,141	1,720	2,076	1,451	1,497	1,528	1,735	1,975	1,350	1,910	
6 PM - 7 PM	1,486	1,469	1,546	1,684	1,982	1,493	2,002	1,473	1,448	1,485	1,710	1,970	1,595	2,010	1,288	1,291	1,336	1,511	1,765	1,289	2,100	
7 PM - 8 PM	1,245	1,302	1,316	1,492	1,700	1,276	1,719	1,263	1,229	1,318	1,527	1,661	1,403	1,771	1,045	1,093	1,089	1,228	1,533	1,090	1,767	
8 PM - 9 PM	1,145	1,114	1,076	1,260	1,367	1,158	1,422	1,067	1,058	1,103	1,275	1,252	1,145	1,427	776	892	889	1,051	1,145	921	1,490	
9 PM - 10 PM	954	918	903	1,075	1,130	998	1,084	853	883	959	1,050	1,045	952	1,106	695	724	768	874	909	863	1,260	
10 PM - 11 PM	811	821	779	886	947	824	812	724	786	821	836	942	809	830	646	636	645	755	777	677	798	
11 PM - Midnight	738	726	683	810	761	642	628	632	656	676	708	780	657	582	583	549	569	658	658	598	482	

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

81 Elmore - Woodville

TO

71 Stony Ridge - Toledo

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	177	231	225	228	278	282	262	153	224	214	205	221	220	133	131	225	227	220	221	200	110
	1 AM - 2 AM	114	200	185	196	225	207	222	104	181	182	187	188	164	127	96	184	195	181	177	157	90
	2 AM - 3 AM	95	160	178	167	178	145	141	84	157	155	156	164	139	69	84	163	154	151	158	125	65
	3 AM - 4 AM	87	156	153	153	160	124	87	87	152	143	153	141	123	56	82	146	146	152	151	130	60
	4 AM - 5 AM	113	168	172	170	173	127	65	108	173	175	175	166	127	54	102	160	169	161	167	106	58
	5 AM - 6 AM	154	213	208	211	216	141	64	161	211	219	230	209	134	64	149	204	214	210	204	133	67
	6 AM - 7 AM	276	340	340	356	312	183	86	289	348	348	361	338	191	94	254	326	336	315	317	175	89
	7 AM - 8 AM	374	437	430	432	415	250	126	380	447	437	444	425	263	132	339	401	397	399	395	255	118
	8 AM - 9 AM	428	514	474	502	481	392	216	437	501	478	488	479	392	211	381	486	473	470	465	351	190
	9 AM - 10 AM	500	552	558	578	602	557	352	488	545	545	554	568	513	316	418	560	543	556	540	490	294
	10 AM - 11 AM	590	611	605	625	717	680	528	572	580	587	643	659	671	462	489	593	590	579	611	583	450
	11 AM - 12 PM	654	670	639	694	822	773	762	613	628	617	666	766	733	625	538	638	631	618	698	684	616
	12 PM - 1 PM	692	687	692	772	889	786	860	665	650	624	706	829	758	737	566	666	672	615	736	690	743
	1 PM - 2 PM	721	700	685	788	957	771	939	657	665	656	733	822	727	744	581	673	706	681	763	710	798
	2 PM - 3 PM	742	722	709	802	992	756	935	673	713	655	775	894	709	747	596	691	705	706	807	698	821
	3 PM - 4 PM	759	756	769	845	953	736	1,006	689	723	716	814	912	725	857	632	718	754	732	852	700	814
	4 PM - 5 PM	741	732	764	867	981	709	976	718	692	714	829	927	707	811	646	746	765	744	834	654	791
	5 PM - 6 PM	739	721	740	840	937	661	939	692	684	685	775	922	662	784	604	698	732	726	831	578	740
	6 PM - 7 PM	642	646	639	725	924	598	862	591	594	595	667	803	551	826	525	608	633	606	695	497	652
	7 PM - 8 PM	529	536	538	620	722	527	726	503	494	490	567	671	442	705	446	498	521	508	615	426	579
	8 PM - 9 PM	442	434	435	511	560	453	625	403	398	401	482	549	378	513	379	414	438	410	493	320	459
	9 PM - 10 PM	369	362	373	430	451	396	535	348	326	346	404	409	299	398	337	366	360	371	392	263	350
	10 PM - 11 PM	320	297	311	372	389	347	395	297	297	303	308	357	235	290	321	317	318	313	320	218	236
	11 PM - Midnight	281	271	274	323	339	308	299	253	255	262	288	306	177	178	271	267	269	264	254	159	179

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	354	462	450	455	557	564	524	306	447	427	409	441	439	266	262	449	454	439	441	400	220
	1 AM - 2 AM	227	400	369	391	449	413	444	208	362	364	373	377	327	254	192	368	391	362	353	314	180
	2 AM - 3 AM	190	320	355	334	356	290	283	167	315	310	312	327	278	137	167	327	308	301	316	250	129
	3 AM - 4 AM	174	312	306	307	320	247	173	174	303	287	305	281	246	113	163	292	293	303	302	261	120
	4 AM - 5 AM	227	335	343	339	346	254	129	217	346	350	349	333	253	108	204	320	339	323	333	213	117
	5 AM - 6 AM	308	425	416	422	432	283	128	323	421	439	459	417	268	128	297	409	428	421	407	266	134
	6 AM - 7 AM	551	681	680	712	623	366	172	578	695	697	721	676	382	188	508	652	672	630	634	350	177
	7 AM - 8 AM	749	874	860	864	829	499	252	739	894	873	887	849	526	264	678	802	793	799	791	510	235
	8 AM - 9 AM	857	1,027	948	1,005	962	783	433	875	1,002	956	976	958	783	422	762	972	946	941	930	702	380
	9 AM - 10 AM	1,000	1,103	1,116	1,156	1,205	1,113	704	977	1,091	1,089	1,108	1,137	1,027	631	836	1,119	1,085	1,112	1,079	981	588
	10 AM - 11 AM	1,179	1,222	1,210	1,251	1,434	1,361	1,057	1,144	1,161	1,174	1,286	1,317	1,342	925	978	1,186	1,181	1,158	1,223	1,166	901
	11 AM - 12 PM	1,308	1,341	1,279	1,388	1,645	1,546	1,523	1,225	1,257	1,234	1,332	1,531	1,465	1,250	1,076	1,275	1,262	1,237	1,395	1,368	1,233
	12 PM - 1 PM	1,384	1,374	1,384	1,543	1,779	1,571	1,720	1,331	1,300	1,249	1,411	1,658	1,515	1,474	1,131	1,332	1,345	1,230	1,472	1,381	1,485
	1 PM - 2 PM	1,442	1,399	1,371	1,577	1,913	1,543	1,878	1,315	1,330	1,313	1,465	1,644	1,455	1,487	1,162	1,346	1,412	1,361	1,525	1,420	1,595
	2 PM - 3 PM	1,483	1,444	1,418	1,605	1,984	1,512	1,869	1,346	1,426	1,310	1,550	1,789	1,419	1,494	1,192	1,381	1,411	1,411	1,615	1,396	1,641
	3 PM - 4 PM	1,518	1,511	1,539	1,690	1,906	1,473	2,013	1,377	1,445	1,432	1,628	1,823	1,450	1,714	1,263	1,436	1,508	1,465	1,703	1,399	1,627
	4 PM - 5 PM	1,482	1,464	1,528	1,734	1,961	1,417	1,953	1,436	1,384	1,428	1,659	1,854	1,414	1,621	1,292	1,491	1,530	1,488	1,668	1,308	1,582
	5 PM - 6 PM	1,478	1,442	1,481	1,679	1,873	1,322	1,878	1,383	1,368	1,370	1,550	1,844	1,324	1,567	1,209	1,395	1,465	1,452	1,662	1,155	1,479
	6 PM - 7 PM	1,284	1,291	1,278	1,450	1,848	1,196	1,725	1,181	1,188	1,190	1,333	1,606	1,102	1,653	1,050	1,217	1,267	1,211	1,390	994	1,305
	7 PM - 8 PM	1,058	1,072	1,077	1,239	1,443	1,053	1,452	1,005	988	980	1,134	1,342	883	1,411	892	996	1,041	1,015	1,229	853	1,158
	8 PM - 9 PM	885	869	869	1,023	1,120	907	1,250	807	796	802	963	1,097	757	1,027	758	828	875	819	986	641	918
	9 PM - 10 PM	738	724	746	860	901	792	1,070	695	652	693	808	817	597	795	674	732	721	743	783	526	700
	10 PM - 11 PM	641	593	622	743	779	694	791	594	595	606	616	713	470	580	643	633	636	627	639	436	472
	11 PM - Midnight	562	541	547	645	678	617	599	507	510	525	575	612	353	357	542	534	539	529	507	317	359

NOTES:

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Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

81 Elmore - Woodville

TO

91 Fremont - Port Clinton

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	113	162	173	173	182	160	119	138	187	204	176	141	181	130	167	198	200	205	212	212	153
	1 AM - 2 AM	90	131	143	140	154	132	90	100	152	164	143	125	146	95	121	157	162	162	170	162	136
	2 AM - 3 AM	76	105	113	118	120	99	73	84	128	130	120	108	109	72	96	130	132	151	154	124	79
	3 AM - 4 AM	66	99	111	117	119	100	57	75	107	125	117	108	95	62	95	118	124	141	136	110	72
	4 AM - 5 AM	76	111	120	132	128	88	56	88	120	133	131	113	99	65	92	135	139	147	148	111	66
	5 AM - 6 AM	106	156	163	172	166	108	62	128	171	174	157	137	118	69	128	188	179	192	196	134	72
	6 AM - 7 AM	187	249	257	257	243	156	76	199	280	272	241	187	155	95	222	280	287	284	296	176	98
	7 AM - 8 AM	250	332	354	343	341	191	106	306	378	385	315	289	212	138	327	389	402	391	372	238	137
	8 AM - 9 AM	299	391	403	388	388	241	143	368	450	408	367	338	284	195	382	458	454	478	446	309	199
	9 AM - 10 AM	345	420	428	426	410	319	212	412	461	436	393	382	372	264	412	461	497	517	487	407	301
	10 AM - 11 AM	374	455	436	446	443	422	317	452	487	454	428	435	478	384	489	513	519	554	545	531	441
	11 AM - 12 PM	425	495	495	505	499	542	416	530	523	500	489	507	577	506	537	557	593	623	632	658	598
	12 PM - 1 PM	481	521	519	547	539	582	493	579	547	517	513	558	615	594	606	578	606	674	692	703	694
	1 PM - 2 PM	500	542	544	574	588	583	564	588	568	522	534	607	608	656	609	627	634	691	749	702	787
	2 PM - 3 PM	541	548	538	584	633	576	618	595	595	549	555	687	599	696	628	629	648	719	811	699	872
	3 PM - 4 PM	580	574	581	635	670	578	674	683	652	580	580	735	601	713	683	675	703	770	880	711	930
	4 PM - 5 PM	592	584	626	664	706	568	686	687	668	617	594	751	577	726	704	702	745	791	923	681	915
	5 PM - 6 PM	554	590	620	632	717	512	611	649	655	574	555	746	534	704	669	697	729	768	908	630	863
	6 PM - 7 PM	486	529	532	527	637	450	530	549	554	497	455	672	473	596	579	584	619	696	799	544	794
	7 PM - 8 PM	422	415	423	437	542	392	463	460	471	414	378	555	412	495	477	495	504	563	688	449	670
	8 PM - 9 PM	341	349	373	388	453	316	370	395	414	354	310	473	335	421	424	419	432	485	554	364	527
	9 PM - 10 PM	284	283	295	331	352	262	301	331	327	300	260	370	277	318	350	344	361	401	447	307	421
	10 PM - 11 PM	233	231	245	272	276	212	221	270	282	234	207	282	224	244	282	272	297	329	352	252	311
	11 PM - Midnight	196	206	201	228	214	158	155	230	226	196	185	214	188	183	245	235	238	260	279	176	236

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	227	324	346	346	364	319	237	276	373	408	353	282	363	259	334	396	400	409	423	424	306
	1 AM - 2 AM	181	261	287	280	308	265	179	199	304	328	286	251	291	190	241	314	325	324	341	323	272
	2 AM - 3 AM	152	210	227	236	240	198	145	168	257	259	239	215	217	143	193	260	263	303	308	247	157
	3 AM - 4 AM	131	198	222	234	238	201	115	149	214	250	233	215	190	124	191	235	249	282	272	220	144
	4 AM - 5 AM	152	221	239	264	256	175	112	176	241	265	262	225	198	130	184	270	277	293	295	223	132
	5 AM - 6 AM	211	311	326	343	332	217	124	256	342	348	315	274	235	137	256	376	358	383	391	267	144
	6 AM - 7 AM	375	499	515	514	486	313	152	398	560	544	482	375	310	190	444	560	574	568	592	352	197
	7 AM - 8 AM	499	664	709	686	682	382	211	612	757	771	631	578	423	276	653	778	803	782	744	475	274
	8 AM - 9 AM	598	783	806	776	776	482	286	737	901	817	733	676	567	390	764	916	908	955	892	619	399
	9 AM - 10 AM	690	840	856	852	820	638	424	824	923	872	787	765	744	528	824	923	994	1,033	973	814	602
	10 AM - 11 AM	748	910	872	893	887	844	634	903	975	907	855	870	956	768	978	1,026	1,037	1,108	1,090	1,063	881
	11 AM - 12 PM	849	991	990	1,011	998	1,085	831	1,060	1,046	1,001	979	1,013	1,155	1,012	1,075	1,114	1,186	1,246	1,264	1,316	1,195
	12 PM - 1 PM	962	1,041	1,038	1,095	1,078	1,164	986	1,159	1,094	1,035	1,026	1,116	1,229	1,188	1,211	1,156	1,212	1,348	1,383	1,406	1,388
	1 PM - 2 PM	1,001	1,084	1,088	1,148	1,176	1,166	1,128	1,176	1,136	1,045	1,068	1,214	1,215	1,311	1,218	1,253	1,267	1,382	1,498	1,405	1,573
	2 PM - 3 PM	1,082	1,095	1,077	1,167	1,267	1,153	1,236	1,190	1,190	1,098	1,110	1,374	1,199	1,392	1,256	1,258	1,297	1,438	1,622	1,397	1,744
	3 PM - 4 PM	1,161	1,147	1,161	1,270	1,340	1,155	1,348	1,366	1,305	1,160	1,159	1,469	1,202	1,427	1,366	1,350	1,406	1,541	1,760	1,422	1,861
	4 PM - 5 PM	1,184	1,168	1,253	1,328	1,412	1,136	1,372	1,374	1,336	1,233	1,189	1,503	1,154	1,452	1,409	1,404	1,490	1,582	1,847	1,363	1,831
	5 PM - 6 PM	1,109	1,180	1,240	1,264	1,435	1,025	1,222	1,298	1,130	1,147	1,110	1,493	1,068	1,407	1,339	1,395	1,457	1,536	1,816	1,260	1,725
	6 PM - 7 PM	973	1,058	1,064	1,054	1,275	899	1,061	1,097	1,109	994	910	1,344	946	1,193	1,159	1,167	1,237	1,393	1,598	1,088	1,587
	7 PM - 8 PM	843	831	846	875	1,083	784	925	920	941	827	756	1,111	825	991	954	990	1,008	1,126	1,376	898	1,340
	8 PM - 9 PM	682	697	747	776	906	632	739	790	828	708	620	946	671	843	847	839	865	969	1,108	727	1,054
	9 PM - 10 PM	568	567	589	661	704	524	602	662	654	600	521	740	553	635	699	688	722	803	894	613	841
	10 PM - 11 PM	466	461	490	543	553	424	443	541	564	468	415	563	449	489	565	543	593	658	704	503	623
	11 PM - Midnight	393	411	402	456	427	316	311	461	453	393	371	428	377	366	490	469	475	519	559	353	471

- NOTES:**
- Refer to SP 104 for lane closure restrictions.
 - If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
 - If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

81 Elmore - Woodville

TO

91 Fremont - Port Clinton

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	160	206	213	229	251	227	159	181	197	217	229	251	243	163	228	235	245	250	289	268	186
	1 AM - 2 AM	125	160	165	170	185	178	114	129	179	175	184	194	178	123	155	186	190	219	230	190	134
	2 AM - 3 AM	101	131	134	146	155	135	88	104	136	142	153	166	138	94	124	158	162	185	192	151	106
	3 AM - 4 AM	90	124	125	133	138	129	84	97	119	130	151	156	133	78	102	136	149	168	171	140	84
	4 AM - 5 AM	96	126	142	143	157	121	76	103	127	143	156	168	121	73	115	146	145	166	160	138	87
	5 AM - 6 AM	137	190	194	197	196	141	75	142	177	211	194	210	146	82	149	202	208	230	220	155	93
6 AM - 7 AM	227	278	292	300	300	179	105	244	264	308	288	317	198	111	256	304	315	329	329	198	122	
7 AM - 8 AM	334	394	402	389	393	249	150	339	374	431	426	409	280	159	371	433	442	454	441	280	184	
8 AM - 9 AM	408	462	496	497	460	323	221	422	428	500	531	508	400	255	469	527	532	537	541	418	307	
9 AM - 10 AM	437	503	503	537	527	428	325	523	504	552	615	600	539	418	623	623	633	658	685	611	484	
10 AM - 11 AM	494	533	567	602	621	567	458	569	573	594	651	663	629	545	680	653	680	743	767	744	624	
11 AM - 12 PM	554	598	616	661	698	682	627	654	642	681	749	765	730	734	749	708	730	817	886	871	793	
12 PM - 1 PM	609	623	648	717	781	732	729	692	706	697	777	834	816	844	793	765	762	883	938	903	924	
1 PM - 2 PM	609	633	672	754	822	723	814	738	731	725	797	906	801	896	849	778	806	909	1,011	921	1,032	
2 PM - 3 PM	661	693	699	799	891	746	873	749	782	760	831	961	789	961	891	796	837	947	1,047	941	1,092	
3 PM - 4 PM	692	726	736	842	968	712	906	804	814	828	890	1,008	769	966	913	847	870	1,009	1,151	858	1,150	
4 PM - 5 PM	719	729	752	858	962	708	905	803	802	815	910	1,037	747	999	937	856	885	1,032	1,123	807	1,116	
5 PM - 6 PM	687	702	758	855	912	668	894	739	789	780	854	958	682	970	847	794	868	988	1,054	750	1,070	
6 PM - 7 PM	582	608	678	740	798	584	809	672	703	690	785	865	597	892	766	733	719	872	933	650	972	
7 PM - 8 PM	494	526	574	640	674	516	673	568	578	601	668	734	502	770	661	580	598	738	766	573	842	
8 PM - 9 PM	426	441	460	541	545	427	544	477	513	541	571	618	450	659	575	512	502	628	651	501	709	
9 PM - 10 PM	353	372	377	446	455	352	430	403	410	441	460	502	363	511	486	440	425	549	547	419	572	
10 PM - 11 PM	288	296	340	362	354	278	313	310	316	346	391	402	298	372	375	340	367	439	440	328	434	
11 PM - Midnight	240	241	294	297	272	220	229	253	254	281	302	325	230	258	297	279	297	352	340	254	319	

Close 2 Lanes	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	320	412	426	457	502	454	318	362	394	433	459	502	487	326	456	470	489	499	578	536	372
	1 AM - 2 AM	250	320	331	340	370	356	229	258	358	350	368	389	355	246	310	371	380	437	460	380	268
	2 AM - 3 AM	202	262	268	292	310	270	176	208	272	283	307	331	276	189	247	315	324	369	384	302	213
	3 AM - 4 AM	179	247	250	266	277	258	167	193	238	259	303	311	265	156	204	272	298	335	341	281	169
	4 AM - 5 AM	191	252	284	286	313	243	152	205	254	286	311	336	242	147	230	291	289	332	319	277	175
	5 AM - 6 AM	273	381	387	394	391	281	150	283	355	421	388	420	292	163	297	403	416	460	440	310	187
	6 AM - 7 AM	455	556	584	600	601	359	210	488	528	615	576	635	395	223	513	607	629	657	659	395	245
	7 AM - 8 AM	668	787	803	778	786	498	301	678	749	862	852	817	560	319	743	866	884	908	882	561	369
	8 AM - 9 AM	815	924	991	995	920	646	442	843	856	1,000	1,061	1,016	800	509	937	1,054	1,063	1,073	1,081	836	615
	9 AM - 10 AM	874	1,005	1,006	1,074	1,054	857	651	1,047	1,008	1,104	1,229	1,199	1,078	837	1,245	1,245	1,266	1,315	1,369	1,222	967
	10 AM - 11 AM	987	1,066	1,133	1,203	1,242	1,134	915	1,137	1,147	1,188	1,302	1,326	1,258	1,090	1,360	1,306	1,360	1,487	1,534	1,488	1,249
	11 AM - 12 PM	1,108	1,196	1,233	1,322	1,397	1,363	1,255	1,308	1,283	1,362	1,498	1,529	1,460	1,468	1,499	1,415	1,460	1,633	1,773	1,741	1,586
	12 PM - 1 PM	1,218	1,246	1,297	1,435	1,563	1,464	1,458	1,385	1,412	1,394	1,555	1,667	1,631	1,687	1,586	1,530	1,523	1,766	1,876	1,807	1,848
	1 PM - 2 PM	1,217	1,266	1,344	1,509	1,644	1,446	1,628	1,475	1,462	1,450	1,593	1,813	1,602	1,793	1,698	1,557	1,611	1,817	2,021	1,842	2,065
	2 PM - 3 PM	1,321	1,386	1,399	1,599	1,782	1,492	1,746	1,499	1,563	1,520	1,662	1,921	1,578	1,923	1,782	1,591	1,675	1,895	2,093	1,881	2,183
	3 PM - 4 PM	1,384	1,452	1,473	1,684	1,935	1,424	1,812	1,608	1,629	1,656	1,781	2,015	1,538	1,931	1,827	1,695	1,740	2,018	2,301	1,717	2,300
	4 PM - 5 PM	1,437	1,458	1,504	1,716	1,924	1,417	1,810	1,606	1,603	1,630	1,820	2,075	1,494	1,998	1,874	1,712	1,770	2,065	2,246	1,614	2,233
	5 PM - 6 PM	1,374	1,404	1,516	1,710	1,824	1,337	1,787	1,477	1,579	1,660	1,708	1,915	1,363	1,940	1,694	1,588	1,737	1,976	2,108	1,501	2,141
	6 PM - 7 PM	1,165	1,216	1,356	1,479	1,596	1,169	1,618	1,344	1,405	1,380	1,570	1,729	1,193	1,784	1,531	1,466	1,437	1,744	1,866	1,300	1,945
	7 PM - 8 PM	987	1,052	1,148	1,279	1,349	1,032	1,346	1,136	1,156	1,202	1,335	1,468	1,004	1,541	1,321	1,160	1,196	1,477	1,532	1,146	1,685
	8 PM - 9 PM	851	882	920	1,082	1,090	855	1,089	954	1,026	1,082	1,141	1,236	899	1,317	1,150	1,024	1,004	1,256	1,302	1,002	1,419
	9 PM - 10 PM	706	744	755	892	909	704	861	807	820	882	921	1,004	726	1,022	973	879	850	1,098	1,094	839	1,143
	10 PM - 11 PM	576	592	681	724	708	555	626	620	632	693	782	803	596	745	751	680	733	878	879	657	868
	11 PM - Midnight	480	481	587	593	543	440	457	505	508	563	604	651	460	517	594	558	594	704	680	508	638

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

81 Elmore - Woodville

TO

91 Fremont - Port Clinton

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	227	219	228	256	273	269	204	248	240	232	254	270	279	208	191	222	220	242	280	277	196
	1 AM - 2 AM	159	177	183	210	223	189	140	185	184	190	209	199	206	151	147	176	179	199	222	213	134
	2 AM - 3 AM	118	141	149	171	180	160	115	137	163	162	165	175	155	109	110	139	143	164	172	159	112
	3 AM - 4 AM	114	119	137	157	168	143	85	109	140	142	162	168	137	95	96	121	138	148	158	129	88
	4 AM - 5 AM	122	130	157	163	171	136	86	117	154	159	179	166	134	82	109	138	144	163	171	135	79
	5 AM - 6 AM	158	184	195	221	225	154	93	159	200	214	210	220	161	95	142	184	190	203	212	149	81
	6 AM - 7 AM	245	278	304	308	330	206	120	261	297	324	326	312	189	115	257	271	294	316	319	185	106
	7 AM - 8 AM	363	390	414	443	435	268	175	391	435	482	493	457	280	177	345	391	409	422	414	266	179
	8 AM - 9 AM	463	489	516	561	532	417	281	489	555	575	572	564	430	282	401	455	474	498	496	382	279
	9 AM - 10 AM	631	640	657	697	716	645	475	618	645	685	698	721	688	503	460	509	543	579	547	530	488
	10 AM - 11 AM	712	686	707	765	821	808	665	678	688	758	783	795	849	705	552	547	590	631	646	747	743
	11 AM - 12 PM	793	758	779	858	924	945	863	779	741	806	854	932	993	913	615	652	640	730	766	868	872
	12 PM - 1 PM	856	815	811	944	1,014	1,028	1,024	855	794	832	879	999	1,068	1,061	687	704	697	789	855	891	941
	1 PM - 2 PM	886	838	827	968	1,081	1,034	1,136	907	830	867	937	1,052	1,101	1,173	714	714	733	812	917	885	987
	2 PM - 3 PM	914	877	888	1,008	1,145	1,019	1,209	906	859	900	1,009	1,112	1,055	1,198	775	752	755	880	1,010	927	1,035
	3 PM - 4 PM	937	928	890	1,020	1,253	1,032	1,183	968	923	988	1,095	1,172	1,065	1,279	805	785	786	898	1,077	846	1,043
	4 PM - 5 PM	918	949	911	1,042	1,245	940	1,199	979	967	1,027	1,128	1,165	1,003	1,187	828	821	844	958	1,127	797	1,040
	5 PM - 6 PM	853	858	867	1,028	1,108	840	1,154	950	934	987	1,072	1,119	870	1,118	775	774	807	923	1,136	746	981
	6 PM - 7 PM	765	774	792	890	987	740	1,002	788	788	834	904	1,010	775	1,051	690	665	705	822	998	653	912
	7 PM - 8 PM	635	629	677	767	838	639	880	609	645	680	765	854	664	934	545	567	558	690	821	587	792
	8 PM - 9 PM	538	532	577	657	687	526	801	522	532	563	647	703	575	771	478	458	487	586	667	487	646
	9 PM - 10 PM	426	435	467	545	578	444	617	449	448	475	567	579	473	599	399	386	412	500	537	440	519
	10 PM - 11 PM	351	350	386	441	454	341	450	381	351	379	460	455	378	488	312	312	352	419	411	367	374
	11 PM - Midnight	296	300	306	344	351	279	342	311	295	308	361	369	284	344	266	245	287	338	354	295	268

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	454	439	455	511	546	539	408	497	480	463	509	541	558	415	382	445	441	485	561	554	392
	1 AM - 2 AM	318	354	366	420	447	377	281	370	368	381	418	399	411	301	294	352	358	397	443	427	267
	2 AM - 3 AM	235	281	298	342	359	320	230	273	325	325	329	349	310	218	219	278	286	328	344	318	223
	3 AM - 4 AM	227	239	273	315	336	287	170	219	279	284	324	336	274	190	193	241	276	295	316	259	175
	4 AM - 5 AM	245	260	313	327	342	272	172	233	309	317	357	333	268	164	217	275	287	325	341	269	158
	5 AM - 6 AM	316	368	390	442	450	309	186	319	399	428	420	439	323	190	283	368	381	405	423	297	163
	6 AM - 7 AM	490	556	607	615	660	411	239	522	594	648	652	624	377	230	514	543	587	631	639	370	211
	7 AM - 8 AM	726	779	827	887	870	536	349	781	869	964	985	913	559	354	690	783	818	845	829	531	357
	8 AM - 9 AM	925	977	1,032	1,122	1,064	834	563	978	1,110	1,150	1,144	1,129	860	564	802	911	948	996	993	763	558
	9 AM - 10 AM	1,262	1,280	1,315	1,393	1,432	1,290	949	1,235	1,289	1,371	1,396	1,441	1,377	1,006	920	1,019	1,087	1,159	1,095	1,060	976
	10 AM - 11 AM	1,424	1,373	1,414	1,530	1,642	1,617	1,329	1,356	1,376	1,517	1,565	1,591	1,698	1,410	1,104	1,095	1,181	1,262	1,292	1,493	1,487
	11 AM - 12 PM	1,587	1,517	1,558	1,716	1,849	1,891	1,727	1,558	1,481	1,611	1,708	1,865	1,987	1,825	1,230	1,304	1,280	1,460	1,532	1,736	1,743
	12 PM - 1 PM	1,711	1,629	1,622	1,888	2,027	2,057	2,047	1,710	1,589	1,663	1,758	1,997	2,136	2,123	1,373	1,408	1,394	1,577	1,710	1,781	1,881
	1 PM - 2 PM	1,772	1,675	1,654	1,937	2,162	2,068	2,271	1,814	1,660	1,734	1,873	2,104	2,201	2,346	1,428	1,429	1,466	1,625	1,835	1,770	1,974
	2 PM - 3 PM	1,828	1,755	1,777	2,015	2,290	2,037	2,417	1,813	1,718	1,800	2,019	2,224	2,110	2,397	1,549	1,504	1,509	1,760	2,019	1,854	2,069
	3 PM - 4 PM	1,874	1,855	1,780	2,041	2,507	2,064	2,366	1,936	1,845	1,975	2,191	2,344	2,129	2,557	1,609	1,569	1,571	1,795	2,154	1,692	2,086
	4 PM - 5 PM	1,836	1,897	1,822	2,084	2,490	1,880	2,397	1,958	1,933	2,053	2,255	2,331	2,005	2,375	1,656	1,643	1,687	1,917	2,253	1,594	2,080
	5 PM - 6 PM	1,706	1,716	1,735	2,056	2,216	1,680	2,308	1,900	1,868	1,975	2,145	2,238	1,741	2,236	1,550	1,547	1,614	1,846	2,271	1,492	1,961
	6 PM - 7 PM	1,529	1,547	1,583	1,780	1,973	1,480	2,005	1,576	1,576	1,669	1,808	2,020	1,550	2,101	1,379	1,330	1,409	1,644	1,997	1,305	1,824
	7 PM - 8 PM	1,270	1,258	1,355	1,535	1,676	1,278	1,759	1,217	1,290	1,360	1,531	1,707	1,328	1,868	1,090	1,134	1,116	1,380	1,642	1,174	1,584
	8 PM - 9 PM	1,076	1,065	1,155	1,313	1,373	1,052	1,602	1,044	1,064	1,126	1,294	1,406	1,150	1,541	955	916	974	1,172	1,333	974	1,292
	9 PM - 10 PM	851	870	934	1,089	1,156	887	1,233	898	897	950	1,133	1,159	946	1,197	797	772	824	1,000	1,074	879	1,038
	10 PM - 11 PM	702	700	773	882	908	682	901	762	702	757	921	909	756	976	624	624	705	838	821	734	747
	11 PM - Midnight	593	600	613	688	701	558	683	622	590	616	723	737	567	688	531	489	575	676	708	589	536

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

81 Elmore - Woodville

TO

91 Fremont - Port Clinton

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	197	220	218	236	250	246	166	158	203	203	226	217	224	182	156	202	199	201	211	201	129
	1 AM - 2 AM	138	183	166	176	202	180	123	127	181	175	167	191	167	161	106	164	169	161	185	165	102
	2 AM - 3 AM	108	149	136	150	179	145	103	96	141	141	150	164	132	91	92	141	142	145	147	134	76
	3 AM - 4 AM	96	132	133	145	156	123	91	85	125	133	140	144	124	74	90	127	137	138	156	115	67
	4 AM - 5 AM	106	143	152	150	163	126	85	101	144	151	155	173	130	75	101	153	153	157	165	118	67
	5 AM - 6 AM	144	186	199	205	207	131	86	145	185	195	212	207	145	81	127	186	195	189	206	123	70
	6 AM - 7 AM	244	290	297	307	296	178	110	245	301	308	300	323	190	120	221	286	296	301	295	160	100
	7 AM - 8 AM	337	385	415	414	383	246	153	334	388	394	413	425	256	168	331	379	393	412	400	212	134
	8 AM - 9 AM	393	447	492	497	468	361	239	406	464	471	504	478	327	265	381	433	457	445	432	297	216
	9 AM - 10 AM	457	506	518	537	568	560	414	457	483	502	532	503	454	429	416	492	498	503	477	394	337
	10 AM - 11 AM	542	546	565	611	661	784	654	497	511	555	564	568	616	575	460	523	558	530	541	514	491
	11 AM - 12 PM	626	624	637	708	779	875	835	577	586	616	647	689	761	759	523	592	645	599	614	637	684
	12 PM - 1 PM	704	664	678	785	844	901	933	626	629	629	703	757	794	840	597	630	672	640	705	705	788
	1 PM - 2 PM	708	673	715	822	859	849	1,010	659	641	653	731	805	797	885	629	642	703	659	729	717	849
	2 PM - 3 PM	762	696	750	886	942	818	1,031	698	651	685	791	873	777	935	655	685	725	699	781	735	880
	3 PM - 4 PM	838	749	775	938	1,014	787	1,031	741	689	710	813	926	747	977	673	752	754	758	849	729	885
	4 PM - 5 PM	829	774	809	950	1,068	720	997	756	736	745	841	958	723	930	704	769	768	772	866	680	848
	5 PM - 6 PM	750	725	806	930	1,076	675	954	697	692	746	819	947	687	889	637	712	721	736	806	639	770
	6 PM - 7 PM	665	652	698	814	952	619	890	608	583	627	714	831	588	764	544	618	608	652	750	556	693
	7 PM - 8 PM	549	518	578	675	770	533	731	521	474	527	601	663	499	650	472	511	524	552	617	459	592
	8 PM - 9 PM	460	434	494	555	664	439	599	445	398	420	512	590	429	545	406	449	458	457	517	367	483
	9 PM - 10 PM	406	360	407	481	523	365	479	365	321	358	418	468	374	427	332	362	425	382	420	324	374
	10 PM - 11 PM	321	318	347	396	407	307	351	305	275	335	334	377	309	292	276	292	323	294	338	251	289
	11 PM - Midnight	270	254	276	311	329	222	250	243	221	274	270	289	255	208	234	235	270	256	274	190	195

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	395	439	436	472	500	491	332	317	406	407	452	433	449	364	311	403	397	402	423	402	259
	1 AM - 2 AM	276	366	333	352	404	360	246	255	362	350	333	381	334	323	211	329	338	322	370	329	204
	2 AM - 3 AM	216	298	273	301	359	289	206	191	281	283	300	328	264	181	183	281	284	291	293	268	152
	3 AM - 4 AM	193	264	266	290	311	246	182	169	250	266	280	288	248	148	180	253	273	275	311	229	134
	4 AM - 5 AM	212	287	303	300	326	252	169	202	288	302	310	347	260	150	202	307	307	313	331	237	135
	5 AM - 6 AM	288	373	398	409	414	262	171	290	370	391	423	413	291	163	255	373	391	378	412	246	139
	6 AM - 7 AM	487	579	595	613	592	356	220	489	603	615	600	647	380	241	442	573	592	602	589	319	200
	7 AM - 8 AM	674	770	831	827	765	491	305	667	775	787	826	850	511	336	663	757	786	824	801	424	268
	8 AM - 9 AM	785	895	984	995	936	723	478	811	928	942	1,009	955	655	530	761	865	915	889	863	593	432
	9 AM - 10 AM	914	1,011	1,037	1,074	1,135	1,119	828	915	967	1,003	1,064	1,005	908	858	832	983	996	1,006	953	788	674
	10 AM - 11 AM	1,084	1,092	1,130	1,222	1,321	1,567	1,308	994	1,023	1,110	1,128	1,136	1,232	1,151	919	1,045	1,115	1,059	1,082	1,028	982
	11 AM - 12 PM	1,252	1,247	1,273	1,416	1,557	1,750	1,670	1,155	1,172	1,233	1,293	1,377	1,521	1,517	1,046	1,183	1,289	1,198	1,228	1,273	1,368
	12 PM - 1 PM	1,409	1,328	1,355	1,570	1,687	1,802	1,866	1,253	1,259	1,257	1,405	1,513	1,588	1,680	1,195	1,260	1,345	1,280	1,409	1,409	1,576
	1 PM - 2 PM	1,417	1,345	1,429	1,644	1,718	1,697	2,019	1,318	1,282	1,306	1,461	1,609	1,594	1,769	1,259	1,284	1,405	1,317	1,458	1,434	1,698
	2 PM - 3 PM	1,524	1,392	1,499	1,773	1,884	1,635	2,062	1,396	1,302	1,370	1,583	1,747	1,555	1,869	1,310	1,371	1,451	1,398	1,561	1,469	1,761
	3 PM - 4 PM	1,677	1,498	1,551	1,876	2,028	1,574	2,063	1,482	1,378	1,419	1,625	1,851	1,494	1,955	1,346	1,503	1,508	1,516	1,698	1,459	1,771
	4 PM - 5 PM	1,659	1,547	1,618	1,900	2,136	1,440	1,994	1,513	1,471	1,490	1,683	1,915	1,447	1,861	1,407	1,537	1,535	1,545	1,733	1,361	1,697
	5 PM - 6 PM	1,501	1,450	1,612	1,859	2,152	1,349	1,908	1,395	1,384	1,492	1,638	1,893	1,373	1,778	1,274	1,424	1,442	1,472	1,612	1,277	1,541
	6 PM - 7 PM	1,330	1,304	1,396	1,628	1,903	1,238	1,779	1,215	1,165	1,254	1,428	1,661	1,176	1,528	1,088	1,236	1,216	1,305	1,499	1,112	1,386
	7 PM - 8 PM	1,097	1,035	1,155	1,350	1,539	1,065	1,462	1,043	948	1,054	1,202	1,327	999	1,301	944	1,022	1,048	1,104	1,235	919	1,183
	8 PM - 9 PM	919	867	987	1,111	1,328	878	1,198	890	796	840	1,025	1,180	857	1,090	812	898	917	914	1,035	734	965
	9 PM - 10 PM	813	720	814	962	1,047	729	959	730	641	715	836	937	747	854	664	723	849	764	839	649	749
	10 PM - 11 PM	642	635	694	791	814	614	703	610	550	670	667	754	619	584	552	585	646	589	676	501	578
	11 PM - Midnight	540	507	553	623	658	445	500	486	442	548	540	578	510	416	468	470	539	513	549	381	391

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

91 Fremont - Port Clinton

TO

81 Elmore - Woodville

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	103	183	197	199	198	168	91	123	207	213	199	160	170	113	146	225	214	218	207	184	121
	1 AM - 2 AM	83	136	152	175	157	126	72	93	171	166	153	118	134	78	110	184	172	175	175	141	83
	2 AM - 3 AM	66	129	132	142	138	111	54	86	155	150	128	117	111	61	77	150	152	154	146	108	63
	3 AM - 4 AM	69	123	135	133	132	99	48	72	132	137	121	111	89	57	79	139	137	132	126	100	53
	4 AM - 5 AM	83	131	150	147	152	98	48	92	158	159	136	115	102	52	105	154	161	153	156	101	54
	5 AM - 6 AM	102	166	170	186	175	110	46	126	191	188	158	147	116	57	136	199	197	194	193	121	56
	6 AM - 7 AM	173	253	266	267	232	139	62	225	288	265	247	205	140	76	228	301	282	296	265	162	73
	7 AM - 8 AM	230	327	336	339	315	179	97	312	404	359	316	285	214	109	312	390	391	385	367	220	112
	8 AM - 9 AM	279	415	400	412	385	265	131	370	470	420	378	329	304	164	363	473	461	461	449	326	171
	9 AM - 10 AM	330	450	447	454	431	368	201	412	517	467	411	409	390	246	419	511	505	519	517	448	262
	10 AM - 11 AM	368	490	483	489	492	463	302	481	547	485	462	496	499	372	476	555	549	568	584	546	396
	11 AM - 12 PM	418	524	500	526	546	553	401	516	560	504	482	534	579	500	511	582	578	617	685	644	548
	12 PM - 1 PM	431	562	507	541	589	571	503	530	591	526	504	600	602	552	558	615	602	666	731	692	693
	1 PM - 2 PM	472	574	523	556	642	578	563	565	577	533	490	642	592	626	582	628	627	676	755	679	757
	2 PM - 3 PM	497	594	550	605	650	598	635	586	588	544	527	615	580	659	603	643	645	700	787	660	763
	3 PM - 4 PM	512	616	565	636	671	584	635	611	525	555	549	611	566	671	610	657	667	722	831	651	818
	4 PM - 5 PM	534	619	574	613	681	548	624	616	583	564	533	695	549	668	635	664	672	750	807	615	845
	5 PM - 6 PM	519	577	578	581	664	504	584	598	611	534	494	696	500	651	615	633	641	713	824	566	792
	6 PM - 7 PM	447	513	494	524	622	430	536	523	534	454	428	606	433	574	568	583	584	650	744	485	736
	7 PM - 8 PM	409	438	414	471	500	341	457	473	467	399	359	508	366	486	481	489	512	549	612	404	631
	8 PM - 9 PM	339	373	351	368	386	275	373	403	402	333	292	402	296	396	414	410	421	452	494	321	476
	9 PM - 10 PM	280	313	304	303	309	219	278	335	328	303	250	298	253	295	346	339	342	368	368	271	369
	10 PM - 11 PM	257	270	285	266	247	170	186	289	288	252	221	250	194	221	319	319	315	312	308	211	269
	11 PM - Midnight	220	240	244	233	205	130	133	259	237	235	166	203	144	167	267	262	272	269	239	145	196

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	206	365	395	398	395	335	182	246	413	426	399	320	340	227	291	450	428	435	413	369	242
	1 AM - 2 AM	166	271	303	351	313	253	143	187	342	332	306	235	269	156	219	368	345	349	349	282	166
	2 AM - 3 AM	132	258	265	284	277	223	109	172	310	300	257	234	222	121	155	300	304	308	291	217	125
	3 AM - 4 AM	137	245	271	267	263	198	95	145	265	274	242	223	178	114	158	278	274	264	252	199	106
	4 AM - 5 AM	167	261	299	294	303	196	96	184	317	318	273	230	205	103	211	308	323	306	312	201	108
	5 AM - 6 AM	203	332	340	372	349	221	91	253	383	377	315	293	231	113	271	397	393	387	387	243	112
	6 AM - 7 AM	346	506	533	534	464	278	123	450	577	530	495	410	280	152	457	602	564	591	530	325	147
	7 AM - 8 AM	460	655	671	679	631	358	193	624	807	719	633	570	428	219	623	781	782	769	735	439	225
	8 AM - 9 AM	557	829	801	825	769	530	262	741	941	840	757	657	607	328	725	945	921	923	897	652	342
	9 AM - 10 AM	660	899	894	908	861	736	403	824	1,034	935	822	818	780	491	839	1,023	1,010	1,037	1,034	895	524
	10 AM - 11 AM	735	980	965	978	983	927	603	962	1,093	969	924	993	999	743	951	1,110	1,097	1,136	1,168	1,093	791
	11 AM - 12 PM	836	1,047	1,000	1,051	1,093	1,106	801	1,032	1,120	1,008	963	1,069	1,157	999	1,022	1,163	1,156	1,235	1,369	1,287	1,096
	12 PM - 1 PM	862	1,124	1,013	1,082	1,179	1,143	1,006	1,059	1,182	1,051	1,007	1,200	1,204	1,104	1,116	1,229	1,204	1,331	1,462	1,384	1,387
	1 PM - 2 PM	943	1,149	1,045	1,112	1,285	1,155	1,126	1,130	1,154	1,065	979	1,284	1,184	1,253	1,165	1,257	1,254	1,352	1,509	1,359	1,514
	2 PM - 3 PM	993	1,188	1,100	1,211	1,300	1,196	1,270	1,171	1,176	1,089	1,055	1,230	1,161	1,318	1,206	1,285	1,290	1,401	1,574	1,320	1,526
	3 PM - 4 PM	1,024	1,232	1,130	1,272	1,343	1,167	1,269	1,223	1,051	1,110	1,097	1,221	1,132	1,342	1,220	1,314	1,333	1,443	1,662	1,302	1,636
	4 PM - 5 PM	1,068	1,237	1,148	1,225	1,361	1,097	1,249	1,232	1,165	1,128	1,067	1,390	1,098	1,336	1,269	1,328	1,343	1,501	1,614	1,229	1,689
	5 PM - 6 PM	1,038	1,155	1,156	1,162	1,329	1,007	1,168	1,196	1,222	1,068	988	1,391	1,099	1,302	1,229	1,266	1,282	1,427	1,647	1,133	1,584
	6 PM - 7 PM	893	1,026	987	1,049	1,244	859	1,073	1,045	1,068	908	856	1,213	867	1,148	1,136	1,166	1,167	1,299	1,488	971	1,473
	7 PM - 8 PM	817	876	827	942	1,001	682	914	946	935	798	719	1,017	733	971	962	979	1,023	1,097	1,224	808	1,262
	8 PM - 9 PM	678	746	702	735	773	550	745	805	804	666	585	804	593	792	829	820	843	904	988	642	951
	9 PM - 10 PM	561	626	608	605	618	438	557	669	657	606	500	597	505	590	693	677	683	736	736	542	738
	10 PM - 11 PM	514	540	570	533	494	341	373	579	576	505	442	501	387	441	638	638	630	624	616	421	538
	11 PM - Midnight	439	479	488	466	411	260	267	518	473	469	331	407	288	334	533	524	544	537	479	291	391

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

91 Fremont - Port Clinton

TO

81 Elmore - Woodville

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
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Revision Date: 9/1/2022

Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	139	244	235	247	235	215	141	154	225	229	229	235	239	140	175	256	258	256	279	275	191
	1 AM - 2 AM	94	184	186	186	190	161	97	111	174	187	185	196	170	100	121	198	202	207	206	189	128
	2 AM - 3 AM	74	164	154	163	169	131	83	91	144	168	159	166	129	76	97	162	166	178	184	162	93
	3 AM - 4 AM	110	147	139	143	143	119	59	87	131	149	152	162	111	62	92	153	159	171	167	129	72
	4 AM - 5 AM	102	167	164	158	167	122	59	104	144	176	169	166	122	61	107	163	183	182	176	140	67
	5 AM - 6 AM	143	197	203	204	202	148	68	159	189	211	213	210	133	64	168	219	242	239	231	153	67
	6 AM - 7 AM	245	316	301	313	299	176	87	270	292	326	332	316	190	90	267	323	343	339	319	202	108
	7 AM - 8 AM	325	405	401	390	384	254	126	355	383	426	417	393	273	155	349	430	432	439	411	286	167
	8 AM - 9 AM	370	478	484	493	458	372	188	418	460	515	507	486	388	218	435	533	535	548	527	408	263
	9 AM - 10 AM	438	543	540	543	566	500	311	487	521	568	580	605	534	347	525	596	618	642	644	562	422
	10 AM - 11 AM	509	584	583	629	658	637	454	564	606	652	651	720	662	531	642	668	672	714	768	718	636
	11 AM - 12 PM	548	636	613	686	723	724	632	625	680	666	726	826	756	663	714	734	758	843	901	866	830
	12 PM - 1 PM	578	637	631	710	761	763	721	656	721	703	762	882	761	822	747	777	797	880	985	895	977
	1 PM - 2 PM	589	640	659	736	785	734	820	694	761	709	795	941	762	854	797	765	803	911	994	875	1,050
	2 PM - 3 PM	633	685	694	782	849	743	881	723	804	755	836	938	744	912	790	808	813	938	1,037	880	1,060
	3 PM - 4 PM	661	686	696	785	886	761	904	725	805	767	866	953	737	949	803	789	839	956	1,082	831	1,090
	4 PM - 5 PM	649	702	725	812	915	736	934	756	843	802	859	954	692	922	840	805	867	923	1,022	815	1,101
	5 PM - 6 PM	629	693	694	816	908	664	879	726	768	765	783	882	627	890	812	795	821	928	1,011	742	1,026
	6 PM - 7 PM	568	614	633	724	772	582	779	639	690	664	721	859	584	808	717	702	721	777	897	686	937
	7 PM - 8 PM	505	526	536	610	643	507	678	559	588	556	637	722	540	703	614	604	619	706	799	622	801
	8 PM - 9 PM	421	435	431	485	530	401	529	479	492	454	517	613	417	630	518	506	525	636	657	545	671
	9 PM - 10 PM	345	365	368	398	432	323	409	399	412	375	434	466	372	496	434	427	423	540	556	473	558
	10 PM - 11 PM	294	311	300	338	338	272	308	348	337	318	358	371	290	326	365	373	357	418	442	394	405
	11 PM - Midnight	244	270	272	287	260	190	205	279	266	285	287	302	194	223	317	317	305	359	367	300	288

Close 2 Lanes	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	278	488	471	495	470	431	282	308	449	458	458	469	478	280	351	513	515	511	557	550	381
	1 AM - 2 AM	188	368	371	372	380	323	194	222	347	373	370	392	339	201	242	397	403	414	412	378	256
	2 AM - 3 AM	147	327	308	326	338	262	165	182	288	337	318	331	258	153	195	324	332	356	369	323	185
	3 AM - 4 AM	220	293	277	285	286	238	117	174	263	297	305	324	222	124	183	305	317	342	333	257	145
	4 AM - 5 AM	203	334	328	317	335	244	117	208	287	353	339	331	244	121	213	325	365	364	352	280	135
	5 AM - 6 AM	286	394	406	409	403	296	136	319	377	421	427	420	267	127	337	437	484	479	461	306	134
	6 AM - 7 AM	489	633	602	625	599	353	174	540	584	652	664	632	379	180	533	646	686	678	638	404	216
	7 AM - 8 AM	650	810	803	780	767	508	252	710	766	852	834	785	546	310	698	860	863	877	823	572	335
	8 AM - 9 AM	740	956	967	986	917	743	376	836	919	1,031	1,014	972	777	436	870	1,067	1,069	1,096	1,055	815	525
	9 AM - 10 AM	876	1,086	1,081	1,087	1,131	1,000	621	974	1,043	1,137	1,161	1,210	1,067	694	1,050	1,191	1,236	1,285	1,287	1,124	844
	10 AM - 11 AM	1,018	1,168	1,166	1,258	1,316	1,274	908	1,128	1,212	1,303	1,301	1,441	1,325	1,062	1,284	1,337	1,345	1,429	1,535	1,436	1,271
	11 AM - 12 PM	1,096	1,272	1,225	1,372	1,445	1,448	1,264	1,250	1,359	1,332	1,451	1,652	1,512	1,326	1,429	1,467	1,516	1,686	1,802	1,733	1,659
	12 PM - 1 PM	1,155	1,274	1,261	1,419	1,521	1,525	1,442	1,312	1,442	1,407	1,524	1,764	1,522	1,644	1,495	1,554	1,593	1,760	1,971	1,789	1,954
	1 PM - 2 PM	1,178	1,280	1,318	1,472	1,570	1,468	1,640	1,389	1,523	1,418	1,589	1,883	1,523	1,708	1,593	1,529	1,606	1,823	1,988	1,751	2,099
	2 PM - 3 PM	1,266	1,370	1,389	1,563	1,697	1,485	1,763	1,447	1,608	1,511	1,671	1,876	1,487	1,824	1,579	1,616	1,627	1,876	2,074	1,760	2,120
	3 PM - 4 PM	1,321	1,372	1,393	1,571	1,772	1,523	1,808	1,449	1,609	1,534	1,732	1,906	1,474	1,898	1,606	1,578	1,677	1,911	2,164	1,663	2,181
	4 PM - 5 PM	1,297	1,404	1,449	1,624	1,830	1,472	1,867	1,513	1,687	1,604	1,718	1,908	1,385	1,844	1,681	1,609	1,734	1,846	2,045	1,630	2,202
	5 PM - 6 PM	1,259	1,386	1,387	1,633	1,815	1,327	1,757	1,452	1,535	1,530	1,566	1,765	1,283	1,780	1,623	1,590	1,642	1,857	2,021	1,484	2,053
	6 PM - 7 PM	1,135	1,227	1,265	1,448	1,544	1,163	1,558	1,278	1,380	1,328	1,442	1,718	1,168	1,616	1,434	1,404	1,442	1,554	1,794	1,372	1,873
	7 PM - 8 PM	1,011	1,053	1,073	1,219	1,287	1,015	1,357	1,119	1,176	1,112	1,273	1,444	1,079	1,406	1,229	1,207	1,238	1,412	1,599	1,243	1,601
	8 PM - 9 PM	841	869	862	970	1,060	802	1,059	959	985	909	1,035	1,226	833	1,261	1,036	1,012	1,049	1,271	1,315	1,089	1,341
	9 PM - 10 PM	690	731	737	795	863	646	817	797	824	749	869	932	744	991	867	854	846	1,079	1,112	947	1,115
	10 PM - 11 PM	587	621	601	677	677	544	616	696	675	637	715	742	580	651	730	746	714	836	884	789	809
	11 PM - Midnight	487	540	545	575	520	380	410	558	532	570	573	604	387	445	634	634	610	719	734	601	575

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

91 Fremont - Port Clinton

TO

81 Elmore - Woodville

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	188	256	269	267	291	287	262	198	261	259	265	278	302	271	174	233	229	231	251	265	218
	1 AM - 2 AM	133	189	194	210	214	208	161	136	197	212	201	198	204	183	122	179	189	206	192	209	160
	2 AM - 3 AM	108	146	168	181	181	147	96	106	172	166	186	160	148	117	98	138	172	171	164	155	89
	3 AM - 4 AM	96	139	143	157	164	125	76	97	165	148	166	150	133	80	95	136	143	152	154	135	67
	4 AM - 5 AM	105	143	180	175	176	132	76	116	161	179	180	173	135	69	103	152	166	165	174	132	61
	5 AM - 6 AM	172	192	226	227	233	157	81	161	213	204	221	247	147	75	159	203	199	218	233	147	70
6 AM - 7 AM	270	298	309	316	317	199	104	253	312	309	326	317	187	99	279	315	310	330	303	198	95	
7 AM - 8 AM	346	393	402	427	402	258	154	336	423	399	420	396	275	153	361	398	413	409	398	265	144	
8 AM - 9 AM	415	476	522	542	529	400	259	416	519	518	549	519	425	272	432	458	471	495	479	412	234	
9 AM - 10 AM	532	569	609	637	678	601	433	526	598	623	641	648	610	419	524	546	566	575	579	565	376	
10 AM - 11 AM	633	656	698	764	812	777	664	639	676	705	765	796	792	671	626	620	617	667	687	682	561	
11 AM - 12 PM	731	758	772	864	944	916	931	752	759	796	889	929	919	932	707	664	664	726	826	777	752	
12 PM - 1 PM	796	807	837	902	1,060	977	1,082	804	787	848	931	1,009	958	1,094	748	676	668	776	903	820	886	
1 PM - 2 PM	796	817	857	934	1,063	945	1,128	800	794	848	959	1,081	941	1,141	733	701	714	787	942	789	909	
2 PM - 3 PM	812	854	831	955	1,129	959	1,162	835	830	854	961	1,097	873	1,164	741	723	739	834	975	767	903	
3 PM - 4 PM	845	859	876	996	1,107	942	1,209	856	835	866	994	1,092	882	1,110	775	732	747	833	970	780	959	
4 PM - 5 PM	862	863	902	990	1,094	912	1,178	850	833	886	931	1,057	908	1,121	738	691	755	868	964	718	946	
5 PM - 6 PM	819	822	849	968	1,051	831	1,123	811	815	832	935	1,062	855	1,055	709	729	747	850	972	665	947	
6 PM - 7 PM	735	728	766	836	983	744	998	731	716	734	852	974	795	1,010	638	638	659	746	870	635	1,050	
7 PM - 8 PM	619	649	655	746	846	634	859	630	612	656	758	828	698	884	527	541	541	616	763	537	884	
8 PM - 9 PM	571	554	534	626	679	577	710	532	523	549	636	625	569	714	396	443	445	537	569	458	745	
9 PM - 10 PM	477	454	449	533	563	499	542	424	440	480	523	522	473	552	365	367	384	446	461	429	633	
10 PM - 11 PM	404	410	389	441	472	412	407	362	393	410	417	471	403	416	325	318	321	382	387	338	398	
11 PM - Midnight	370	362	341	404	379	320	313	316	327	337	354	389	329	291	292	274	284	330	328	299	239	

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	376	511	537	534	583	574	523	395	521	518	530	557	605	542	347	466	457	463	501	530	436
	1 AM - 2 AM	266	377	388	421	427	416	322	271	393	424	402	396	409	367	244	359	379	412	383	417	320
	2 AM - 3 AM	215	292	337	362	362	294	193	212	344	333	372	320	297	235	196	277	343	342	329	310	178
	3 AM - 4 AM	192	278	286	314	328	250	152	194	329	295	333	300	265	159	189	272	286	304	308	269	134
	4 AM - 5 AM	210	287	359	351	352	264	152	231	323	358	361	347	270	138	205	304	331	329	348	263	122
	5 AM - 6 AM	344	385	452	455	467	314	161	321	427	409	442	494	294	151	317	406	397	436	465	293	139
6 AM - 7 AM	540	596	619	633	633	399	208	506	623	618	653	634	373	197	558	629	619	659	605	395	189	
7 AM - 8 AM	692	786	804	853	804	515	309	672	846	799	840	791	549	305	722	795	826	818	797	529	288	
8 AM - 9 AM	830	952	1,044	1,084	1,058	799	517	833	1,038	1,036	1,098	1,038	850	544	864	916	941	990	957	824	468	
9 AM - 10 AM	1,064	1,137	1,219	1,273	1,357	1,201	867	1,052	1,195	1,246	1,282	1,295	1,220	839	1,047	1,092	1,131	1,150	1,159	1,130	752	
10 AM - 11 AM	1,265	1,311	1,397	1,528	1,623	1,554	1,327	1,277	1,352	1,410	1,530	1,592	1,583	1,342	1,252	1,240	1,233	1,333	1,374	1,365	1,122	
11 AM - 12 PM	1,461	1,516	1,544	1,729	1,888	1,831	1,863	1,504	1,518	1,592	1,777	1,859	1,838	1,865	1,413	1,328	1,328	1,452	1,651	1,553	1,504	
12 PM - 1 PM	1,592	1,613	1,675	1,804	2,120	1,953	2,165	1,608	1,575	1,695	1,863	2,017	1,916	2,189	1,496	1,353	1,336	1,552	1,807	1,639	1,773	
1 PM - 2 PM	1,591	1,633	1,714	1,869	2,127	1,891	2,257	1,600	1,588	1,697	1,918	2,162	1,882	2,283	1,466	1,401	1,428	1,575	1,884	1,578	1,817	
2 PM - 3 PM	1,624	1,707	1,662	1,910	2,258	1,919	2,325	1,669	1,659	1,708	1,922	2,194	1,747	2,327	1,482	1,447	1,478	1,667	1,949	1,533	1,806	
3 PM - 4 PM	1,689	1,718	1,752	1,992	2,213	1,885	2,418	1,713	1,669	1,732	1,988	2,184	1,763	2,219	1,550	1,465	1,493	1,665	1,940	1,560	1,918	
4 PM - 5 PM	1,723	1,726	1,803	1,979	2,188	1,825	2,357	1,700	1,665	1,772	1,861	2,113	1,817	2,241	1,475	1,382	1,510	1,735	1,928	1,436	1,891	
5 PM - 6 PM	1,637	1,643	1,698	1,935	2,102	1,661	2,246	1,621	1,630	1,664	1,870	2,123	1,710	2,110	1,418	1,457	1,493	1,699	1,943	1,330	1,894	
6 PM - 7 PM	1,470	1,456	1,531	1,671	1,966	1,488	1,995	1,462	1,431	1,467	1,705	1,948	1,590	2,020	1,277	1,276	1,317	1,493	1,740	1,269	2,100	
7 PM - 8 PM	1,239	1,298	1,310	1,491	1,693	1,268	1,717	1,259	1,223	1,312	1,517	1,656	1,396	1,768	1,054	1,083	1,083	1,232	1,526	1,073	1,768	
8 PM - 9 PM	1,142	1,107	1,068	1,253	1,359	1,154	1,420	1,065	1,047	1,098	1,272	1,250	1,139	1,428	792	885	889	1,073	1,137	915	1,490	
9 PM - 10 PM	953	908	899	1,067	1,125	998	1,085	848	880	959	1,045	1,044	946	1,104	729	733	769	893	922	858	1,265	
10 PM - 11 PM	807	820	778	882	945	824	814	724	786	821	833	942	805	832	649	635	643	764	774	677	797	
11 PM - Midnight	740	724	682	809	758	640	626	633	654	675	707	777	659	582	583	548	568	660	657	598	479	

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

91 Fremont - Port Clinton

TO

81 Elmore - Woodville

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	177	232	224	227	279	282	263	153	223	213	203	221	218	133	131	223	227	219	220	198	109
	1 AM - 2 AM	114	200	185	195	226	206	222	104	180	182	187	188	164	126	96	183	194	180	175	157	89
	2 AM - 3 AM	94	160	178	167	178	144	141	83	157	155	155	164	138	68	84	163	155	150	158	125	65
	3 AM - 4 AM	86	154	151	151	159	122	86	86	149	140	150	138	122	56	79	145	143	151	149	130	60
	4 AM - 5 AM	111	165	169	167	170	125	63	106	170	172	172	163	124	53	102	158	167	160	165	106	57
	5 AM - 6 AM	146	204	200	203	209	139	64	153	199	209	220	199	130	63	141	198	207	203	197	131	66
	6 AM - 7 AM	253	318	319	333	292	178	83	264	319	320	334	313	182	90	230	305	317	295	296	168	87
	7 AM - 8 AM	345	405	394	399	389	247	122	341	409	396	403	387	253	129	307	373	370	369	366	251	114
	8 AM - 9 AM	405	491	451	481	464	386	211	415	474	453	458	455	380	204	359	465	450	446	445	340	186
	9 AM - 10 AM	487	541	544	564	589	549	346	466	531	522	535	544	500	309	407	542	530	538	522	480	287
	10 AM - 11 AM	577	604	598	614	706	670	519	554	568	569	624	641	654	451	477	581	577	568	596	573	441
	11 AM - 12 PM	646	663	630	685	815	762	755	598	614	599	652	747	717	617	527	625	622	609	685	674	608
	12 PM - 1 PM	685	679	681	763	881	775	854	652	638	606	690	815	744	726	556	653	661	606	722	677	734
	1 PM - 2 PM	713	691	679	779	946	757	933	645	653	642	715	800	715	737	574	663	696	672	754	700	789
	2 PM - 3 PM	735	712	701	790	983	750	930	662	699	640	760	877	703	740	587	680	694	695	801	692	813
	3 PM - 4 PM	747	743	754	832	944	728	998	672	709	700	793	887	715	851	619	707	739	717	836	692	805
	4 PM - 5 PM	726	713	746	855	964	697	970	699	671	683	805	899	696	806	631	730	746	727	813	644	783
	5 PM - 6 PM	720	703	718	819	925	650	936	672	664	665	747	896	652	781	588	681	709	708	812	570	734
	6 PM - 7 PM	633	638	627	715	912	591	860	578	583	578	649	786	542	822	515	599	622	596	683	486	647
	7 PM - 8 PM	528	529	532	624	717	521	723	495	487	486	560	666	434	703	438	489	516	498	609	421	575
	8 PM - 9 PM	449	433	434	530	557	450	624	400	395	394	476	544	375	511	374	411	434	406	490	316	456
	9 PM - 10 PM	369	362	372	431	446	394	536	344	323	344	401	406	296	398	335	364	357	367	387	258	347
	10 PM - 11 PM	319	294	311	371	387	344	396	294	294	300	306	354	239	288	320	315	317	311	317	213	235
	11 PM - Midnight	281	270	274	322	337	307	299	252	255	261	286	305	175	178	270	266	268	263	252	157	179

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	354	463	449	454	558	563	526	306	445	426	407	441	435	266	261	446	453	437	440	396	218
	1 AM - 2 AM	229	401	369	391	451	412	445	207	360	364	373	375	327	251	191	365	388	360	350	314	178
	2 AM - 3 AM	189	320	356	335	357	289	282	167	314	309	311	327	276	136	168	326	309	301	315	251	130
	3 AM - 4 AM	171	309	302	302	317	244	172	172	299	280	301	275	243	112	158	289	287	302	298	260	119
	4 AM - 5 AM	222	331	337	333	340	251	127	212	341	344	344	325	247	106	203	317	333	319	329	211	114
	5 AM - 6 AM	291	409	400	407	417	278	127	306	399	417	441	398	261	126	282	396	413	405	393	261	132
	6 AM - 7 AM	507	636	638	667	584	357	166	528	638	639	667	625	363	181	459	609	634	590	592	337	174
	7 AM - 8 AM	691	809	788	799	777	493	244	682	819	792	805	773	505	258	613	746	740	737	733	502	229
	8 AM - 9 AM	810	981	901	961	929	771	421	830	947	905	917	910	760	408	718	929	900	892	891	680	371
	9 AM - 10 AM	974	1,081	1,088	1,127	1,177	1,099	691	931	1,062	1,043	1,070	1,088	1,001	619	813	1,085	1,060	1,075	1,043	959	573
	10 AM - 11 AM	1,153	1,209	1,196	1,228	1,411	1,339	1,038	1,108	1,136	1,138	1,248	1,282	1,309	901	954	1,161	1,155	1,135	1,192	1,146	883
	11 AM - 12 PM	1,291	1,326	1,260	1,371	1,630	1,523	1,510	1,196	1,227	1,198	1,304	1,494	1,433	1,234	1,054	1,251	1,243	1,218	1,370	1,348	1,215
	12 PM - 1 PM	1,371	1,357	1,363	1,525	1,761	1,551	1,709	1,304	1,276	1,212	1,380	1,630	1,487	1,452	1,113	1,305	1,323	1,212	1,443	1,354	1,467
	1 PM - 2 PM	1,426	1,382	1,358	1,558	1,891	1,514	1,865	1,289	1,307	1,284	1,431	1,599	1,431	1,473	1,147	1,325	1,392	1,344	1,508	1,400	1,577
	2 PM - 3 PM	1,469	1,425	1,402	1,580	1,965	1,500	1,859	1,324	1,398	1,279	1,519	1,754	1,405	1,479	1,175	1,360	1,389	1,390	1,602	1,384	1,625
	3 PM - 4 PM	1,494	1,485	1,509	1,664	1,888	1,457	1,997	1,345	1,418	1,399	1,587	1,773	1,430	1,701	1,237	1,413	1,478	1,434	1,673	1,384	1,609
	4 PM - 5 PM	1,452	1,427	1,493	1,710	1,929	1,393	1,940	1,398	1,341	1,367	1,609	1,799	1,393	1,612	1,263	1,459	1,492	1,454	1,626	1,289	1,566
	5 PM - 6 PM	1,440	1,405	1,436	1,637	1,850	1,299	1,872	1,343	1,328	1,331	1,494	1,792	1,304	1,562	1,176	1,361	1,417	1,415	1,624	1,141	1,467
	6 PM - 7 PM	1,267	1,277	1,253	1,430	1,823	1,183	1,720	1,156	1,165	1,155	1,299	1,572	1,083	1,644	1,031	1,198	1,245	1,192	1,366	972	1,293
	7 PM - 8 PM	1,055	1,058	1,065	1,247	1,434	1,041	1,446	990	975	973	1,120	1,332	869	1,406	876	978	1,033	996	1,217	842	1,151
	8 PM - 9 PM	898	866	867	1,061	1,115	900	1,247	799	790	789	952	1,087	750	1,022	748	823	868	811	979	631	912
	9 PM - 10 PM	739	723	744	861	892	788	1,072	687	645	688	802	811	593	795	669	727	714	734	774	515	694
	10 PM - 11 PM	638	589	622	743	774	688	791	589	588	599	611	708	477	575	641	630	634	622	634	426	470
	11 PM - Midnight	561	539	548	644	674	614	598	504	510	522	572	609	350	356	540	532	537	526	504	314	357

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

91 Fremont - Port Clinton

TO

110 Sandusky - Bellevue

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	112	160	171	172	179	156	117	135	185	203	177	141	179	126	165	196	198	203	206	208	150
	1 AM - 2 AM	89	130	143	138	152	129	89	99	151	164	142	125	144	92	121	154	159	160	165	158	133
	2 AM - 3 AM	75	103	113	117	119	96	72	83	128	129	118	107	106	71	97	127	131	150	152	120	78
	3 AM - 4 AM	65	99	112	117	119	99	56	76	107	125	117	107	94	62	95	119	126	140	137	108	70
	4 AM - 5 AM	74	109	119	131	126	86	55	86	118	132	131	112	98	63	90	133	138	148	145	109	64
	5 AM - 6 AM	103	153	162	170	165	106	61	128	171	175	155	136	117	67	126	187	179	189	195	131	70
	6 AM - 7 AM	173	236	243	246	232	153	73	188	269	262	233	180	152	94	208	267	269	272	286	175	97
	7 AM - 8 AM	229	310	333	323	322	181	102	274	355	362	300	273	202	131	301	366	375	370	352	231	139
	8 AM - 9 AM	289	373	388	372	375	226	140	352	431	396	352	326	269	194	363	439	438	456	426	301	198
	9 AM - 10 AM	332	412	417	413	397	308	211	404	451	427	385	375	364	263	401	450	486	503	476	407	303
	10 AM - 11 AM	369	443	430	440	438	414	316	447	480	446	422	429	465	381	476	505	503	542	537	527	437
	11 AM - 12 PM	411	489	481	492	484	524	408	518	513	487	480	495	560	497	528	544	572	612	618	646	589
	12 PM - 1 PM	473	513	512	541	522	572	486	571	537	515	507	552	601	583	594	569	599	659	681	694	687
	1 PM - 2 PM	492	532	536	566	578	572	561	581	564	513	530	602	594	645	595	618	621	682	743	693	778
	2 PM - 3 PM	533	539	533	581	622	568	612	587	590	552	553	680	591	686	620	618	637	715	803	689	858
	3 PM - 4 PM	565	564	566	619	656	564	670	669	639	575	575	720	585	699	669	664	684	756	866	699	920
	4 PM - 5 PM	568	559	610	640	683	554	680	658	643	597	580	735	562	720	676	672	718	766	901	667	903
	5 PM - 6 PM	530	573	602	614	689	503	604	621	635	551	542	726	524	693	646	674	704	747	888	617	855
	6 PM - 7 PM	473	510	517	511	621	438	520	534	543	490	446	658	452	589	563	568	611	681	790	528	781
	7 PM - 8 PM	411	408	419	431	531	381	456	451	461	407	372	547	397	490	465	484	492	553	671	435	659
	8 PM - 9 PM	334	339	368	379	447	306	366	388	403	347	305	462	325	414	414	410	423	476	542	354	517
	9 PM - 10 PM	280	275	289	321	343	255	296	323	319	295	253	363	265	309	341	337	353	391	435	295	416
	10 PM - 11 PM	230	225	240	264	269	203	217	264	274	228	203	275	215	240	277	269	291	321	342	241	307
	11 PM - Midnight	193	201	200	224	209	154	152	226	224	194	182	207	183	181	244	233	237	252	271	169	230

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	223	321	341	345	359	311	233	270	370	405	354	282	358	252	330	393	396	405	413	416	300
	1 AM - 2 AM	177	261	286	276	304	257	177	198	301	328	284	249	288	183	241	309	318	321	331	316	265
	2 AM - 3 AM	149	205	225	233	237	193	144	166	255	257	236	214	213	142	193	254	263	299	303	240	155
	3 AM - 4 AM	129	197	223	235	239	198	112	151	214	249	234	214	188	124	190	237	252	279	274	217	140
	4 AM - 5 AM	149	218	238	262	252	172	110	172	236	265	262	225	196	125	181	266	275	295	290	219	129
	5 AM - 6 AM	205	306	324	340	329	213	122	257	341	350	311	272	234	133	252	373	358	378	390	263	141
	6 AM - 7 AM	347	472	486	492	464	307	146	376	537	523	465	361	303	189	416	534	538	543	571	349	194
	7 AM - 8 AM	458	619	666	645	644	362	203	549	710	724	599	546	405	262	603	732	749	740	705	463	277
	8 AM - 9 AM	577	746	776	743	749	453	281	704	862	792	705	652	539	389	726	877	876	912	851	602	396
	9 AM - 10 AM	664	824	835	826	793	615	422	809	902	854	770	749	728	526	801	900	972	1,006	952	814	605
	10 AM - 11 AM	739	885	860	880	877	827	633	893	960	892	843	859	930	762	952	1,010	1,007	1,083	1,073	1,054	873
	11 AM - 12 PM	822	978	962	984	968	1,049	817	1,036	1,027	974	959	990	1,120	994	1,055	1,087	1,145	1,224	1,235	1,291	1,178
	12 PM - 1 PM	945	1,026	1,024	1,082	1,045	1,145	973	1,141	1,074	1,029	1,014	1,104	1,201	1,167	1,188	1,139	1,198	1,318	1,363	1,389	1,375
	1 PM - 2 PM	983	1,064	1,072	1,132	1,157	1,144	1,121	1,163	1,129	1,026	1,059	1,204	1,188	1,289	1,189	1,237	1,242	1,365	1,485	1,386	1,556
	2 PM - 3 PM	1,067	1,077	1,066	1,162	1,245	1,136	1,225	1,175	1,180	1,103	1,106	1,360	1,182	1,372	1,240	1,236	1,275	1,431	1,607	1,377	1,717
	3 PM - 4 PM	1,130	1,128	1,131	1,239	1,311	1,128	1,339	1,337	1,278	1,149	1,149	1,440	1,169	1,397	1,339	1,328	1,368	1,512	1,731	1,398	1,841
	4 PM - 5 PM	1,136	1,118	1,221	1,280	1,366	1,109	1,359	1,317	1,285	1,194	1,159	1,470	1,124	1,440	1,352	1,343	1,435	1,532	1,802	1,335	1,806
	5 PM - 6 PM	1,060	1,146	1,204	1,228	1,378	1,006	1,207	1,241	1,270	1,102	1,085	1,451	1,047	1,385	1,291	1,348	1,408	1,495	1,776	1,235	1,709
	6 PM - 7 PM	945	1,021	1,035	1,022	1,242	875	1,039	1,069	1,087	980	892	1,316	905	1,177	1,126	1,136	1,221	1,362	1,580	1,057	1,562
	7 PM - 8 PM	822	816	838	862	1,062	761	911	902	923	813	744	1,094	795	979	930	967	983	1,106	1,342	870	1,319
	8 PM - 9 PM	668	679	736	757	893	611	732	776	806	694	609	925	650	828	829	821	845	952	1,085	707	1,035
	9 PM - 10 PM	561	551	578	643	687	511	592	646	638	589	506	726	531	619	682	674	706	783	870	590	832
	10 PM - 11 PM	460	450	480	528	537	406	434	528	549	457	406	550	430	480	554	537	582	641	685	481	614
	11 PM - Midnight	386	402	399	448	419	308	303	453	447	389	365	413	366	363	487	465	473	505	542	337	461

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

91 Fremont - Port Clinton

TO

110 Sandusky - Bellevue

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	159	204	213	225	245	221	155	179	196	216	228	248	239	159	229	234	241	245	286	261	182
	1 AM - 2 AM	124	159	163	167	182	174	113	127	177	173	181	192	174	118	154	186	189	216	228	183	133
	2 AM - 3 AM	100	130	134	144	152	129	86	104	134	142	150	163	134	91	123	154	159	183	189	146	104
	3 AM - 4 AM	87	122	124	130	137	126	81	94	117	129	151	155	130	75	100	135	148	166	170	137	82
	4 AM - 5 AM	95	124	142	141	153	117	75	102	127	142	154	163	117	73	112	144	145	165	157	135	85
	5 AM - 6 AM	136	190	191	192	194	136	73	140	173	208	186	208	144	80	148	199	203	225	213	150	88
	6 AM - 7 AM	217	269	279	288	291	173	101	230	255	293	275	307	193	106	245	292	298	316	318	192	120
	7 AM - 8 AM	312	372	381	370	373	237	150	312	352	404	395	384	269	157	349	411	420	434	422	268	182
	8 AM - 9 AM	381	446	475	475	441	315	221	400	413	478	505	488	385	248	449	509	515	523	522	401	304
	9 AM - 10 AM	428	496	489	519	507	421	322	506	491	531	602	580	521	412	602	611	617	641	669	590	474
	10 AM - 11 AM	488	527	554	585	607	547	448	556	558	581	636	640	612	532	664	634	658	724	739	712	607
	11 AM - 12 PM	536	581	602	647	683	660	617	641	623	662	729	744	707	712	729	693	706	796	852	828	765
	12 PM - 1 PM	606	610	639	705	763	707	706	675	689	687	760	812	790	823	776	744	740	864	902	857	895
	1 PM - 2 PM	595	624	665	741	808	706	802	728	718	702	782	881	782	877	832	761	792	886	973	882	1,004
	2 PM - 3 PM	651	680	691	785	866	730	864	733	772	746	817	928	766	947	873	783	821	921	1,008	906	1,067
	3 PM - 4 PM	679	709	727	821	944	697	900	786	796	802	872	977	748	952	894	832	851	983	1,116	823	1,123
	4 PM - 5 PM	688	704	730	831	929	682	895	776	775	778	881	991	721	986	912	829	855	995	1,074	773	1,095
	5 PM - 6 PM	659	676	732	825	887	650	879	713	765	752	824	918	656	954	821	766	838	947	1,008	722	1,052
	6 PM - 7 PM	565	587	662	723	778	569	807	652	690	672	763	838	581	881	740	712	698	851	895	626	959
	7 PM - 8 PM	479	514	562	629	660	504	667	555	571	588	655	716	487	762	648	569	587	716	734	557	836
	8 PM - 9 PM	416	432	450	529	529	420	539	469	506	533	560	596	438	652	562	503	491	608	633	489	700
	9 PM - 10 PM	344	365	366	436	443	341	427	394	403	432	445	488	352	507	474	429	416	529	529	410	565
	10 PM - 11 PM	282	286	332	355	345	269	309	305	313	343	382	388	287	373	371	329	359	427	428	326	429
	11 PM - Midnight	235	238	288	290	263	215	224	249	251	279	296	318	223	253	294	277	292	344	335	250	315

Close 2 Lanes	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	318	409	425	450	491	442	310	358	392	432	457	495	477	318	458	469	483	490	573	522	364
	1 AM - 2 AM	249	317	327	335	364	348	226	254	355	346	361	385	348	237	309	372	379	432	457	365	265
	2 AM - 3 AM	200	260	267	287	303	259	172	208	268	283	301	327	267	183	246	309	319	366	379	292	207
	3 AM - 4 AM	175	244	248	261	274	251	162	188	235	257	303	309	260	150	200	270	297	332	341	274	163
	4 AM - 5 AM	189	248	284	282	306	233	149	203	254	283	308	326	235	145	224	287	290	330	314	270	170
	5 AM - 6 AM	272	380	383	385	388	271	145	280	347	415	373	415	288	159	297	398	406	450	426	300	175
	6 AM - 7 AM	434	538	557	577	581	347	202	461	510	587	551	614	387	212	490	585	596	631	635	384	240
	7 AM - 8 AM	624	744	761	739	745	475	300	624	704	808	790	769	537	313	697	823	840	868	843	536	365
	8 AM - 9 AM	762	892	951	949	882	630	442	800	827	956	1,011	975	769	497	899	1,018	1,031	1,045	1,045	801	608
	9 AM - 10 AM	855	993	979	1,038	1,015	842	644	1,013	981	1,061	1,204	1,160	1,041	823	1,204	1,221	1,234	1,282	1,339	1,181	947
	10 AM - 11 AM	975	1,054	1,108	1,171	1,214	1,095	895	1,113	1,116	1,162	1,272	1,279	1,225	1,063	1,329	1,268	1,317	1,449	1,478	1,425	1,214
	11 AM - 12 PM	1,073	1,163	1,204	1,293	1,365	1,319	1,234	1,282	1,247	1,323	1,457	1,488	1,414	1,425	1,459	1,386	1,412	1,591	1,704	1,656	1,530
	12 PM - 1 PM	1,211	1,220	1,277	1,410	1,526	1,413	1,412	1,351	1,377	1,373	1,520	1,625	1,580	1,647	1,552	1,488	1,479	1,729	1,803	1,715	1,790
	1 PM - 2 PM	1,190	1,249	1,329	1,483	1,617	1,411	1,603	1,455	1,436	1,404	1,564	1,761	1,565	1,754	1,665	1,521	1,584	1,772	1,945	1,765	2,009
	2 PM - 3 PM	1,302	1,361	1,383	1,570	1,732	1,459	1,728	1,466	1,544	1,492	1,634	1,856	1,531	1,894	1,747	1,567	1,641	1,842	2,016	1,812	2,134
	3 PM - 4 PM	1,357	1,417	1,453	1,642	1,888	1,394	1,799	1,572	1,593	1,605	1,743	1,953	1,496	1,903	1,789	1,665	1,702	1,965	2,233	1,647	2,246
	4 PM - 5 PM	1,375	1,408	1,460	1,662	1,859	1,365	1,789	1,551	1,549	1,557	1,762	1,981	1,442	1,972	1,824	1,657	1,710	1,989	2,147	1,546	2,190
	5 PM - 6 PM	1,318	1,352	1,463	1,649	1,774	1,300	1,757	1,425	1,530	1,504	1,648	1,835	1,312	1,908	1,641	1,531	1,677	1,893	2,017	1,444	2,104
	6 PM - 7 PM	1,130	1,174	1,323	1,445	1,556	1,138	1,614	1,303	1,381	1,344	1,526	1,675	1,162	1,762	1,481	1,424	1,397	1,701	1,790	1,252	1,918
	7 PM - 8 PM	959	1,027	1,125	1,258	1,320	1,008	1,334	1,110	1,143	1,175	1,310	1,432	974	1,525	1,295	1,138	1,174	1,431	1,468	1,113	1,672
	8 PM - 9 PM	833	865	901	1,057	1,058	839	1,078	938	1,013	1,066	1,120	1,193	877	1,304	1,125	1,005	982	1,216	1,266	978	1,401
	9 PM - 10 PM	689	730	732	871	887	683	853	789	805	864	890	976	703	1,013	949	859	832	1,058	1,059	819	1,131
	10 PM - 11 PM	563	573	665	710	691	538	617	609	625	686	763	776	573	745	743	658	717	854	856	652	858
	11 PM - Midnight	471	475	577	579	525	431	448	498	502	559	591	636	445	505	587	554	583	689	670	500	630

NOTES:

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- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

91 Fremont - Port Clinton

TO

110 Sandusky - Bellevue

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	225	218	227	253	269	264	198	246	239	233	251	266	273	203	189	222	219	239	276	274	195
	1 AM - 2 AM	158	173	182	208	219	184	138	184	182	189	208	199	202	149	145	175	178	199	219	212	133
	2 AM - 3 AM	118	140	147	169	179	156	114	136	161	160	163	171	151	106	110	138	141	162	170	155	108
	3 AM - 4 AM	113	122	138	157	167	142	82	108	139	141	162	167	136	93	95	122	137	148	156	130	85
	4 AM - 5 AM	121	130	159	163	170	134	84	116	153	160	179	164	133	82	107	135	141	159	169	131	79
	5 AM - 6 AM	156	182	192	216	224	150	92	157	199	214	207	218	157	93	139	179	185	196	204	145	80
	6 AM - 7 AM	233	266	289	298	320	203	114	251	286	313	316	305	182	114	242	255	278	297	298	179	104
	7 AM - 8 AM	345	375	396	420	415	259	172	371	415	461	470	438	274	175	323	370	381	400	391	257	178
	8 AM - 9 AM	441	472	499	548	514	403	276	475	542	563	556	548	413	282	386	436	456	484	473	360	281
	9 AM - 10 AM	611	622	641	682	695	617	464	604	626	674	685	703	661	496	644	483	524	565	535	517	489
	10 AM - 11 AM	693	670	691	741	797	764	653	670	673	744	763	775	810	698	540	532	577	616	618	725	740
	11 AM - 12 PM	772	739	764	834	894	905	844	763	723	782	827	901	951	895	602	640	623	710	736	835	858
	12 PM - 1 PM	841	798	795	922	976	990	997	842	783	816	853	963	1,029	1,047	676	689	680	769	827	864	925
	1 PM - 2 PM	873	819	813	950	1,045	998	1,115	890	820	849	918	1,019	1,068	1,159	707	701	722	799	883	858	970
	2 PM - 3 PM	899	865	873	989	1,105	983	1,187	895	850	883	987	1,078	1,029	1,189	758	740	738	863	977	897	1,022
	3 PM - 4 PM	922	910	868	1,001	1,208	996	1,165	953	912	972	1,075	1,134	1,045	1,268	783	770	764	875	1,038	817	1,022
	4 PM - 5 PM	891	924	885	1,009	1,188	910	1,176	961	950	1,006	1,094	1,084	978	1,174	799	791	811	915	1,078	773	1,026
	5 PM - 6 PM	823	834	839	990	1,058	813	1,143	921	910	964	1,030	1,062	849	1,107	745	743	781	884	1,074	719	969
	6 PM - 7 PM	750	759	772	862	946	722	988	771	766	817	882	972	758	1,036	672	650	686	796	956	629	907
	7 PM - 8 PM	621	614	662	745	806	618	867	600	635	667	748	827	652	923	530	551	545	677	799	565	786
	8 PM - 9 PM	528	523	568	639	672	517	795	511	526	553	628	683	564	763	468	452	475	572	646	472	639
	9 PM - 10 PM	418	424	458	532	563	436	609	443	439	469	552	564	461	594	387	378	401	485	524	428	511
	10 PM - 11 PM	344	344	374	431	442	333	446	378	345	373	450	437	377	479	308	306	346	411	388	355	373
	11 PM - Midnight	289	294	303	334	340	270	339	310	291	303	356	355	278	340	261	242	283	333	345	292	266

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	450	436	455	506	538	529	396	493	477	465	502	533	547	407	377	443	437	479	552	547	390
	1 AM - 2 AM	316	345	364	415	437	367	277	367	364	377	416	399	403	299	290	350	357	398	438	424	265
	2 AM - 3 AM	236	280	294	337	359	312	228	272	321	320	326	342	303	212	220	276	282	324	340	309	217
	3 AM - 4 AM	226	244	275	315	334	284	164	215	279	282	323	335	271	186	190	243	274	297	313	259	169
	4 AM - 5 AM	242	260	318	327	339	267	168	231	306	319	358	329	266	164	215	270	282	319	338	261	158
	5 AM - 6 AM	313	363	385	433	448	300	183	315	398	428	413	436	313	187	277	358	370	393	407	290	160
	6 AM - 7 AM	465	533	578	595	640	405	229	503	571	626	632	610	364	228	484	510	556	594	595	358	208
	7 AM - 8 AM	690	750	792	841	830	519	344	741	831	923	940	876	549	349	646	739	762	799	782	513	356
	8 AM - 9 AM	882	943	998	1,096	1,029	805	552	949	1,084	1,125	1,112	1,096	825	564	773	872	913	967	946	721	562
	9 AM - 10 AM	1,222	1,244	1,282	1,365	1,389	1,234	928	1,209	1,251	1,349	1,370	1,405	1,323	993	887	966	1,048	1,131	1,071	1,034	977
	10 AM - 11 AM	1,386	1,341	1,383	1,481	1,595	1,528	1,305	1,341	1,346	1,488	1,526	1,549	1,620	1,395	1,081	1,064	1,154	1,232	1,235	1,450	1,480
	11 AM - 12 PM	1,543	1,478	1,528	1,668	1,787	1,810	1,687	1,527	1,446	1,563	1,654	1,802	1,903	1,789	1,203	1,280	1,246	1,419	1,472	1,670	1,716
	12 PM - 1 PM	1,683	1,595	1,590	1,844	1,952	1,981	1,994	1,684	1,565	1,631	1,707	1,926	2,057	2,095	1,352	1,379	1,359	1,538	1,654	1,728	1,851
	1 PM - 2 PM	1,746	1,639	1,627	1,901	2,090	1,997	2,230	1,780	1,639	1,698	1,837	2,038	2,137	2,319	1,414	1,401	1,444	1,597	1,766	1,716	1,939
	2 PM - 3 PM	1,797	1,730	1,745	1,978	2,210	1,967	2,373	1,791	1,699	1,766	1,974	2,155	2,058	2,378	1,515	1,480	1,476	1,727	1,954	1,795	2,045
	3 PM - 4 PM	1,845	1,820	1,736	2,002	2,416	1,993	2,329	1,905	1,824	1,943	2,150	2,268	2,090	2,536	1,567	1,541	1,528	1,749	2,076	1,634	2,043
	4 PM - 5 PM	1,782	1,848	1,769	2,018	2,375	1,820	2,351	1,921	1,900	2,012	2,188	2,169	1,956	2,347	1,599	1,581	1,621	1,831	2,155	1,546	2,051
	5 PM - 6 PM	1,646	1,669	1,678	1,979	2,115	1,625	2,285	1,842	1,921	1,929	2,060	2,125	1,699	2,215	1,491	1,485	1,562	1,769	2,148	1,438	1,938
	6 PM - 7 PM	1,500	1,519	1,544	1,725	1,892	1,444	1,976	1,542	1,532	1,634	1,764	1,943	1,515	2,072	1,344	1,300	1,372	1,592	1,912	1,258	1,813
	7 PM - 8 PM	1,241	1,228	1,323	1,490	1,612	1,237	1,735	1,201	1,270	1,333	1,496	1,654	1,303	1,845	1,060	1,103	1,091	1,353	1,597	1,129	1,572
	8 PM - 9 PM	1,056	1,046	1,137	1,279	1,345	1,035	1,589	1,021	1,053	1,106	1,255	1,366	1,129	1,526	935	903	950	1,144	1,293	944	1,279
	9 PM - 10 PM	835	849	916	1,063	1,126	871	1,219	886	877	938	1,103	1,127	923	1,188	773	757	802	969	1,048	856	1,022
	10 PM - 11 PM	689	688	748	862	884	667	893	756	691	747	899	874	754	957	616	612	691	822	776	709	745
	11 PM - Midnight	578	588	605	668	680	540	677	620	582	606	712	710	555	681	522	485	566	667	690	584	532

NOTES:

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2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

91 Fremont - Port Clinton

TO

110 Sandusky - Bellevue

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

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Revision Date: 9/1/2022

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	196	217	216	234	246	240	163	155	199	201	226	214	223	178	153	202	197	198	208	197	126
	1 AM - 2 AM	136	181	166	174	199	176	126	126	179	173	166	188	164	157	104	161	169	159	184	161	99
	2 AM - 3 AM	109	148	136	149	178	140	100	96	139	141	148	161	130	87	92	138	140	143	146	131	74
	3 AM - 4 AM	95	131	134	146	156	123	90	84	126	135	139	144	123	73	90	128	135	138	156	114	66
	4 AM - 5 AM	107	142	152	148	161	123	84	100	144	149	154	170	128	74	100	152	151	156	160	116	67
	5 AM - 6 AM	143	183	195	199	204	130	85	144	182	191	209	203	144	82	126	183	194	187	202	123	69
	6 AM - 7 AM	231	274	278	289	284	171	106	229	281	284	280	298	184	118	204	265	280	282	283	153	97
	7 AM - 8 AM	317	366	390	387	364	232	148	309	365	365	390	398	248	165	307	355	367	388	378	206	133
	8 AM - 9 AM	376	434	474	474	453	344	240	393	444	444	482	456	316	261	368	417	444	429	417	283	215
	9 AM - 10 AM	452	496	502	526	555	540	411	448	475	489	518	487	443	432	407	479	489	490	468	383	334
	10 AM - 11 AM	532	537	553	604	651	744	653	490	504	539	555	558	617	574	448	514	546	518	530	507	494
	11 AM - 12 PM	620	608	623	693	756	837	826	562	573	604	633	668	748	751	509	578	632	586	602	626	680
	12 PM - 1 PM	689	657	669	772	825	868	926	621	623	618	690	738	785	836	580	618	659	630	685	687	778
	1 PM - 2 PM	699	662	703	811	840	823	1,000	646	634	640	725	789	784	878	624	641	691	651	716	706	841
	2 PM - 3 PM	753	689	737	876	926	797	1,025	685	640	671	781	865	765	920	648	675	714	686	767	723	873
	3 PM - 4 PM	825	733	754	920	989	764	1,027	725	667	693	796	905	733	970	661	739	738	740	836	713	877
	4 PM - 5 PM	805	752	788	922	1,035	704	989	728	710	720	809	923	706	914	676	740	747	755	837	668	838
	5 PM - 6 PM	723	700	786	908	1,034	655	951	665	659	716	790	921	671	878	615	683	696	714	785	621	756
	6 PM - 7 PM	647	635	678	800	923	600	886	590	564	610	695	812	576	752	526	595	587	634	734	545	684
	7 PM - 8 PM	538	509	560	659	748	519	726	505	456	510	585	648	485	637	461	504	511	537	605	451	580
	8 PM - 9 PM	447	424	483	543	653	427	591	429	389	407	501	573	416	535	394	437	443	442	504	355	474
	9 PM - 10 PM	401	353	401	468	514	354	477	355	311	352	411	457	362	420	321	354	413	371	401	309	368
	10 PM - 11 PM	319	311	335	385	393	301	350	299	270	327	324	363	294	284	273	284	315	287	324	241	280
	11 PM - Midnight	267	254	275	307	324	217	247	243	218	271	263	279	245	205	230	231	262	250	262	184	191

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	391	434	431	468	492	480	326	310	399	402	452	427	446	356	306	403	394	396	416	393	253
	1 AM - 2 AM	271	363	331	349	399	351	251	252	359	345	332	376	329	315	207	323	337	317	367	322	198
	2 AM - 3 AM	217	295	272	297	355	280	201	192	278	281	297	321	260	173	184	276	280	286	291	262	148
	3 AM - 4 AM	191	262	268	292	312	245	180	168	252	270	278	287	245	147	179	256	271	275	311	227	133
	4 AM - 5 AM	213	283	304	295	322	245	167	199	289	297	307	340	255	148	199	304	302	311	320	232	134
	5 AM - 6 AM	285	366	391	398	408	261	169	288	363	382	417	405	288	163	251	367	389	373	404	245	138
	6 AM - 7 AM	463	548	557	578	567	342	212	458	562	567	559	597	368	235	408	531	560	564	565	305	193
	7 AM - 8 AM	634	733	780	775	727	465	296	619	729	729	781	797	495	330	613	710	733	775	755	412	267
	8 AM - 9 AM	751	867	948	948	906	688	480	786	888	889	963	912	632	522	737	835	888	858	834	566	430
	9 AM - 10 AM	905	993	1,004	1,052	1,110	1,079	822	897	949	978	1,036	974	887	864	813	957	979	980	936	766	667
	10 AM - 11 AM	1,064	1,074	1,106	1,208	1,302	1,489	1,306	980	1,008	1,079	1,109	1,115	1,233	1,149	896	1,028	1,092	1,036	1,059	1,014	988
	11 AM - 12 PM	1,240	1,216	1,247	1,386	1,511	1,674	1,652	1,125	1,145	1,207	1,266	1,336	1,495	1,502	1,019	1,156	1,264	1,171	1,203	1,252	1,360
	12 PM - 1 PM	1,378	1,313	1,338	1,543	1,649	1,735	1,852	1,242	1,245	1,236	1,381	1,475	1,571	1,672	1,161	1,236	1,319	1,260	1,371	1,374	1,556
	1 PM - 2 PM	1,398	1,324	1,406	1,623	1,680	1,645	1,999	1,292	1,268	1,279	1,449	1,579	1,568	1,755	1,247	1,281	1,383	1,302	1,433	1,411	1,682
	2 PM - 3 PM	1,507	1,377	1,473	1,753	1,851	1,594	2,050	1,371	1,279	1,342	1,562	1,729	1,530	1,840	1,295	1,349	1,429	1,372	1,534	1,445	1,746
	3 PM - 4 PM	1,650	1,467	1,509	1,840	1,978	1,527	2,053	1,449	1,334	1,386	1,591	1,811	1,466	1,939	1,322	1,478	1,475	1,480	1,672	1,426	1,755
	4 PM - 5 PM	1,610	1,504	1,575	1,845	2,070	1,408	1,979	1,456	1,420	1,440	1,617	1,845	1,412	1,827	1,351	1,479	1,494	1,509	1,675	1,337	1,675
	5 PM - 6 PM	1,446	1,399	1,573	1,817	2,068	1,310	1,902	1,330	1,318	1,432	1,580	1,842	1,342	1,755	1,230	1,365	1,393	1,428	1,570	1,242	1,513
	6 PM - 7 PM	1,293	1,269	1,357	1,600	1,846	1,201	1,771	1,180	1,129	1,220	1,391	1,624	1,151	1,505	1,052	1,190	1,175	1,269	1,468	1,091	1,368
	7 PM - 8 PM	1,076	1,017	1,120	1,319	1,497	1,037	1,452	1,010	912	1,020	1,171	1,295	969	1,273	922	1,007	1,021	1,075	1,211	901	1,160
	8 PM - 9 PM	894	847	966	1,086	1,307	853	1,183	858	777	813	1,002	1,146	831	1,070	787	873	886	884	1,009	710	948
	9 PM - 10 PM	802	707	801	937	1,028	708	955	710	622	704	821	914	725	840	641	708	826	741	801	618	736
	10 PM - 11 PM	638	622	670	771	785	602	700	598	539	653	647	726	588	569	546	567	630	573	649	482	559
	11 PM - Midnight	535	508	550	614	647	434	495	487	435	542	526	557	491	410	461	462	524	500	523	367	383

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

110 Sandusky - Bellevue

TO

91 Fremont - Port Clinton

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	105	185	196	199	199	166	92	124	209	216	203	163	173	116	148	227	216	220	208	186	122
	1 AM - 2 AM	85	136	152	177	159	127	72	96	174	167	154	117	135	78	112	187	173	177	176	140	85
	2 AM - 3 AM	67	129	134	142	139	111	54	87	156	151	131	119	112	62	78	152	155	155	147	109	63
	3 AM - 4 AM	68	123	137	134	131	99	46	73	133	139	122	114	91	58	79	138	138	134	126	101	53
	4 AM - 5 AM	82	133	149	148	151	97	48	92	157	157	136	113	100	52	106	154	161	151	155	98	54
	5 AM - 6 AM	98	162	168	183	173	108	47	123	188	188	153	143	116	56	133	194	196	191	192	121	56
	6 AM - 7 AM	159	240	254	250	216	136	59	213	272	250	235	195	135	74	214	285	265	282	249	160	71
	7 AM - 8 AM	208	307	312	320	302	176	92	289	378	343	298	267	207	107	287	368	369	360	346	214	109
	8 AM - 9 AM	274	408	397	405	374	261	128	361	468	411	371	320	297	158	355	463	450	454	443	322	168
	9 AM - 10 AM	326	446	440	451	427	358	196	411	516	465	410	401	383	233	416	505	503	516	511	436	255
	10 AM - 11 AM	364	486	481	486	483	458	296	475	547	486	460	489	486	357	466	549	544	565	577	531	386
	11 AM - 12 PM	415	522	499	521	542	551	396	516	559	502	483	530	568	490	505	579	575	615	675	631	535
	12 PM - 1 PM	426	551	500	533	581	567	493	525	581	525	500	594	594	536	548	603	594	659	719	675	682
	1 PM - 2 PM	460	565	510	549	628	568	552	556	570	521	484	635	580	616	575	622	614	668	744	664	745
	2 PM - 3 PM	491	588	539	594	632	578	629	578	573	534	521	635	562	652	595	631	630	683	770	647	759
	3 PM - 4 PM	500	603	550	615	658	564	629	597	506	545	537	632	545	664	596	639	651	705	817	633	815
	4 PM - 5 PM	518	600	555	598	662	531	619	604	547	545	521	674	525	662	615	644	652	729	789	598	840
	5 PM - 6 PM	502	563	558	566	644	491	583	581	575	517	483	682	484	646	591	610	619	693	806	554	793
	6 PM - 7 PM	434	499	482	513	611	421	539	507	512	444	422	600	421	569	554	569	571	637	734	478	737
	7 PM - 8 PM	403	430	409	463	490	333	449	465	457	399	358	503	359	481	473	481	502	544	607	401	629
	8 PM - 9 PM	337	369	351	366	382	270	373	400	398	330	295	398	291	396	414	410	417	450	493	321	473
	9 PM - 10 PM	279	314	305	300	304	217	277	331	325	298	253	298	250	295	343	337	340	367	365	274	366
	10 PM - 11 PM	255	270	282	262	243	167	184	288	285	253	222	248	191	220	317	317	316	308	307	213	269
	11 PM - Midnight	221	241	245	232	204	127	134	261	236	236	167	201	141	168	266	262	272	269	239	147	197

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	209	369	393	398	398	333	184	248	418	432	406	326	345	231	297	455	431	440	415	372	243
	1 AM - 2 AM	170	272	303	355	318	255	143	192	348	334	307	234	270	155	224	373	345	353	352	281	171
	2 AM - 3 AM	134	259	269	285	277	223	108	173	311	301	263	238	223	124	156	303	310	309	295	218	125
	3 AM - 4 AM	137	247	274	267	262	198	92	147	266	278	243	227	182	115	158	276	275	267	251	203	106
	4 AM - 5 AM	165	265	297	296	302	194	96	184	314	315	271	226	201	104	212	307	321	301	309	196	109
	5 AM - 6 AM	196	325	336	365	347	216	93	245	376	376	307	286	231	112	267	388	392	383	383	242	111
	6 AM - 7 AM	318	480	507	499	433	271	118	426	544	500	470	390	271	148	428	570	530	564	498	321	142
	7 AM - 8 AM	415	613	624	639	605	353	183	579	757	685	597	534	414	214	575	736	737	719	692	427	217
	8 AM - 9 AM	548	816	793	810	748	522	256	721	936	822	742	639	594	317	710	925	900	908	886	645	336
	9 AM - 10 AM	651	892	879	902	853	716	392	822	1,031	929	820	802	767	465	832	1,011	1,006	1,032	1,022	872	511
	10 AM - 11 AM	727	973	962	972	967	915	591	950	1,094	973	920	979	972	713	932	1,099	1,089	1,130	1,155	1,063	773
	11 AM - 12 PM	830	1,043	999	1,041	1,084	1,102	791	1,031	1,117	1,004	967	1,059	1,136	980	1,010	1,158	1,149	1,230	1,350	1,263	1,069
	12 PM - 1 PM	852	1,102	1,000	1,066	1,162	1,135	986	1,049	1,163	1,050	1,000	1,189	1,188	1,073	1,096	1,207	1,187	1,319	1,438	1,350	1,365
	1 PM - 2 PM	919	1,131	1,021	1,099	1,257	1,135	1,103	1,112	1,139	1,042	968	1,270	1,160	1,233	1,150	1,243	1,228	1,336	1,488	1,328	1,490
	2 PM - 3 PM	981	1,177	1,077	1,189	1,265	1,155	1,258	1,156	1,145	1,068	1,043	1,270	1,124	1,303	1,190	1,262	1,260	1,366	1,540	1,293	1,518
	3 PM - 4 PM	1,000	1,206	1,099	1,231	1,317	1,128	1,257	1,194	1,012	1,089	1,074	1,264	1,091	1,328	1,193	1,278	1,302	1,410	1,635	1,266	1,630
	4 PM - 5 PM	1,036	1,201	1,110	1,197	1,325	1,062	1,237	1,207	1,095	1,090	1,041	1,348	1,051	1,323	1,230	1,287	1,304	1,458	1,577	1,197	1,680
	5 PM - 6 PM	1,004	1,127	1,115	1,133	1,289	982	1,167	1,163	1,151	1,034	967	1,363	968	1,293	1,182	1,219	1,239	1,387	1,611	1,107	1,585
	6 PM - 7 PM	867	998	964	1,025	1,223	843	1,079	1,015	1,025	889	844	1,200	843	1,138	1,108	1,138	1,142	1,275	1,468	956	1,475
	7 PM - 8 PM	806	859	818	926	980	667	899	930	913	797	717	1,006	717	962	946	962	1,003	1,088	1,214	801	1,259
	8 PM - 9 PM	674	738	702	733	764	539	745	800	797	660	590	796	581	793	828	820	835	900	985	642	947
	9 PM - 10 PM	557	628	611	600	607	434	554	662	650	596	506	597	501	591	686	675	680	733	731	547	732
	10 PM - 11 PM	510	539	563	525	487	334	367	575	570	507	445	496	383	440	634	635	631	616	615	426	537
	11 PM - Midnight	442	481	490	465	409	254	267	521	472	471	335	403	281	336	533	523	545	538	479	293	394

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

110 Sandusky - Bellevue

TO

91 Fremont - Port Clinton

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	141	247	235	249	238	216	133	155	223	231	232	236	242	139	175	258	260	258	281	273	184
	1 AM - 2 AM	96	185	186	188	190	163	92	111	175	188	185	198	172	99	121	200	203	208	208	190	125
	2 AM - 3 AM	75	165	155	165	169	131	83	91	144	168	159	166	131	76	98	165	167	181	187	164	92
	3 AM - 4 AM	110	147	138	142	146	119	59	89	133	149	153	164	113	63	91	151	158	170	167	128	71
	4 AM - 5 AM	102	164	163	156	166	121	59	104	144	175	169	164	121	60	109	164	182	181	176	139	66
	5 AM - 6 AM	139	196	202	200	197	145	65	157	185	210	211	208	133	63	165	213	236	232	223	147	66
	6 AM - 7 AM	230	297	289	297	285	175	83	253	278	315	317	305	186	87	248	309	334	326	306	195	100
	7 AM - 8 AM	305	382	382	366	362	253	122	328	362	403	399	379	269	146	326	412	412	419	395	279	158
	8 AM - 9 AM	365	474	473	479	446	373	177	403	451	504	497	478	381	212	421	525	523	537	513	397	248
	9 AM - 10 AM	430	538	532	536	556	499	294	479	510	556	575	594	520	333	513	584	607	629	627	544	397
	10 AM - 11 AM	503	575	582	621	646	628	439	552	594	641	646	707	648	510	621	657	661	702	749	697	604
	11 AM - 12 PM	538	628	604	675	708	717	613	616	662	658	717	813	738	641	690	726	743	829	886	848	793
	12 PM - 1 PM	571	628	622	696	742	758	710	645	704	694	750	866	753	796	734	765	783	859	968	891	934
	1 PM - 2 PM	580	631	644	723	765	726	809	682	743	699	781	926	747	826	777	748	788	894	978	866	1,008
	2 PM - 3 PM	622	673	680	771	819	731	871	714	780	741	819	920	727	889	771	792	798	922	1,018	859	1,022
	3 PM - 4 PM	645	663	677	769	845	744	890	702	784	751	850	935	714	924	780	769	818	932	1,057	809	1,047
	4 PM - 5 PM	627	686	702	785	869	718	917	729	811	783	839	925	677	895	810	774	835	906	1,001	792	1,060
	5 PM - 6 PM	604	674	679	792	874	639	871	697	743	742	768	866	607	865	786	772	799	903	990	721	995
	6 PM - 7 PM	557	606	622	714	764	571	771	630	672	651	710	846	576	781	699	686	708	764	892	670	914
	7 PM - 8 PM	500	517	528	604	632	495	668	550	577	546	626	717	528	685	602	591	609	697	790	601	781
	8 PM - 9 PM	421	430	427	483	521	400	524	475	482	443	513	609	405	613	510	501	519	630	655	527	650
	9 PM - 10 PM	343	361	366	397	423	321	410	395	406	361	435	461	367	484	433	428	417	532	547	458	543
	10 PM - 11 PM	291	308	298	337	334	268	309	346	335	315	354	366	283	320	361	371	355	415	438	377	397
	11 PM - Midnight	245	270	274	290	262	188	208	277	268	286	287	302	188	224	315	317	307	361	365	284	286

Close 2 Lanes	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	281	493	470	498	475	432	265	310	447	463	465	472	483	278	351	516	520	515	562	547	368
	1 AM - 2 AM	192	371	372	376	381	326	184	223	349	376	370	396	344	197	242	400	406	416	416	381	251
	2 AM - 3 AM	150	330	310	330	338	262	165	182	288	335	318	332	261	151	196	330	333	361	374	327	185
	3 AM - 4 AM	221	294	277	284	293	237	118	178	265	298	306	329	225	126	183	303	316	340	334	256	141
	4 AM - 5 AM	204	329	325	313	332	242	118	209	287	350	339	327	242	119	219	327	363	362	352	278	133
	5 AM - 6 AM	278	392	404	400	394	291	130	314	370	420	422	416	266	127	329	426	472	465	446	295	131
	6 AM - 7 AM	459	595	578	593	571	350	166	507	557	630	634	610	372	173	496	617	669	651	613	390	199
	7 AM - 8 AM	609	765	764	732	725	506	244	657	723	806	798	758	538	292	651	824	825	838	790	559	316
	8 AM - 9 AM	731	948	947	958	892	747	355	807	902	1,008	995	956	761	424	842	1,050	1,047	1,075	1,027	795	495
	9 AM - 10 AM	860	1,075	1,065	1,072	1,112	998	589	958	1,019	1,112	1,149	1,188	1,041	665	1,025	1,169	1,215	1,258	1,254	1,088	793
	10 AM - 11 AM	1,006	1,151	1,163	1,242	1,292	1,256	878	1,105	1,188	1,282	1,292	1,414	1,296	1,020	1,242	1,315	1,321	1,404	1,498	1,394	1,207
	11 AM - 12 PM	1,077	1,256	1,208	1,349	1,417	1,434	1,226	1,232	1,325	1,316	1,435	1,627	1,476	1,282	1,380	1,452	1,486	1,657	1,773	1,696	1,587
	12 PM - 1 PM	1,141	1,256	1,243	1,392	1,484	1,515	1,421	1,290	1,409	1,388	1,500	1,731	1,507	1,593	1,468	1,530	1,567	1,718	1,937	1,782	1,867
	1 PM - 2 PM	1,160	1,261	1,289	1,446	1,531	1,452	1,617	1,363	1,486	1,398	1,562	1,852	1,493	1,652	1,553	1,496	1,576	1,789	1,956	1,731	2,016
	2 PM - 3 PM	1,244	1,345	1,361	1,542	1,637	1,462	1,741	1,428	1,560	1,483	1,638	1,841	1,453	1,778	1,542	1,585	1,595	1,845	2,036	1,719	2,045
	3 PM - 4 PM	1,289	1,326	1,354	1,537	1,690	1,488	1,779	1,403	1,567	1,501	1,700	1,870	1,428	1,848	1,559	1,539	1,637	1,864	2,113	1,618	2,094
	4 PM - 5 PM	1,253	1,372	1,404	1,571	1,739	1,437	1,833	1,459	1,622	1,565	1,679	1,850	1,355	1,789	1,620	1,548	1,670	1,812	2,003	1,584	2,121
	5 PM - 6 PM	1,207	1,348	1,358	1,585	1,749	1,277	1,742	1,395	1,485	1,483	1,536	1,731	1,213	1,730	1,573	1,544	1,598	1,805	1,980	1,442	1,991
	6 PM - 7 PM	1,115	1,213	1,245	1,428	1,527	1,143	1,541	1,260	1,344	1,302	1,420	1,692	1,151	1,563	1,399	1,371	1,416	1,527	1,783	1,340	1,828
	7 PM - 8 PM	1,000	1,034	1,056	1,208	1,264	990	1,336	1,099	1,154	1,092	1,253	1,435	1,055	1,370	1,205	1,182	1,219	1,393	1,579	1,201	1,562
	8 PM - 9 PM	843	861	855	967	1,042	799	1,048	950	964	887	1,027	1,217	810	1,226	1,020	1,002	1,039	1,259	1,309	1,055	1,301
	9 PM - 10 PM	686	722	732	794	846	642	820	790	811	721	870	922	734	968	865	855	834	1,064	1,094	916	1,085
	10 PM - 11 PM	582	617	597	673	668	537	618	693	670	631	708	733	567	641	723	742	709	829	876	753	794
	11 PM - Midnight	490	539	548	579	523	376	417	554	535	572	575	604	377	449	631	635	614	721	730	569	572

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

110 Sandusky - Bellevue

TO

91 Fremont - Port Clinton

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

- Refer to SP 104 for lane closure restrictions.
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Revision Date: 9/1/2022

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	190	259	270	270	297	286	254	199	261	262	268	279	305	270	176	236	231	234	255	265	213
	1 AM - 2 AM	137	189	195	214	218	210	155	138	198	213	205	198	206	186	126	182	192	207	193	212	157
	2 AM - 3 AM	108	146	170	184	183	147	95	107	173	167	185	163	150	118	97	139	172	172	166	157	88
	3 AM - 4 AM	95	141	144	158	164	125	76	98	165	148	165	150	133	79	95	138	146	153	158	135	67
	4 AM - 5 AM	109	144	182	176	177	132	77	117	160	178	180	175	134	68	106	153	166	164	176	131	62
	5 AM - 6 AM	166	188	221	222	229	156	79	157	210	201	217	242	144	74	150	195	195	213	225	143	67
	6 AM - 7 AM	256	284	299	308	303	194	102	242	301	302	313	306	182	97	264	300	293	311	286	192	88
	7 AM - 8 AM	329	372	386	405	388	255	149	320	407	388	400	381	273	149	337	369	391	387	382	261	140
	8 AM - 9 AM	407	461	513	535	518	397	249	410	514	515	542	511	423	263	424	454	460	484	468	402	224
	9 AM - 10 AM	520	555	601	631	667	591	410	520	597	616	634	638	604	395	513	538	556	572	563	550	358
	10 AM - 11 AM	616	645	679	750	793	755	623	617	665	697	754	774	780	635	618	613	608	653	675	666	528
	11 AM - 12 PM	722	746	757	859	932	900	877	740	757	790	875	916	920	884	697	655	653	717	816	770	712
	12 PM - 1 PM	783	785	824	896	1,037	963	1,039	789	775	840	919	988	955	1,049	735	666	658	763	889	804	844
	1 PM - 2 PM	782	794	840	919	1,045	936	1,086	787	783	835	945	1,067	928	1,103	718	684	703	775	923	778	869
	2 PM - 3 PM	794	833	814	941	1,110	939	1,127	822	819	835	944	1,080	861	1,127	732	706	724	816	956	754	876
	3 PM - 4 PM	824	832	861	975	1,094	922	1,168	830	810	848	966	1,073	861	1,083	751	709	721	809	952	763	930
	4 PM - 5 PM	837	834	879	961	1,074	893	1,151	822	813	864	908	1,032	879	1,099	715	670	728	843	941	700	917
	5 PM - 6 PM	796	803	827	947	1,026	814	1,092	793	795	815	907	1,045	826	1,063	688	703	723	829	947	650	934
	6 PM - 7 PM	717	710	754	822	970	730	967	720	703	720	838	959	773	990	623	631	647	734	855	622	1,039
	7 PM - 8 PM	610	638	645	736	830	617	838	623	602	645	746	818	679	863	533	531	536	606	759	522	874
	8 PM - 9 PM	564	548	529	620	666	550	695	527	518	547	629	619	549	701	407	440	438	544	569	446	737
	9 PM - 10 PM	468	449	448	531	560	472	530	418	438	476	516	518	456	544	375	368	385	457	450	417	629
	10 PM - 11 PM	400	407	385	438	466	384	402	358	389	404	413	461	384	415	323	316	318	381	374	332	398
	11 PM - Midnight	370	363	340	405	380	307	313	315	330	337	351	388	326	290	296	275	284	332	325	289	242

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	380	517	541	540	594	573	507	399	523	524	536	559	610	540	353	471	462	467	509	531	425
	1 AM - 2 AM	273	377	390	428	436	420	309	276	396	426	410	397	411	372	252	364	384	414	386	424	313
	2 AM - 3 AM	215	293	340	367	366	294	191	213	346	334	370	327	301	237	194	279	343	344	333	313	175
	3 AM - 4 AM	191	282	287	316	327	251	153	197	329	296	331	301	266	159	191	275	291	305	316	269	134
	4 AM - 5 AM	217	288	364	352	353	265	153	233	321	356	360	350	269	136	211	306	332	329	351	261	124
	5 AM - 6 AM	332	377	442	445	457	312	158	315	421	402	434	484	288	148	301	390	389	426	451	286	135
	6 AM - 7 AM	512	568	599	615	606	387	203	484	602	603	627	612	364	193	527	600	585	622	571	384	176
	7 AM - 8 AM	658	745	772	810	775	510	297	639	814	775	801	762	546	299	675	738	782	773	764	522	279
	8 AM - 9 AM	814	921	1,026	1,070	1,036	795	497	819	1,028	1,030	1,083	1,022	845	527	847	909	920	969	935	803	447
	9 AM - 10 AM	1,039	1,109	1,202	1,263	1,333	1,182	820	1,039	1,193	1,232	1,267	1,276	1,208	789	1,026	1,076	1,112	1,143	1,126	1,099	716
	10 AM - 11 AM	1,231	1,289	1,359	1,500	1,586	1,510	1,245	1,234	1,329	1,394	1,507	1,548	1,560	1,271	1,237	1,226	1,215	1,307	1,349	1,332	1,056
	11 AM - 12 PM	1,445	1,491	1,514	1,719	1,863	1,799	1,754	1,481	1,513	1,580	1,750	1,833	1,839	1,767	1,394	1,311	1,307	1,434	1,633	1,540	1,424
	12 PM - 1 PM	1,566	1,570	1,647	1,791	2,073	1,926	2,078	1,578	1,550	1,680	1,839	1,976	1,910	2,098	1,470	1,332	1,315	1,526	1,777	1,609	1,688
	1 PM - 2 PM	1,564	1,588	1,680	1,838	2,090	1,872	2,171	1,574	1,565	1,670	1,891	2,135	1,856	2,206	1,435	1,367	1,405	1,550	1,846	1,556	1,737
	2 PM - 3 PM	1,588	1,665	1,628	1,882	2,220	1,878	2,254	1,644	1,638	1,670	1,889	2,160	1,723	2,255	1,464	1,411	1,448	1,632	1,911	1,508	1,751
	3 PM - 4 PM	1,648	1,665	1,721	1,950	2,189	1,843	2,335	1,660	1,621	1,697	1,932	2,145	1,723	2,166	1,502	1,419	1,443	1,618	1,903	1,526	1,859
	4 PM - 5 PM	1,674	1,667	1,758	1,922	2,149	1,786	2,302	1,644	1,625	1,729	1,817	2,065	1,758	2,199	1,429	1,340	1,456	1,687	1,881	1,399	1,835
	5 PM - 6 PM	1,593	1,605	1,653	1,894	2,052	1,629	2,183	1,586	1,569	1,630	1,815	2,090	1,652	2,127	1,375	1,406	1,447	1,659	1,894	1,300	1,868
	6 PM - 7 PM	1,435	1,421	1,508	1,645	1,940	1,460	1,933	1,441	1,405	1,439	1,675	1,918	1,545	1,980	1,245	1,262	1,293	1,468	1,710	1,243	2,078
	7 PM - 8 PM	1,221	1,276	1,291	1,472	1,660	1,233	1,676	1,246	1,204	1,291	1,491	1,636	1,358	1,725	1,067	1,063	1,073	1,213	1,518	1,043	1,747
	8 PM - 9 PM	1,127	1,096	1,058	1,241	1,332	1,101	1,389	1,055	1,035	1,093	1,258	1,237	1,099	1,402	814	879	876	1,087	1,138	892	1,475
	9 PM - 10 PM	936	898	896	1,062	1,121	944	1,061	837	875	952	1,032	1,037	911	1,087	750	736	769	913	900	833	1,258
	10 PM - 11 PM	799	814	770	875	932	769	804	717	777	809	826	922	769	831	646	632	636	762	748	664	796
	11 PM - Midnight	739	727	680	810	759	615	625	630	659	674	703	776	652	581	592	550	567	663	649	578	483

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

110 Sandusky - Bellevue

TO

91 Fremont - Port Clinton

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

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2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
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Revision Date: 9/1/2022

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	178	238	227	233	282	286	258	156	224	214	207	222	218	135	132	225	228	219	222	199	109
	1 AM - 2 AM	116	203	186	196	230	206	219	105	182	183	188	188	165	126	97	184	197	182	176	159	88
	2 AM - 3 AM	95	160	178	168	179	144	142	84	158	156	156	163	138	68	85	164	157	152	159	126	65
	3 AM - 4 AM	87	157	152	152	160	123	85	88	150	143	151	141	123	56	81	144	146	151	149	130	59
	4 AM - 5 AM	110	166	168	167	169	122	63	107	168	169	173	162	121	53	102	158	165	161	166	105	58
	5 AM - 6 AM	141	200	196	202	203	139	64	148	195	206	211	195	129	62	140	199	205	198	193	130	64
	6 AM - 7 AM	234	300	300	311	281	173	82	246	298	294	310	298	175	86	216	293	305	279	285	164	83
	7 AM - 8 AM	320	382	369	378	372	246	118	320	385	374	379	361	247	124	297	359	353	355	353	251	113
	8 AM - 9 AM	394	483	450	471	461	383	203	403	472	445	449	447	371	201	347	454	440	436	439	342	183
	9 AM - 10 AM	479	535	537	558	575	544	332	463	526	516	527	530	493	302	406	535	527	530	517	470	280
	10 AM - 11 AM	566	602	593	605	700	656	491	553	562	560	618	630	644	440	471	579	572	563	588	560	432
	11 AM - 12 PM	642	654	622	678	807	748	721	592	603	590	640	744	705	603	523	619	612	605	680	672	597
	12 PM - 1 PM	680	669	672	752	872	757	821	647	626	600	679	797	731	712	552	644	650	600	718	669	725
	1 PM - 2 PM	702	676	672	763	935	744	903	632	648	631	705	789	705	725	561	647	684	668	750	696	774
	2 PM - 3 PM	721	701	688	773	971	737	908	649	684	625	744	855	691	732	575	672	685	690	786	676	803
	3 PM - 4 PM	727	716	734	807	928	712	978	660	682	670	764	863	706	840	605	694	720	692	810	678	794
	4 PM - 5 PM	709	699	724	825	955	679	952	683	650	662	782	879	684	789	614	718	729	708	787	637	772
	5 PM - 6 PM	706	685	694	795	914	639	926	655	641	640	725	865	637	783	566	669	686	685	784	561	729
	6 PM - 7 PM	622	630	613	705	914	579	862	570	569	570	635	776	532	823	514	589	612	581	669	475	650
	7 PM - 8 PM	519	521	526	616	715	511	726	487	478	480	555	659	430	708	431	483	510	495	604	417	577
	8 PM - 9 PM	450	430	433	532	556	437	628	397	392	391	472	539	374	512	375	409	434	407	487	316	456
	9 PM - 10 PM	367	366	370	438	445	389	543	341	322	345	403	408	297	399	336	357	354	364	385	257	345
	10 PM - 11 PM	319	294	307	371	378	339	399	292	293	297	306	354	239	289	326	312	316	311	313	211	238
	11 PM - Midnight	283	271	277	324	337	302	301	252	256	263	289	310	176	181	271	268	269	264	254	157	179

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	356	476	453	465	564	571	517	313	448	428	413	444	436	269	265	451	455	439	444	399	219
	1 AM - 2 AM	233	405	372	391	461	413	438	211	364	366	376	376	330	251	194	369	394	363	352	318	176
	2 AM - 3 AM	190	319	357	337	358	289	284	168	316	311	312	327	276	137	170	327	313	303	318	252	129
	3 AM - 4 AM	175	314	304	304	320	246	169	175	300	285	302	281	246	112	161	289	291	302	299	259	117
	4 AM - 5 AM	219	332	335	334	338	244	125	214	335	338	347	325	242	106	204	316	331	322	331	211	117
	5 AM - 6 AM	283	399	393	404	405	277	127	297	389	412	422	389	259	123	280	398	409	397	385	259	128
	6 AM - 7 AM	467	599	600	622	562	346	163	491	597	589	621	595	351	172	432	585	611	558	569	327	166
	7 AM - 8 AM	641	763	738	755	744	492	237	640	770	748	758	723	494	248	595	718	705	710	705	501	226
	8 AM - 9 AM	788	967	901	942	922	765	407	807	943	890	898	894	742	403	694	907	880	871	878	684	366
	9 AM - 10 AM	957	1,070	1,074	1,116	1,149	1,088	663	925	1,053	1,032	1,054	1,059	986	604	811	1,071	1,053	1,059	1,033	939	561
	10 AM - 11 AM	1,132	1,204	1,185	1,210	1,401	1,312	981	1,106	1,125	1,121	1,235	1,261	1,289	879	942	1,159	1,144	1,127	1,176	1,119	863
	11 AM - 12 PM	1,284	1,308	1,243	1,355	1,614	1,495	1,442	1,184	1,207	1,179	1,279	1,488	1,411	1,206	1,046	1,237	1,223	1,210	1,359	1,344	1,195
	12 PM - 1 PM	1,359	1,337	1,343	1,505	1,744	1,514	1,642	1,293	1,252	1,199	1,358	1,595	1,463	1,424	1,104	1,288	1,300	1,200	1,435	1,338	1,450
	1 PM - 2 PM	1,405	1,352	1,344	1,525	1,869	1,489	1,805	1,263	1,296	1,261	1,409	1,578	1,409	1,450	1,121	1,294	1,369	1,336	1,499	1,391	1,548
	2 PM - 3 PM	1,441	1,401	1,376	1,546	1,941	1,474	1,815	1,298	1,368	1,250	1,488	1,711	1,382	1,463	1,149	1,345	1,371	1,381	1,571	1,353	1,606
	3 PM - 4 PM	1,455	1,432	1,469	1,613	1,857	1,424	1,957	1,321	1,364	1,340	1,528	1,726	1,411	1,679	1,209	1,388	1,439	1,383	1,620	1,356	1,588
	4 PM - 5 PM	1,418	1,398	1,448	1,651	1,911	1,357	1,904	1,366	1,299	1,323	1,563	1,759	1,368	1,579	1,227	1,435	1,459	1,416	1,573	1,273	1,545
	5 PM - 6 PM	1,412	1,370	1,388	1,590	1,827	1,278	1,853	1,310	1,283	1,279	1,451	1,729	1,378	1,566	1,132	1,337	1,372	1,370	1,568	1,122	1,458
	6 PM - 7 PM	1,244	1,260	1,225	1,410	1,828	1,158	1,723	1,140	1,138	1,139	1,271	1,551	1,064	1,647	1,028	1,177	1,224	1,162	1,337	950	1,300
	7 PM - 8 PM	1,039	1,043	1,051	1,232	1,431	1,022	1,451	975	956	961	1,111	1,318	861	1,416	863	966	1,021	990	1,207	833	1,154
	8 PM - 9 PM	899	861	866	1,064	1,112	874	1,257	794	784	781	944	1,078	747	1,024	749	817	868	813	974	631	913
	9 PM - 10 PM	733	732	741	876	890	779	1,085	682	645	689	806	815	594	797	671	713	708	727	769	513	690
	10 PM - 11 PM	637	588	613	741	757	677	798	584	587	593	612	707	477	578	651	624	631	621	626	423	475
	11 PM - Midnight	566	542	553	649	673	605	602	505	512	525	578	620	351	361	542	536	538	528	507	314	358

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

110 Sandusky - Bellevue

TO

118 Sandusky - Norwalk

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

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2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	108	157	169	168	175	151	111	131	182	198	174	138	172	119	162	193	195	198	202	202	143
	1 AM - 2 AM	85	128	141	134	149	124	85	99	147	159	140	122	140	88	120	151	156	156	161	154	126
	2 AM - 3 AM	74	103	111	114	115	94	72	81	125	124	115	106	103	67	94	124	129	145	147	116	76
	3 AM - 4 AM	65	97	109	115	116	97	55	74	105	122	115	105	91	60	93	116	123	137	132	107	68
	4 AM - 5 AM	75	108	117	130	125	83	54	85	118	130	129	108	96	61	91	132	138	146	142	106	62
	5 AM - 6 AM	100	150	158	164	162	104	59	122	166	168	152	133	111	64	123	181	173	184	192	128	69
	6 AM - 7 AM	167	229	234	238	224	142	71	180	257	252	222	175	143	89	200	256	258	263	273	162	89
	7 AM - 8 AM	214	295	318	307	309	173	100	257	341	346	287	261	194	126	285	348	350	353	339	213	134
	8 AM - 9 AM	269	354	370	355	359	217	139	330	409	376	341	309	256	188	345	418	417	437	407	280	192
	9 AM - 10 AM	316	395	402	395	382	296	211	382	432	409	370	363	348	256	381	427	464	482	458	395	297
	10 AM - 11 AM	355	428	413	425	419	396	309	427	459	431	406	414	451	367	458	489	484	521	520	512	425
	11 AM - 12 PM	399	474	462	477	460	502	393	494	497	469	459	474	540	478	509	523	552	589	599	624	570
	12 PM - 1 PM	457	496	497	518	502	549	472	540	514	500	494	531	569	560	571	552	579	631	662	651	668
	1 PM - 2 PM	471	519	515	550	554	552	544	560	544	494	513	577	563	620	574	599	602	658	714	661	749
	2 PM - 3 PM	518	525	518	567	596	548	593	561	573	538	538	654	563	663	598	601	607	693	778	661	831
	3 PM - 4 PM	547	552	552	602	628	548	645	647	617	562	563	694	566	677	645	642	653	732	840	672	892
	4 PM - 5 PM	546	536	587	618	653	532	662	633	619	575	559	704	537	697	653	643	690	747	868	644	873
	5 PM - 6 PM	510	548	581	588	656	487	588	596	609	538	522	688	502	671	623	649	686	721	851	591	828
	6 PM - 7 PM	456	493	497	492	598	422	505	520	526	478	431	625	436	573	546	549	596	662	761	511	759
	7 PM - 8 PM	399	400	407	420	512	368	435	437	449	400	364	517	383	477	453	466	476	538	641	420	637
	8 PM - 9 PM	324	328	355	367	434	296	353	378	389	337	300	441	309	398	399	400	413	462	518	344	503
	9 PM - 10 PM	270	269	284	312	329	245	286	314	312	288	248	342	257	302	335	328	342	383	417	284	403
	10 PM - 11 PM	227	219	235	256	254	194	212	259	268	222	199	263	207	236	271	262	284	311	330	230	299
	11 PM - Midnight	189	196	198	218	202	147	148	221	221	191	175	198	174	178	238	229	230	248	265	160	224

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	216	314	338	337	351	303	222	261	364	397	348	275	343	239	324	385	391	396	404	405	286
	1 AM - 2 AM	171	257	282	268	299	248	169	198	294	319	279	244	280	177	240	302	311	311	321	308	253
	2 AM - 3 AM	147	205	222	228	230	187	143	162	251	248	230	212	207	135	188	249	258	290	295	232	151
	3 AM - 4 AM	131	194	219	230	232	193	110	148	211	244	230	210	183	121	185	232	245	273	264	214	136
	4 AM - 5 AM	150	217	234	260	251	167	107	171	235	260	258	217	192	123	182	265	276	292	284	212	124
	5 AM - 6 AM	199	300	317	327	323	208	119	245	331	336	303	266	221	128	245	362	347	368	384	255	138
	6 AM - 7 AM	334	457	467	476	447	285	142	359	514	504	444	349	286	178	400	512	515	525	546	324	178
	7 AM - 8 AM	429	590	636	615	617	347	199	514	682	692	575	522	387	251	569	696	699	707	678	426	268
	8 AM - 9 AM	538	707	739	710	717	434	277	660	817	752	682	618	513	376	691	836	834	874	815	561	384
	9 AM - 10 AM	632	789	804	790	765	593	421	764	864	819	741	726	696	512	762	854	928	963	916	790	593
	10 AM - 11 AM	710	856	827	849	839	793	619	855	917	861	811	828	902	734	915	979	967	1,042	1,041	1,024	850
	11 AM - 12 PM	797	949	924	954	920	1,003	787	988	995	939	918	948	1,080	956	1,018	1,045	1,104	1,178	1,197	1,248	1,139
	12 PM - 1 PM	914	992	993	1,035	1,004	1,097	943	1,081	1,029	1,000	989	1,062	1,138	1,121	1,141	1,103	1,159	1,262	1,323	1,301	1,336
	1 PM - 2 PM	943	1,039	1,031	1,100	1,109	1,105	1,089	1,119	1,088	988	1,026	1,155	1,126	1,239	1,148	1,197	1,204	1,315	1,427	1,321	1,497
	2 PM - 3 PM	1,035	1,049	1,037	1,134	1,192	1,097	1,186	1,122	1,146	1,077	1,075	1,309	1,127	1,325	1,197	1,201	1,214	1,385	1,557	1,322	1,662
	3 PM - 4 PM	1,094	1,104	1,105	1,204	1,257	1,097	1,291	1,294	1,233	1,124	1,125	1,388	1,131	1,354	1,290	1,284	1,306	1,464	1,681	1,345	1,783
	4 PM - 5 PM	1,092	1,073	1,174	1,236	1,307	1,065	1,324	1,265	1,237	1,151	1,117	1,407	1,074	1,394	1,305	1,285	1,380	1,493	1,736	1,288	1,745
	5 PM - 6 PM	1,020	1,096	1,162	1,177	1,313	973	1,176	1,192	1,219	1,075	1,045	1,377	1,004	1,342	1,247	1,297	1,371	1,442	1,703	1,182	1,656
	6 PM - 7 PM	912	986	994	983	1,197	845	1,010	1,039	1,052	956	861	1,249	872	1,146	1,091	1,097	1,191	1,324	1,521	1,021	1,518
	7 PM - 8 PM	798	800	815	840	1,023	737	870	873	898	800	728	1,035	765	955	907	932	952	1,076	1,282	841	1,275
	8 PM - 9 PM	647	657	711	733	868	592	705	756	778	674	600	881	618	797	799	800	825	925	1,035	688	1,007
	9 PM - 10 PM	540	538	567	624	658	490	571	629	623	576	497	684	513	605	669	656	684	766	833	568	806
	10 PM - 11 PM	454	437	469	512	509	388	424	519	536	445	398	526	414	471	541	523	567	622	660	460	597
	11 PM - Midnight	378	392	396	435	404	294	296	443	442	382	350	397	349	356	476	458	460	496	530	320	447

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

110 Sandusky - Bellevue

TO

118 Sandusky - Norwalk

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Close 1 Lane	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	153	202	210	218	240	213	152	177	194	211	223	240	233	153	222	228	236	239	275	253	176
	1 AM - 2 AM	120	155	160	163	177	170	109	126	172	169	176	186	170	113	152	182	186	212	222	178	128
	2 AM - 3 AM	100	128	132	141	149	128	85	104	133	140	146	161	130	90	122	152	156	180	186	144	101
	3 AM - 4 AM	86	120	121	129	134	122	79	93	114	125	149	151	128	73	99	132	145	163	167	132	81
	4 AM - 5 AM	95	124	141	138	152	114	74	102	127	139	151	161	115	72	110	143	144	165	155	131	83
	5 AM - 6 AM	130	185	186	186	189	131	72	138	168	200	181	199	139	78	143	192	198	216	209	144	88
	6 AM - 7 AM	216	263	274	279	281	167	99	229	251	287	270	301	182	100	242	292	293	309	309	186	115
	7 AM - 8 AM	296	355	362	357	358	225	148	301	336	385	377	366	240	146	332	391	399	416	400	254	168
	8 AM - 9 AM	356	425	453	452	423	301	217	375	388	452	468	456	334	223	409	476	480	480	483	345	267
	9 AM - 10 AM	409	470	472	495	485	410	315	440	458	511	540	514	454	362	496	530	541	563	591	483	394
	10 AM - 11 AM	471	508	536	563	587	530	440	507	524	562	587	595	555	496	581	581	597	659	658	612	535
	11 AM - 12 PM	518	567	580	627	662	640	607	610	594	634	693	712	668	676	670	658	666	752	790	754	708
	12 PM - 1 PM	586	592	617	679	737	678	690	642	657	662	728	781	747	788	727	710	706	825	842	787	843
	1 PM - 2 PM	571	603	643	724	780	680	779	705	694	680	759	845	736	841	790	729	753	844	914	820	949
	2 PM - 3 PM	631	662	665	761	833	710	843	711	748	727	797	881	736	920	836	760	790	880	955	853	1,017
	3 PM - 4 PM	657	687	707	800	909	677	872	762	772	782	843	932	718	928	855	796	813	933	1,057	781	1,074
	4 PM - 5 PM	668	684	704	801	888	666	873	750	750	753	849	945	697	964	874	798	822	956	1,021	735	1,055
	5 PM - 6 PM	634	654	704	792	852	634	854	688	743	723	796	858	635	926	785	738	806	902	950	693	1,013
	6 PM - 7 PM	550	569	640	702	751	557	793	629	669	646	738	790	559	860	711	687	673	814	848	600	923
	7 PM - 8 PM	463	498	551	612	635	492	655	540	557	569	631	670	472	747	623	550	564	682	700	539	809
	8 PM - 9 PM	402	420	438	511	508	408	528	455	490	517	538	566	425	637	546	484	474	586	600	469	681
	9 PM - 10 PM	336	358	353	427	426	331	420	389	394	420	428	467	345	498	462	414	401	509	505	396	555
	10 PM - 11 PM	274	279	323	347	332	259	302	297	308	333	371	369	279	366	364	321	349	413	408	316	419
	11 PM - Midnight	232	233	283	282	257	210	216	242	246	274	288	316	212	246	286	270	283	331	326	246	307

Close 2 Lanes	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	306	403	421	435	480	426	303	353	388	423	447	480	465	307	444	455	472	478	549	506	353
	1 AM - 2 AM	240	310	320	326	354	340	217	252	344	338	351	371	340	227	303	365	371	423	444	357	256
	2 AM - 3 AM	199	256	264	283	299	256	169	208	265	281	292	322	261	180	243	304	312	361	372	287	201
	3 AM - 4 AM	172	239	243	257	267	243	159	187	228	250	297	302	255	146	198	264	289	325	333	265	161
	4 AM - 5 AM	190	248	283	275	305	227	147	205	255	279	303	321	230	144	220	287	288	329	311	261	165
	5 AM - 6 AM	260	370	371	372	378	262	144	276	336	400	362	397	278	156	286	384	396	432	419	289	176
	6 AM - 7 AM	432	527	548	558	562	334	197	458	501	573	541	602	364	200	485	584	585	619	617	371	230
	7 AM - 8 AM	592	709	724	713	716	451	295	601	671	770	755	732	481	293	663	782	798	833	799	508	335
	8 AM - 9 AM	712	851	906	905	845	601	435	749	775	904	936	911	668	446	818	951	960	959	965	689	535
	9 AM - 10 AM	819	941	944	991	970	819	630	880	915	1,022	1,079	1,029	908	724	993	1,060	1,083	1,126	1,182	965	788
	10 AM - 11 AM	942	1,015	1,072	1,125	1,173	1,060	880	1,015	1,048	1,123	1,174	1,189	1,109	992	1,161	1,162	1,194	1,318	1,317	1,224	1,071
	11 AM - 12 PM	1,035	1,134	1,161	1,254	1,325	1,281	1,215	1,220	1,188	1,268	1,387	1,424	1,336	1,351	1,340	1,316	1,332	1,504	1,581	1,509	1,417
	12 PM - 1 PM	1,172	1,184	1,235	1,358	1,474	1,356	1,381	1,285	1,313	1,324	1,456	1,562	1,493	1,576	1,455	1,420	1,411	1,650	1,685	1,574	1,686
	1 PM - 2 PM	1,142	1,207	1,286	1,447	1,560	1,360	1,558	1,409	1,388	1,359	1,517	1,690	1,471	1,681	1,579	1,458	1,506	1,689	1,828	1,639	1,898
	2 PM - 3 PM	1,261	1,323	1,330	1,523	1,667	1,420	1,686	1,423	1,496	1,455	1,595	1,762	1,472	1,840	1,672	1,520	1,580	1,760	1,911	1,705	2,035
	3 PM - 4 PM	1,313	1,374	1,415	1,599	1,817	1,354	1,743	1,525	1,545	1,565	1,687	1,863	1,435	1,856	1,710	1,592	1,626	1,867	2,115	1,563	2,148
	4 PM - 5 PM	1,335	1,368	1,408	1,602	1,776	1,332	1,745	1,500	1,500	1,507	1,697	1,890	1,394	1,929	1,748	1,595	1,643	1,912	2,042	1,469	2,110
	5 PM - 6 PM	1,269	1,308	1,408	1,583	1,705	1,267	1,708	1,377	1,485	1,447	1,593	1,716	1,269	1,853	1,570	1,477	1,613	1,804	1,899	1,386	2,026
	6 PM - 7 PM	1,099	1,137	1,280	1,405	1,502	1,115	1,586	1,259	1,338	1,292	1,475	1,580	1,118	1,721	1,421	1,374	1,345	1,628	1,696	1,200	1,847
	7 PM - 8 PM	927	995	1,101	1,224	1,269	984	1,309	1,080	1,115	1,139	1,261	1,339	943	1,495	1,246	1,100	1,128	1,364	1,400	1,077	1,618
	8 PM - 9 PM	804	840	876	1,022	1,017	817	1,056	910	979	1,034	1,077	1,133	850	1,274	1,091	968	947	1,171	1,200	938	1,362
	9 PM - 10 PM	672	715	705	853	852	662	840	778	789	840	857	933	691	996	923	829	801	1,018	1,010	793	1,110
	10 PM - 11 PM	549	558	646	695	665	519	604	593	616	667	741	738	558	732	727	642	698	826	817	632	838
	11 PM - Midnight	463	467	565	564	514	419	432	485	492	547	577	631	423	493	572	540	567	662	652	491	614

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

110 Sandusky - Bellevue

TO

118 Sandusky - Norwalk

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

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Revision Date: 9/1/2022

Close 1 Lane	Month	July							August							September						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	221	215	223	246	262	254	192	240	235	226	245	257	265	196	182	216	213	233	270	263	193
	1 AM - 2 AM	154	168	179	203	213	177	135	180	179	184	202	194	194	146	141	167	173	193	212	200	126
	2 AM - 3 AM	116	138	144	166	177	152	111	135	157	157	158	168	148	104	108	133	137	158	164	148	103
	3 AM - 4 AM	113	119	135	150	165	137	80	107	137	138	158	166	132	91	94	118	134	143	151	125	82
	4 AM - 5 AM	120	129	155	159	167	130	80	116	152	158	175	162	130	82	105	134	139	156	166	127	77
	5 AM - 6 AM	154	176	187	208	217	147	90	152	194	207	200	213	151	92	139	175	178	190	199	142	77
	6 AM - 7 AM	233	267	286	291	315	198	110	250	286	310	312	302	177	111	237	250	270	286	287	167	100
	7 AM - 8 AM	327	356	376	402	392	251	164	356	397	442	455	420	257	172	309	346	360	377	370	240	171
	8 AM - 9 AM	400	434	465	500	468	355	246	451	506	520	519	511	365	257	358	410	431	453	448	330	267
	9 AM - 10 AM	512	512	545	566	588	486	380	530	546	584	605	611	516	414	423	460	488	525	503	438	447
	10 AM - 11 AM	606	582	603	648	698	644	566	604	600	663	688	693	682	621	517	516	542	583	587	589	634
	11 AM - 12 PM	703	676	711	763	816	820	774	717	674	735	761	834	856	828	578	620	593	677	704	725	784
	12 PM - 1 PM	785	748	752	859	905	906	931	801	742	776	804	905	952	999	657	668	655	743	787	770	871
	1 PM - 2 PM	823	773	771	903	977	940	1,061	858	787	817	876	964	1,008	1,117	691	680	697	768	835	776	925
	2 PM - 3 PM	855	824	839	939	1,037	937	1,137	857	817	844	949	1,033	982	1,159	736	722	708	832	911	827	982
	3 PM - 4 PM	873	862	828	952	1,142	957	1,115	914	872	935	1,029	1,087	1,013	1,235	759	745	735	842	961	759	981
	4 PM - 5 PM	847	880	847	958	1,127	866	1,130	919	907	971	1,056	1,040	949	1,143	759	757	774	882	978	729	997
	5 PM - 6 PM	781	799	802	938	996	775	1,111	885	882	934	987	996	819	1,071	714	708	753	845	953	690	945
	6 PM - 7 PM	723	727	744	817	898	690	955	743	740	783	841	910	733	1,008	644	622	661	758	855	604	889
	7 PM - 8 PM	600	590	630	710	760	600	831	579	612	646	717	780	630	894	512	527	526	652	725	550	769
	8 PM - 9 PM	509	502	544	605	641	497	773	490	510	537	601	639	549	747	452	432	459	551	584	454	621
	9 PM - 10 PM	406	411	440	507	539	425	590	432	423	453	527	532	448	575	373	366	386	466	479	415	489
	10 PM - 11 PM	335	336	365	413	422	323	437	368	338	363	435	424	367	467	300	301	333	397	363	350	362
	11 PM - Midnight	282	290	293	325	329	262	330	303	283	295	345	351	273	329	256	235	275	324	330	287	260

Close 2 Lanes	Month	July							August							September						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	442	429	445	492	524	508	385	480	470	452	489	514	531	393	363	431	426	466	539	526	386
	1 AM - 2 AM	309	337	357	407	425	355	269	361	357	369	403	388	388	291	281	335	346	386	425	400	252
	2 AM - 3 AM	232	275	288	332	354	304	222	270	314	315	316	335	296	208	215	267	274	316	329	296	206
	3 AM - 4 AM	225	239	269	301	329	274	159	213	274	276	317	331	264	182	187	236	268	287	303	250	163
	4 AM - 5 AM	239	258	311	319	335	260	160	232	304	315	351	324	260	163	210	269	277	311	331	255	154
	5 AM - 6 AM	308	353	373	417	434	293	179	304	387	415	399	425	301	184	277	349	356	379	397	285	155
	6 AM - 7 AM	466	533	571	581	630	397	221	500	572	620	625	605	353	223	475	499	540	571	574	334	199
	7 AM - 8 AM	654	712	752	803	784	503	327	711	794	884	909	841	514	343	619	692	720	753	740	481	343
	8 AM - 9 AM	799	869	931	1,001	937	710	493	901	1,012	1,040	1,038	1,022	731	514	716	820	863	907	897	660	534
	9 AM - 10 AM	1,023	1,025	1,090	1,131	1,176	972	759	1,059	1,093	1,168	1,210	1,223	1,031	828	845	921	976	1,050	1,007	876	894
	10 AM - 11 AM	1,211	1,165	1,207	1,295	1,395	1,288	1,133	1,207	1,199	1,325	1,376	1,386	1,365	1,242	1,035	1,032	1,085	1,165	1,174	1,179	1,267
	11 AM - 12 PM	1,406	1,352	1,422	1,527	1,632	1,640	1,549	1,434	1,347	1,470	1,522	1,669	1,712	1,656	1,155	1,240	1,186	1,355	1,407	1,451	1,567
	12 PM - 1 PM	1,569	1,496	1,503	1,718	1,810	1,812	1,862	1,602	1,484	1,551	1,608	1,811	1,903	1,997	1,315	1,336	1,309	1,486	1,573	1,539	1,741
	1 PM - 2 PM	1,647	1,547	1,543	1,807	1,954	1,879	2,123	1,716	1,575	1,634	1,751	1,927	2,015	2,234	1,381	1,360	1,395	1,537	1,670	1,552	1,849
	2 PM - 3 PM	1,709	1,648	1,679	1,877	2,074	1,875	2,274	1,713	1,635	1,687	1,899	2,065	1,964	2,317	1,472	1,443	1,416	1,664	1,821	1,654	1,963
	3 PM - 4 PM	1,745	1,724	1,655	1,904	2,283	1,913	2,230	1,828	1,744	1,870	2,058	2,174	2,027	2,470	1,518	1,491	1,469	1,684	1,921	1,517	1,962
	4 PM - 5 PM	1,694	1,760	1,695	1,916	2,253	1,731	2,261	1,838	1,815	1,941	2,111	2,081	1,898	2,287	1,517	1,513	1,548	1,763	1,956	1,458	1,994
	5 PM - 6 PM	1,562	1,598	1,604	1,876	1,993	1,550	2,221	1,770	1,615	1,868	1,973	1,993	1,698	2,241	1,427	1,416	1,505	1,689	1,906	1,380	1,889
	6 PM - 7 PM	1,446	1,453	1,487	1,635	1,796	1,381	1,910	1,486	1,481	1,566	1,681	1,820	1,465	2,015	1,288	1,245	1,321	1,515	1,711	1,208	1,778
	7 PM - 8 PM	1,199	1,180	1,259	1,420	1,521	1,200	1,663	1,158	1,224	1,291	1,434	1,559	1,259	1,788	1,024	1,054	1,052	1,304	1,449	1,101	1,537
	8 PM - 9 PM	1,017	1,004	1,088	1,210	1,282	995	1,545	980	1,020	1,074	1,202	1,279	1,099	1,493	905	864	918	1,102	1,168	907	1,241
	9 PM - 10 PM	811	823	880	1,013	1,078	850	1,181	864	845	905	1,054	1,065	896	1,151	746	731	771	932	958	830	979
	10 PM - 11 PM	670	672	729	825	844	646	873	736	675	726	871	849	735	934	600	601	666	793	725	699	724
	11 PM - Midnight	564	580	586	651	657	524	660	606	565	589	690	701	545	658	511	470	550	647	660	573	520

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

110 Sandusky - Bellevue

TO

118 Sandusky - Norwalk

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	191	213	211	228	238	226	159	151	195	197	220	211	217	172	151	198	193	193	207	191	120
	1 AM - 2 AM	133	178	162	169	195	169	122	124	176	168	162	184	160	154	102	160	165	154	181	155	95
	2 AM - 3 AM	104	143	132	145	171	135	97	93	136	135	144	157	128	84	90	136	135	141	141	127	72
	3 AM - 4 AM	94	127	130	142	152	119	88	84	123	131	136	142	120	70	89	125	132	136	151	111	66
	4 AM - 5 AM	105	139	149	146	158	118	83	99	140	145	150	166	123	73	102	151	148	151	156	113	67
	5 AM - 6 AM	142	181	189	192	202	127	84	141	180	186	205	197	138	81	124	180	190	185	197	119	69
	6 AM - 7 AM	225	265	271	280	275	163	103	223	274	274	271	289	178	114	196	260	274	278	276	149	95
	7 AM - 8 AM	299	349	368	363	347	218	142	293	348	348	371	377	241	162	293	336	352	367	363	201	132
	8 AM - 9 AM	357	412	445	453	427	312	227	369	421	421	456	436	303	259	345	395	424	411	394	268	210
	9 AM - 10 AM	431	472	481	502	518	443	363	434	459	462	492	466	427	427	388	461	469	469	453	371	327
	10 AM - 11 AM	512	513	532	578	587	582	546	471	489	518	540	535	591	573	429	503	529	506	515	490	487
	11 AM - 12 PM	601	583	602	668	696	714	742	542	552	582	611	645	727	739	493	564	614	562	585	610	668
	12 PM - 1 PM	671	634	647	741	766	750	858	602	602	597	667	714	762	822	564	600	644	612	661	663	755
	1 PM - 2 PM	680	641	688	780	791	728	939	625	615	617	701	760	763	847	598	623	673	633	694	687	819
	2 PM - 3 PM	731	668	714	833	872	716	978	664	628	656	757	839	749	899	634	657	697	673	746	704	849
	3 PM - 4 PM	798	706	726	867	917	699	985	703	643	668	768	873	722	946	644	724	720	725	806	698	858
	4 PM - 5 PM	776	725	753	860	950	656	952	706	687	695	782	889	695	896	650	711	725	733	811	644	819
	5 PM - 6 PM	699	671	755	838	937	609	919	637	638	688	761	870	660	861	598	661	677	695	751	603	737
	6 PM - 7 PM	620	611	652	740	839	567	858	569	545	584	670	763	567	741	509	575	571	616	711	530	669
	7 PM - 8 PM	519	492	542	621	679	489	706	490	442	497	568	619	474	619	448	489	497	522	583	438	562
	8 PM - 9 PM	429	408	467	515	595	407	577	415	376	395	486	554	402	526	380	420	430	431	487	341	456
	9 PM - 10 PM	389	344	389	445	468	342	466	346	302	343	398	438	353	409	313	345	403	360	383	299	358
	10 PM - 11 PM	310	301	325	371	362	294	343	293	264	317	314	366	303	280	268	278	308	279	308	229	270
	11 PM - Midnight	262	250	269	298	306	209	243	237	215	265	257	273	242	200	223	226	258	247	249	176	187

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	381	427	422	456	477	452	318	302	390	394	441	421	435	343	303	396	387	387	413	382	240
	1 AM - 2 AM	267	356	324	339	389	338	244	247	352	336	324	368	319	308	204	320	330	308	362	310	190
	2 AM - 3 AM	209	286	265	290	341	270	194	187	272	270	288	313	255	169	180	272	271	281	282	255	143
	3 AM - 4 AM	187	255	260	283	305	237	176	168	246	261	271	284	239	140	178	251	263	271	301	222	132
	4 AM - 5 AM	209	279	298	291	315	236	166	199	280	290	299	332	247	146	203	303	296	301	312	225	134
	5 AM - 6 AM	285	362	377	384	404	253	168	282	360	372	409	394	276	161	248	360	381	370	393	239	139
	6 AM - 7 AM	450	529	541	561	549	325	206	446	548	548	542	578	356	227	393	520	548	555	552	299	191
	7 AM - 8 AM	597	699	736	726	694	435	284	586	696	697	741	755	482	324	586	673	705	735	725	402	264
	8 AM - 9 AM	714	824	889	906	854	624	455	737	842	842	912	872	606	517	690	791	848	822	788	536	421
	9 AM - 10 AM	861	945	962	1,004	1,035	886	727	869	918	925	984	932	853	854	775	921	938	937	905	742	654
	10 AM - 11 AM	1,023	1,026	1,065	1,157	1,174	1,163	1,091	942	978	1,035	1,080	1,071	1,182	1,145	857	1,006	1,057	1,011	1,030	979	974
	11 AM - 12 PM	1,202	1,165	1,203	1,336	1,392	1,428	1,484	1,085	1,104	1,164	1,223	1,289	1,454	1,478	986	1,128	1,228	1,125	1,169	1,220	1,336
	12 PM - 1 PM	1,341	1,269	1,295	1,482	1,531	1,500	1,717	1,205	1,204	1,194	1,333	1,429	1,525	1,644	1,128	1,199	1,288	1,225	1,321	1,326	1,510
	1 PM - 2 PM	1,361	1,282	1,376	1,561	1,582	1,456	1,878	1,249	1,230	1,234	1,403	1,520	1,526	1,693	1,195	1,246	1,345	1,266	1,389	1,373	1,638
	2 PM - 3 PM	1,462	1,336	1,429	1,667	1,744	1,432	1,956	1,327	1,256	1,312	1,514	1,678	1,497	1,797	1,267	1,314	1,394	1,346	1,492	1,408	1,697
	3 PM - 4 PM	1,596	1,413	1,452	1,733	1,834	1,399	1,969	1,406	1,285	1,337	1,536	1,745	1,444	1,893	1,289	1,449	1,439	1,450	1,611	1,395	1,715
	4 PM - 5 PM	1,552	1,449	1,506	1,721	1,900	1,311	1,904	1,412	1,374	1,389	1,563	1,778	1,389	1,791	1,299	1,421	1,450	1,465	1,622	1,288	1,638
	5 PM - 6 PM	1,397	1,341	1,510	1,677	1,875	1,218	1,838	1,274	1,277	1,376	1,522	1,740	1,329	1,722	1,196	1,321	1,354	1,390	1,502	1,206	1,475
	6 PM - 7 PM	1,239	1,222	1,303	1,481	1,678	1,133	1,716	1,138	1,089	1,168	1,340	1,525	1,134	1,481	1,019	1,149	1,141	1,232	1,422	1,059	1,337
	7 PM - 8 PM	1,039	985	1,084	1,242	1,357	977	1,411	979	883	994	1,136	1,237	947	1,239	895	977	995	1,044	1,166	876	1,124
	8 PM - 9 PM	857	816	934	1,029	1,190	813	1,154	830	751	790	971	1,107	803	1,051	760	839	859	862	974	683	913
	9 PM - 10 PM	778	688	779	889	935	684	932	691	604	685	796	877	706	818	626	690	805	720	766	599	715
	10 PM - 11 PM	620	603	649	742	724	587	687	587	528	634	628	732	606	560	536	555	617	559	616	457	540
	11 PM - Midnight	524	501	539	595	611	419	485	474	431	531	514	546	484	401	447	452	516	493	498	351	373

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

118 Sandusky - Norwalk

TO

110 Sandusky - Bellevue

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	103	182	196	196	197	164	91	123	207	213	201	162	170	113	147	224	214	218	204	183	120
	1 AM - 2 AM	84	135	150	176	156	126	71	95	172	166	152	116	133	77	112	185	171	173	175	139	86
	2 AM - 3 AM	64	128	131	139	135	110	53	85	153	147	130	117	109	61	77	148	152	152	145	107	62
	3 AM - 4 AM	67	122	135	132	130	97	45	72	128	137	121	113	90	56	76	135	134	131	124	99	53
	4 AM - 5 AM	77	127	144	141	146	96	47	86	152	154	131	111	99	51	101	149	154	144	150	96	54
	5 AM - 6 AM	94	158	165	176	169	106	46	120	182	183	150	142	114	55	129	187	192	186	189	119	53
	6 AM - 7 AM	146	228	242	239	209	129	55	201	259	240	225	185	130	69	199	270	256	270	240	158	68
	7 AM - 8 AM	194	290	301	305	287	170	85	272	358	326	286	256	195	101	273	352	359	347	338	207	99
	8 AM - 9 AM	265	398	385	398	364	258	125	356	458	401	361	318	286	153	346	456	436	441	431	309	162
	9 AM - 10 AM	309	436	425	440	410	344	187	390	506	450	396	388	369	222	403	492	488	507	495	417	243
	10 AM - 11 AM	345	476	468	470	469	445	285	456	530	476	449	471	470	342	455	532	528	546	561	511	370
	11 AM - 12 PM	395	505	484	502	523	536	374	493	539	486	469	506	546	460	479	558	554	593	651	606	508
	12 PM - 1 PM	405	535	478	515	562	548	468	499	559	506	479	571	570	502	522	582	569	634	694	651	643
	1 PM - 2 PM	437	548	493	532	604	545	525	529	551	505	468	609	557	579	547	595	589	646	724	638	705
	2 PM - 3 PM	469	565	516	572	603	553	603	547	563	513	502	612	537	615	574	605	603	655	747	615	724
	3 PM - 4 PM	482	586	529	592	637	542	606	567	499	524	519	612	521	631	574	614	622	677	788	594	786
	4 PM - 5 PM	493	577	534	575	632	507	599	570	536	526	495	645	501	632	584	620	625	700	757	571	807
	5 PM - 6 PM	476	540	536	545	618	475	571	551	552	496	465	655	463	630	568	587	594	667	779	527	767
	6 PM - 7 PM	418	482	464	495	592	401	526	484	489	431	407	580	405	549	537	550	551	615	706	453	710
	7 PM - 8 PM	388	420	397	448	478	324	441	441	445	389	347	488	345	464	456	468	485	528	589	385	608
	8 PM - 9 PM	328	359	342	359	373	259	367	385	387	321	288	389	280	385	404	400	409	440	479	310	459
	9 PM - 10 PM	273	307	298	296	298	210	273	323	320	293	248	292	233	288	333	331	333	359	359	262	358
	10 PM - 11 PM	253	264	277	258	237	163	180	283	279	250	220	243	182	217	313	302	311	302	299	203	265
	11 PM - Midnight	218	236	241	228	201	125	130	256	231	233	167	197	134	165	262	256	270	263	237	144	194

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	206	365	391	392	393	327	182	246	414	426	401	324	340	227	294	448	428	436	407	367	239
	1 AM - 2 AM	168	269	301	352	313	252	142	190	344	331	304	232	267	153	224	371	341	346	351	277	172
	2 AM - 3 AM	129	257	263	278	271	219	106	170	306	294	259	234	217	123	155	296	304	304	290	215	124
	3 AM - 4 AM	133	244	270	265	260	194	90	144	256	275	242	225	180	113	152	271	267	262	248	198	106
	4 AM - 5 AM	154	254	288	281	293	192	95	172	303	308	261	222	197	102	202	299	308	287	300	191	107
	5 AM - 6 AM	188	315	329	352	338	211	92	239	363	367	300	284	227	111	258	375	384	371	378	239	105
	6 AM - 7 AM	292	455	485	478	417	258	109	402	518	481	450	370	259	139	398	539	512	540	480	316	137
	7 AM - 8 AM	387	580	602	610	575	340	170	544	717	652	573	513	390	202	547	705	717	694	675	414	199
	8 AM - 9 AM	530	795	771	797	728	516	249	712	917	802	723	635	573	306	692	911	871	882	862	618	323
	9 AM - 10 AM	618	872	850	880	820	688	375	781	1,012	900	793	777	739	445	806	985	976	1,014	990	835	485
	10 AM - 11 AM	690	952	936	940	937	890	571	913	1,059	953	898	943	940	684	911	1,064	1,057	1,093	1,121	1,021	741
	11 AM - 12 PM	790	1,010	969	1,004	1,047	1,071	748	987	1,078	971	938	1,013	1,092	919	957	1,115	1,107	1,185	1,302	1,212	1,016
	12 PM - 1 PM	811	1,071	957	1,030	1,124	1,097	937	999	1,117	1,012	959	1,142	1,139	1,004	1,043	1,164	1,138	1,269	1,387	1,302	1,285
	1 PM - 2 PM	874	1,097	986	1,064	1,209	1,091	1,050	1,058	1,101	1,009	936	1,219	1,115	1,158	1,094	1,189	1,179	1,292	1,447	1,277	1,410
	2 PM - 3 PM	938	1,131	1,032	1,145	1,207	1,105	1,206	1,094	1,125	1,027	1,004	1,223	1,074	1,230	1,147	1,210	1,205	1,310	1,493	1,229	1,449
	3 PM - 4 PM	964	1,172	1,058	1,184	1,274	1,084	1,212	1,134	999	1,047	1,039	1,223	1,041	1,262	1,149	1,229	1,243	1,354	1,577	1,187	1,573
	4 PM - 5 PM	986	1,153	1,068	1,151	1,265	1,013	1,199	1,140	1,072	1,053	990	1,291	1,001	1,264	1,168	1,239	1,250	1,401	1,515	1,143	1,614
	5 PM - 6 PM	951	1,080	1,072	1,090	1,236	951	1,142	1,102	1,104	992	929	1,310	925	1,260	1,137	1,173	1,188	1,334	1,557	1,055	1,535
	6 PM - 7 PM	836	964	929	990	1,184	802	1,053	969	979	862	813	1,161	809	1,098	1,075	1,101	1,102	1,230	1,412	906	1,420
	7 PM - 8 PM	776	841	795	895	955	649	882	883	890	779	693	975	689	928	913	937	970	1,057	1,178	769	1,215
	8 PM - 9 PM	656	717	684	718	745	518	735	771	774	642	576	779	561	769	808	799	817	880	958	619	918
	9 PM - 10 PM	547	615	597	591	597	420	545	646	639	585	496	584	467	576	666	663	665	718	717	523	716
	10 PM - 11 PM	505	529	554	517	473	325	360	566	557	500	441	485	365	434	626	603	622	605	598	406	529
	11 PM - Midnight	435	471	481	457	403	250	259	511	462	466	335	394	269	329	525	511	539	526	475	289	388

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

118 Sandusky - Norwalk

TO

110 Sandusky - Bellevue

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	138	244	234	244	237	210	131	155	214	228	230	235	232	135	167	244	253	249	272	261	160
	1 AM - 2 AM	94	184	183	185	188	160	89	111	172	186	182	196	169	96	120	198	200	204	205	184	117
	2 AM - 3 AM	71	163	153	163	167	129	81	89	141	165	157	162	128	75	94	162	164	179	184	159	89
	3 AM - 4 AM	108	145	135	141	143	115	59	87	129	147	147	161	110	62	88	148	154	167	165	127	69
	4 AM - 5 AM	99	159	157	153	161	119	58	98	138	170	161	159	119	59	106	158	177	176	171	136	67
	5 AM - 6 AM	134	191	197	193	197	143	63	150	180	207	205	204	131	62	153	207	228	224	217	146	64
	6 AM - 7 AM	217	283	276	281	277	170	80	230	264	297	302	293	183	85	234	294	319	314	295	187	95
	7 AM - 8 AM	288	366	369	351	353	244	115	310	348	387	386	368	265	136	312	400	398	407	384	275	146
	8 AM - 9 AM	357	466	462	465	438	365	170	389	436	496	488	466	373	207	398	513	510	523	495	386	230
	9 AM - 10 AM	418	529	518	519	541	485	281	456	500	542	563	575	504	324	487	570	589	606	602	521	374
	10 AM - 11 AM	482	563	560	602	630	611	419	532	572	623	631	691	631	481	589	634	639	672	721	673	560
	11 AM - 12 PM	518	606	583	651	695	699	580	590	631	639	692	787	714	610	660	694	708	792	849	825	731
	12 PM - 1 PM	548	609	599	668	739	743	675	620	671	671	729	844	724	754	697	733	752	828	930	861	866
	1 PM - 2 PM	561	610	616	699	760	703	769	655	714	674	757	900	719	787	742	723	759	854	951	845	939
	2 PM - 3 PM	597	649	653	733	807	706	832	681	740	718	792	895	701	846	739	758	764	883	992	830	969
	3 PM - 4 PM	618	638	648	745	828	715	857	677	752	725	818	902	685	879	751	735	784	901	1,014	781	989
	4 PM - 5 PM	602	662	678	762	848	698	893	699	777	758	809	902	636	844	768	740	799	875	965	755	991
	5 PM - 6 PM	583	650	657	757	849	621	852	666	717	718	740	843	576	823	747	726	759	860	954	683	930
	6 PM - 7 PM	539	588	600	697	749	550	760	596	646	632	682	814	532	732	652	648	670	729	849	622	848
	7 PM - 8 PM	486	501	513	586	620	482	649	516	554	532	595	689	477	648	558	552	572	652	746	542	712
	8 PM - 9 PM	411	424	413	470	512	387	511	438	458	431	483	570	372	570	471	467	483	578	611	465	585
	9 PM - 10 PM	337	354	355	389	415	311	401	353	379	352	403	421	318	440	386	384	383	479	491	378	471
	10 PM - 11 PM	284	303	291	329	327	261	304	326	320	308	339	348	250	301	325	338	333	378	396	308	356
	11 PM - Midnight	244	263	268	289	255	185	205	268	263	281	279	286	179	216	281	296	288	337	332	228	257

Close 2 Lanes	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	276	489	469	489	474	421	263	309	428	456	461	469	463	270	333	488	506	497	544	523	319
	1 AM - 2 AM	189	368	366	371	375	319	179	222	343	371	364	392	337	192	239	396	401	408	410	369	233
	2 AM - 3 AM	142	326	307	326	334	258	161	178	281	330	313	325	257	150	189	325	327	359	368	319	178
	3 AM - 4 AM	216	290	269	282	285	231	119	174	258	293	294	323	220	124	176	297	309	334	330	254	138
	4 AM - 5 AM	198	318	315	305	323	238	117	195	276	339	322	319	237	119	211	317	354	351	343	273	134
	5 AM - 6 AM	268	383	393	386	393	285	126	300	361	413	409	408	261	124	306	414	456	449	433	291	129
	6 AM - 7 AM	433	565	552	562	554	339	160	460	528	595	604	585	365	170	468	588	639	628	589	374	189
	7 AM - 8 AM	576	732	738	703	705	489	231	619	695	774	772	735	529	271	624	800	795	814	767	550	292
	8 AM - 9 AM	713	932	923	929	877	730	340	778	871	991	976	932	746	414	796	1,026	1,020	1,046	990	771	460
	9 AM - 10 AM	835	1,058	1,037	1,039	1,083	971	562	912	1,000	1,084	1,125	1,150	1,008	649	974	1,139	1,178	1,213	1,204	1,043	749
	10 AM - 11 AM	964	1,126	1,119	1,205	1,259	1,223	838	1,064	1,144	1,247	1,262	1,381	1,263	961	1,178	1,268	1,277	1,345	1,443	1,347	1,119
	11 AM - 12 PM	1,035	1,213	1,165	1,303	1,390	1,398	1,159	1,181	1,262	1,279	1,384	1,573	1,428	1,219	1,320	1,389	1,416	1,584	1,698	1,651	1,462
	12 PM - 1 PM	1,095	1,219	1,199	1,336	1,477	1,485	1,349	1,239	1,343	1,343	1,458	1,688	1,447	1,508	1,395	1,467	1,504	1,655	1,859	1,723	1,732
	1 PM - 2 PM	1,122	1,221	1,232	1,397	1,521	1,407	1,537	1,310	1,428	1,347	1,514	1,799	1,437	1,574	1,483	1,445	1,518	1,707	1,903	1,689	1,877
	2 PM - 3 PM	1,194	1,298	1,307	1,467	1,614	1,411	1,663	1,362	1,479	1,435	1,583	1,790	1,401	1,692	1,479	1,516	1,528	1,765	1,985	1,660	1,938
	3 PM - 4 PM	1,236	1,277	1,296	1,490	1,657	1,430	1,714	1,355	1,505	1,449	1,636	1,803	1,369	1,757	1,502	1,469	1,568	1,802	2,028	1,562	1,977
	4 PM - 5 PM	1,204	1,324	1,357	1,524	1,696	1,395	1,787	1,397	1,553	1,516	1,619	1,805	1,273	1,689	1,536	1,480	1,599	1,750	1,930	1,511	1,982
	5 PM - 6 PM	1,166	1,300	1,314	1,514	1,699	1,241	1,703	1,332	1,433	1,356	1,480	1,686	1,152	1,647	1,495	1,453	1,519	1,720	1,907	1,366	1,859
	6 PM - 7 PM	1,079	1,177	1,201	1,394	1,498	1,101	1,519	1,192	1,291	1,265	1,364	1,627	1,063	1,464	1,303	1,297	1,339	1,458	1,698	1,244	1,696
	7 PM - 8 PM	971	1,003	1,027	1,172	1,240	964	1,297	1,032	1,108	1,064	1,190	1,377	954	1,296	1,117	1,105	1,144	1,304	1,493	1,084	1,423
	8 PM - 9 PM	822	849	827	940	1,023	775	1,021	875	917	863	967	1,140	743	1,139	942	933	966	1,156	1,223	930	1,170
	9 PM - 10 PM	674	709	710	777	831	621	803	706	758	704	806	841	635	879	771	768	767	959	982	757	943
	10 PM - 11 PM	568	606	582	658	654	523	608	651	639	616	678	695	499	602	650	676	665	755	791	616	712
	11 PM - Midnight	488	527	537	577	509	370	409	536	527	561	559	572	357	433	561	591	576	673	664	455	513

NOTES:

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Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

118 Sandusky - Norwalk

TO

110 Sandusky - Bellevue

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	177	221	254	255	281	248	187	183	251	251	257	268	267	204	172	232	228	229	250	244	157
	1 AM - 2 AM	135	170	191	209	214	202	132	134	195	210	202	196	197	166	123	179	188	205	190	193	110
	2 AM - 3 AM	105	141	167	182	182	142	91	105	170	164	183	160	146	114	93	137	166	167	162	151	75
	3 AM - 4 AM	93	137	140	156	160	124	75	95	162	146	161	147	131	76	91	132	140	147	155	130	65
	4 AM - 5 AM	105	140	176	171	173	133	75	111	154	173	174	170	133	66	100	146	160	158	167	128	59
	5 AM - 6 AM	159	182	215	214	221	154	78	152	203	195	209	234	141	72	139	183	184	202	216	140	65
	6 AM - 7 AM	243	270	283	295	290	189	99	222	282	285	297	291	178	93	237	275	270	290	270	188	86
	7 AM - 8 AM	314	359	374	394	378	248	143	306	396	379	390	370	269	143	310	346	366	367	364	256	130
	8 AM - 9 AM	389	450	495	517	503	385	235	395	502	500	524	499	413	252	405	441	446	470	448	395	208
	9 AM - 10 AM	495	532	581	610	640	567	386	497	579	592	617	621	587	374	488	514	534	551	546	532	328
	10 AM - 11 AM	587	620	654	720	760	723	583	593	640	670	723	745	750	591	593	588	589	629	649	646	480
	11 AM - 12 PM	679	706	721	810	883	868	813	702	722	757	835	879	890	811	668	629	631	690	788	752	634
	12 PM - 1 PM	738	742	770	847	986	927	957	750	743	799	877	944	927	973	693	644	630	730	864	784	759
	1 PM - 2 PM	746	754	807	881	1,009	899	1,022	752	751	804	910	1,033	905	1,047	685	662	674	751	897	760	793
	2 PM - 3 PM	759	793	777	904	1,072	910	1,068	792	785	803	908	1,059	841	1,074	697	677	699	785	931	746	823
	3 PM - 4 PM	784	790	822	933	1,058	896	1,105	794	775	813	936	1,040	832	1,044	724	679	692	779	924	745	870
	4 PM - 5 PM	802	801	838	919	1,034	858	1,088	787	781	831	889	1,008	846	1,049	688	644	702	810	921	661	854
	5 PM - 6 PM	758	768	789	905	987	775	1,025	757	763	777	876	1,018	794	1,024	667	677	695	796	926	620	872
	6 PM - 7 PM	673	665	707	783	921	689	899	685	666	683	797	933	716	938	608	608	619	711	829	586	982
	7 PM - 8 PM	563	592	615	693	787	567	779	582	569	602	705	777	611	811	521	515	517	586	748	479	808
	8 PM - 9 PM	515	503	505	568	622	498	637	480	482	505	587	583	484	641	398	431	422	528	558	395	655
	9 PM - 10 PM	421	408	416	481	519	406	476	388	390	422	469	477	395	487	366	359	366	435	439	338	524
	10 PM - 11 PM	352	363	348	386	412	325	355	336	352	363	372	408	327	374	316	312	308	373	363	262	359
	11 PM - Midnight	317	305	296	347	326	240	264	295	297	308	319	340	263	252	292	269	275	326	306	222	231

Close 2 Lanes	Month	July							August							September						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	355	441	509	509	561	495	373	366	502	502	515	535	535	408	344	465	457	458	499	488	313
	1 AM - 2 AM	269	340	382	417	429	403	264	267	390	420	405	392	393	332	247	359	376	409	381	386	219
	2 AM - 3 AM	209	282	334	364	364	285	182	211	340	327	366	320	291	228	186	273	332	334	325	302	149
	3 AM - 4 AM	186	274	280	311	320	247	150	190	324	292	322	293	262	153	182	265	279	295	310	260	129
	4 AM - 5 AM	209	280	353	342	346	265	150	222	308	346	348	340	267	133	199	291	319	315	334	255	118
	5 AM - 6 AM	318	364	429	429	443	307	156	304	406	391	419	468	282	144	277	366	368	403	432	280	130
	6 AM - 7 AM	485	540	567	589	581	377	197	443	564	569	595	582	356	187	473	551	540	579	540	375	171
	7 AM - 8 AM	628	719	748	788	755	495	286	611	792	757	780	740	537	286	619	692	731	733	727	511	259
	8 AM - 9 AM	778	900	990	1,033	1,006	770	470	791	1,004	1,000	1,049	998	826	504	809	882	892	940	897	789	416
	9 AM - 10 AM	990	1,063	1,163	1,220	1,281	1,133	772	993	1,158	1,184	1,235	1,241	1,173	748	976	1,028	1,067	1,103	1,092	1,063	656
	10 AM - 11 AM	1,174	1,241	1,308	1,441	1,520	1,445	1,166	1,185	1,280	1,341	1,447	1,491	1,499	1,181	1,185	1,177	1,179	1,257	1,298	1,292	960
	11 AM - 12 PM	1,358	1,413	1,443	1,620	1,766	1,736	1,627	1,405	1,443	1,513	1,670	1,758	1,779	1,621	1,336	1,258	1,262	1,380	1,577	1,504	1,267
	12 PM - 1 PM	1,476	1,484	1,540	1,693	1,973	1,855	1,913	1,499	1,485	1,597	1,755	1,887	1,853	1,945	1,386	1,288	1,261	1,460	1,727	1,568	1,518
	1 PM - 2 PM	1,492	1,508	1,615	1,762	2,019	1,798	2,045	1,505	1,502	1,607	1,820	2,067	1,810	2,093	1,370	1,323	1,348	1,501	1,794	1,520	1,586
	2 PM - 3 PM	1,517	1,586	1,555	1,809	2,144	1,820	2,137	1,585	1,571	1,606	1,817	2,117	1,682	2,147	1,394	1,353	1,397	1,570	1,862	1,491	1,645
	3 PM - 4 PM	1,567	1,579	1,645	1,865	2,116	1,792	2,210	1,587	1,550	1,625	1,872	2,079	1,665	2,088	1,448	1,359	1,383	1,557	1,848	1,489	1,739
	4 PM - 5 PM	1,603	1,603	1,675	1,838	2,068	1,716	2,175	1,575	1,561	1,663	1,778	2,016	1,693	2,099	1,375	1,289	1,404	1,621	1,841	1,321	1,708
	5 PM - 6 PM	1,516	1,535	1,577	1,810	1,974	1,550	2,050	1,515	1,526	1,554	1,753	2,036	1,589	2,048	1,334	1,354	1,389	1,592	1,851	1,241	1,744
	6 PM - 7 PM	1,346	1,331	1,414	1,565	1,842	1,378	1,798	1,370	1,332	1,365	1,594	1,866	1,432	1,876	1,216	1,217	1,239	1,422	1,658	1,172	1,964
	7 PM - 8 PM	1,126	1,185	1,229	1,386	1,574	1,134	1,558	1,165	1,138	1,204	1,411	1,555	1,221	1,622	1,041	1,031	1,034	1,173	1,495	959	1,617
	8 PM - 9 PM	1,031	1,007	1,010	1,137	1,243	997	1,274	960	963	1,011	1,174	1,165	968	1,281	796	862	843	1,055	1,115	791	1,309
	9 PM - 10 PM	842	815	833	962	1,039	812	952	776	779	844	938	954	789	974	733	719	733	870	878	677	1,049
	10 PM - 11 PM	704	726	696	771	824	651	710	671	705	726	745	817	653	747	633	623	616	746	725	524	717
	11 PM - Midnight	633	609	593	695	652	481	529	591	594	616	639	681	525	504	584	538	549	651	613	444	462

NOTES:

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Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

118 Sandusky - Norwalk

TO

110 Sandusky - Bellevue

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

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Revision Date: 9/1/2022

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	150	234	224	227	260	242	144	147	219	211	200	215	212	132	131	222	224	218	218	196	106
	1 AM - 2 AM	112	199	184	192	213	172	106	103	178	182	184	185	162	125	95	183	196	179	174	156	87
	2 AM - 3 AM	91	155	174	164	171	136	84	82	155	153	153	160	135	67	82	161	153	147	154	124	64
	3 AM - 4 AM	84	152	147	147	155	119	65	85	147	139	148	136	119	55	77	141	143	149	148	128	58
	4 AM - 5 AM	105	157	161	159	163	119	58	100	162	163	163	160	120	52	96	154	160	155	162	103	56
	5 AM - 6 AM	133	192	190	194	196	136	61	141	188	200	206	191	127	61	131	194	197	193	189	127	64
	6 AM - 7 AM	215	279	280	288	265	166	76	225	278	275	287	282	173	81	202	279	293	264	277	159	80
	7 AM - 8 AM	297	359	349	361	354	238	109	301	368	360	364	347	241	118	279	349	340	340	336	239	108
	8 AM - 9 AM	375	472	439	455	444	368	189	388	456	435	440	433	359	194	329	446	429	429	427	334	176
	9 AM - 10 AM	454	518	514	538	551	521	301	442	511	495	513	509	478	288	389	520	509	514	496	452	266
	10 AM - 11 AM	538	585	569	588	681	637	438	539	544	544	593	610	633	424	453	559	554	546	570	541	416
	11 AM - 12 PM	608	637	604	655	782	718	629	570	585	569	613	718	693	571	502	597	596	581	653	657	570
	12 PM - 1 PM	644	645	648	728	843	726	734	622	605	578	658	769	718	684	528	623	630	581	691	649	692
	1 PM - 2 PM	668	655	646	742	907	719	830	607	632	612	682	769	684	696	538	630	667	648	721	675	744
	2 PM - 3 PM	693	675	663	748	941	707	839	623	662	599	716	825	664	703	554	649	661	666	757	651	769
	3 PM - 4 PM	698	687	707	780	904	677	912	636	656	642	738	836	678	810	580	667	700	676	778	660	763
	4 PM - 5 PM	684	675	697	791	925	643	889	660	626	642	756	851	662	762	586	693	707	688	762	618	741
	5 PM - 6 PM	676	657	671	772	891	602	870	633	620	620	695	836	613	764	542	644	665	652	754	543	707
	6 PM - 7 PM	601	605	595	685	882	531	804	549	546	552	612	766	524	791	492	567	587	555	646	459	631
	7 PM - 8 PM	508	509	504	599	698	455	673	475	462	466	541	642	417	691	416	469	495	484	587	403	565
	8 PM - 9 PM	439	426	426	522	533	373	565	384	385	383	461	525	362	503	367	403	423	396	479	305	448
	9 PM - 10 PM	357	360	362	423	425	319	472	335	315	332	390	399	289	394	331	351	349	359	378	252	340
	10 PM - 11 PM	313	289	300	355	347	250	318	287	286	288	300	339	234	289	327	308	313	309	307	208	233
	11 PM - Midnight	278	267	270	301	295	193	214	247	252	259	279	287	170	179	267	265	266	260	250	154	177

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	300	469	447	455	519	485	287	293	439	421	400	429	423	263	262	444	449	435	436	393	212
	1 AM - 2 AM	224	399	369	385	427	343	211	205	357	363	369	371	324	249	190	366	392	358	349	312	175
	2 AM - 3 AM	182	310	347	328	343	273	169	163	310	305	305	319	270	133	165	321	305	295	309	247	128
	3 AM - 4 AM	167	304	294	294	309	237	131	170	294	278	295	272	237	110	153	282	286	297	297	256	116
	4 AM - 5 AM	210	315	322	319	325	239	117	199	325	327	327	319	240	103	192	308	320	311	325	207	113
	5 AM - 6 AM	266	383	379	387	392	271	122	282	377	399	412	383	254	121	262	388	395	385	378	254	127
	6 AM - 7 AM	430	557	560	576	529	331	152	450	556	550	574	564	345	162	405	557	586	528	553	318	160
	7 AM - 8 AM	593	718	699	722	708	476	218	603	736	719	727	693	483	237	557	698	680	679	673	479	217
	8 AM - 9 AM	750	944	877	909	888	735	377	777	912	870	880	866	718	387	659	892	859	857	854	667	352
	9 AM - 10 AM	909	1,037	1,028	1,075	1,102	1,042	602	884	1,022	989	1,026	1,017	955	576	777	1,040	1,017	1,029	992	904	531
	10 AM - 11 AM	1,075	1,170	1,138	1,176	1,363	1,275	876	1,078	1,089	1,088	1,186	1,220	1,266	848	906	1,118	1,109	1,091	1,140	1,082	832
	11 AM - 12 PM	1,217	1,273	1,207	1,309	1,564	1,435	1,257	1,140	1,170	1,138	1,227	1,436	1,386	1,143	1,005	1,195	1,192	1,162	1,306	1,313	1,140
	12 PM - 1 PM	1,288	1,290	1,297	1,455	1,686	1,452	1,468	1,244	1,210	1,157	1,315	1,538	1,436	1,368	1,055	1,245	1,261	1,161	1,381	1,297	1,383
	1 PM - 2 PM	1,336	1,310	1,292	1,484	1,815	1,438	1,660	1,213	1,263	1,223	1,363	1,539	1,368	1,393	1,077	1,260	1,333	1,296	1,443	1,349	1,489
	2 PM - 3 PM	1,386	1,351	1,326	1,495	1,882	1,415	1,679	1,246	1,324	1,197	1,432	1,649	1,328	1,406	1,107	1,298	1,322	1,331	1,513	1,302	1,538
	3 PM - 4 PM	1,395	1,374	1,414	1,560	1,807	1,354	1,824	1,271	1,313	1,285	1,476	1,671	1,355	1,620	1,161	1,333	1,400	1,351	1,557	1,319	1,526
	4 PM - 5 PM	1,367	1,350	1,393	1,581	1,850	1,285	1,778	1,319	1,253	1,283	1,513	1,703	1,325	1,524	1,172	1,385	1,414	1,376	1,524	1,236	1,482
	5 PM - 6 PM	1,352	1,314	1,341	1,544	1,781	1,203	1,740	1,266	1,240	1,240	1,390	1,672	1,227	1,527	1,084	1,288	1,329	1,303	1,508	1,087	1,414
	6 PM - 7 PM	1,203	1,209	1,189	1,370	1,763	1,061	1,608	1,099	1,092	1,104	1,224	1,531	1,048	1,582	984	1,135	1,173	1,109	1,291	918	1,263
	7 PM - 8 PM	1,017	1,018	1,008	1,198	1,396	910	1,346	950	924	932	1,082	1,285	834	1,382	833	937	991	968	1,175	806	1,131
	8 PM - 9 PM	878	851	851	1,045	1,065	746	1,130	768	770	765	923	1,050	723	1,005	734	806	845	792	958	610	896
	9 PM - 10 PM	715	720	725	847	849	638	944	671	631	664	780	798	578	788	662	701	698	718	755	504	680
	10 PM - 11 PM	626	578	600	709	694	499	636	574	572	576	600	678	468	578	654	615	627	618	615	416	467
	11 PM - Midnight	555	534	540	603	590	386	427	494	505	517	557	575	341	358	534	529	532	519	499	308	354

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

118 Sandusky - Norwalk

TO

135 Vermilion

Route	I-80/I-90
Direction	EB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	106	154	164	164	172	149	111	131	178	195	170	135	168	117	160	187	191	193	197	198	142
	1 AM - 2 AM	85	125	140	131	147	120	83	97	145	158	139	118	135	87	118	150	154	154	158	151	124
	2 AM - 3 AM	72	101	111	113	115	93	70	82	124	122	114	104	102	67	93	123	127	145	147	113	74
	3 AM - 4 AM	65	95	109	116	115	97	54	73	104	121	115	105	92	59	93	116	123	136	131	108	68
	4 AM - 5 AM	75	109	116	129	125	83	54	85	117	130	129	109	95	60	90	133	137	146	142	106	61
	5 AM - 6 AM	103	151	159	165	163	104	60	125	165	168	152	134	110	64	127	182	174	183	192	127	69
	6 AM - 7 AM	170	232	236	242	222	141	73	183	259	253	223	174	141	88	205	257	257	264	271	161	87
	7 AM - 8 AM	212	291	315	303	303	169	102	260	338	348	286	261	192	123	290	346	351	353	336	206	131
	8 AM - 9 AM	268	350	360	348	351	212	141	333	407	371	340	308	254	187	349	414	411	434	401	276	193
	9 AM - 10 AM	314	395	401	395	382	292	215	381	428	408	366	362	345	259	382	425	462	479	458	388	298
	10 AM - 11 AM	355	429	411	429	419	390	316	423	453	428	407	411	445	369	458	486	481	516	518	502	426
	11 AM - 12 PM	402	473	461	475	457	495	408	489	489	467	457	470	525	487	504	516	547	581	598	619	574
	12 PM - 1 PM	457	496	500	519	501	542	482	530	512	500	484	525	557	571	564	549	573	608	659	653	678
	1 PM - 2 PM	472	520	519	548	548	549	557	563	539	496	508	574	550	628	574	593	597	647	709	661	753
	2 PM - 3 PM	527	529	523	572	591	550	603	570	574	542	536	647	558	670	608	602	608	696	780	668	832
	3 PM - 4 PM	558	557	555	605	626	548	646	654	618	568	558	685	567	687	652	637	651	733	841	679	901
	4 PM - 5 PM	550	545	588	615	648	536	664	634	625	581	556	693	536	712	654	642	694	742	859	648	879
	5 PM - 6 PM	510	548	580	584	651	489	579	596	607	539	519	679	505	678	625	649	689	720	851	596	832
	6 PM - 7 PM	453	490	495	490	592	429	478	517	519	475	430	612	437	576	545	538	591	656	749	514	782
	7 PM - 8 PM	396	392	404	413	501	367	411	434	445	398	358	505	384	479	449	460	471	534	637	420	645
	8 PM - 9 PM	322	326	353	364	430	293	335	377	384	332	297	430	310	397	394	394	405	455	502	350	502
	9 PM - 10 PM	270	271	285	314	325	246	272	315	309	288	250	336	255	303	335	328	343	381	416	292	402
	10 PM - 11 PM	226	218	233	254	252	193	206	258	268	221	197	260	207	233	270	260	282	307	326	232	300
	11 PM - Midnight	187	195	198	216	200	147	145	218	217	189	172	195	172	176	234	225	228	245	261	156	221

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	212	308	329	328	344	299	222	261	356	390	340	271	335	235	321	375	382	387	394	395	283
	1 AM - 2 AM	170	250	279	262	294	240	167	194	290	316	279	237	269	174	235	299	307	308	315	302	248
	2 AM - 3 AM	144	203	222	226	230	186	141	163	248	244	228	208	205	134	186	247	255	290	294	226	148
	3 AM - 4 AM	130	191	218	232	231	193	108	147	208	243	229	210	183	119	185	232	246	272	263	215	136
	4 AM - 5 AM	149	218	232	257	251	166	109	170	233	260	257	218	190	119	180	266	274	292	284	213	123
	5 AM - 6 AM	206	301	318	330	326	209	119	250	329	335	303	269	220	128	254	364	348	366	384	254	138
	6 AM - 7 AM	340	464	472	484	445	282	146	367	519	507	446	347	282	176	410	514	513	528	541	322	174
	7 AM - 8 AM	424	582	629	606	607	337	203	520	675	696	572	522	384	246	579	693	701	706	672	413	262
	8 AM - 9 AM	536	701	721	696	703	424	281	666	813	741	680	617	508	373	697	829	822	868	802	553	386
	9 AM - 10 AM	628	791	802	790	763	584	431	762	856	816	731	723	690	518	765	849	924	957	916	777	596
	10 AM - 11 AM	711	858	822	858	838	780	631	846	907	855	814	822	890	739	915	972	962	1,032	1,036	1,005	852
	11 AM - 12 PM	805	947	923	949	914	991	816	979	978	934	913	940	1,050	973	1,009	1,032	1,093	1,162	1,196	1,239	1,148
	12 PM - 1 PM	914	992	1,001	1,038	1,003	1,085	964	1,059	1,025	1,001	968	1,051	1,114	1,142	1,127	1,099	1,146	1,217	1,317	1,305	1,356
	1 PM - 2 PM	944	1,040	1,039	1,095	1,097	1,099	1,114	1,127	1,079	991	1,015	1,148	1,101	1,257	1,148	1,186	1,194	1,294	1,418	1,322	1,506
	2 PM - 3 PM	1,054	1,058	1,046	1,144	1,182	1,100	1,206	1,141	1,148	1,084	1,071	1,294	1,116	1,340	1,217	1,204	1,217	1,392	1,561	1,337	1,665
	3 PM - 4 PM	1,115	1,114	1,111	1,210	1,252	1,095	1,291	1,308	1,236	1,135	1,117	1,370	1,134	1,374	1,305	1,274	1,303	1,465	1,682	1,358	1,801
	4 PM - 5 PM	1,100	1,089	1,175	1,231	1,295	1,073	1,328	1,267	1,251	1,162	1,111	1,385	1,073	1,423	1,308	1,285	1,388	1,485	1,718	1,297	1,759
	5 PM - 6 PM	1,021	1,096	1,160	1,168	1,302	979	1,158	1,192	1,213	1,079	1,039	1,358	1,010	1,355	1,250	1,297	1,379	1,440	1,703	1,193	1,665
	6 PM - 7 PM	905	980	989	980	1,184	857	957	1,035	1,037	950	860	1,225	874	1,151	1,089	1,077	1,183	1,311	1,499	1,027	1,563
	7 PM - 8 PM	791	784	808	826	1,003	733	821	869	890	796	717	1,010	767	958	897	920	942	1,067	1,274	841	1,290
	8 PM - 9 PM	643	653	706	728	860	586	670	754	767	665	594	860	620	794	788	788	810	911	1,003	700	1,005
	9 PM - 10 PM	540	541	570	629	650	491	544	630	618	576	501	672	510	606	670	656	687	762	833	584	804
	10 PM - 11 PM	453	436	466	508	504	387	411	515	536	443	393	521	414	467	539	520	563	613	652	464	599
	11 PM - Midnight	374	390	396	432	401	294	291	436	434	377	344	389	344	352	468	449	457	490	523	312	442

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

118 Sandusky - Norwalk

TO

135 Vermilion

Route	I-80/I-90
Direction	EB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	153	196	205	211	233	208	151	172	191	207	218	235	228	151	221	225	233	234	267	252	183
	1 AM - 2 AM	120	153	159	161	175	167	107	124	171	165	174	181	168	111	149	178	182	207	217	175	129
	2 AM - 3 AM	99	126	132	141	148	125	83	103	131	139	145	159	127	88	120	150	155	178	182	140	102
	3 AM - 4 AM	86	120	120	127	134	121	78	90	113	125	146	149	124	73	99	131	144	162	166	133	83
	4 AM - 5 AM	95	124	140	136	152	112	73	103	127	138	152	159	115	71	111	143	143	164	154	129	83
	5 AM - 6 AM	134	185	186	186	190	131	71	142	169	199	180	200	140	80	146	191	197	217	211	143	90
	6 AM - 7 AM	216	264	275	281	281	163	99	235	252	287	274	297	176	101	249	292	295	310	305	183	117
	7 AM - 8 AM	295	350	362	357	355	222	146	302	336	385	374	367	234	146	335	390	392	407	396	245	167
	8 AM - 9 AM	354	421	446	451	419	295	218	373	386	445	459	447	327	227	409	474	475	477	476	329	257
	9 AM - 10 AM	408	465	472	494	486	405	320	440	458	508	540	513	446	364	500	527	542	559	580	453	382
	10 AM - 11 AM	472	502	530	562	580	523	445	507	529	558	583	591	540	508	573	576	590	647	639	587	537
	11 AM - 12 PM	511	565	577	626	660	638	616	608	597	627	692	709	662	689	669	653	661	750	777	740	725
	12 PM - 1 PM	574	583	610	678	732	666	703	634	655	660	723	780	743	801	727	704	705	818	829	778	858
	1 PM - 2 PM	565	603	638	721	775	678	795	706	696	679	756	847	726	855	786	721	753	839	899	812	976
	2 PM - 3 PM	633	662	666	771	833	710	862	721	755	726	802	884	729	933	844	759	792	883	940	849	1,040
	3 PM - 4 PM	660	686	710	796	896	684	880	762	777	782	850	924	724	953	861	797	813	931	1,040	776	1,096
	4 PM - 5 PM	660	685	714	803	877	672	887	746	759	754	852	937	698	976	870	815	823	953	1,016	741	1,068
	5 PM - 6 PM	631	654	711	790	848	642	877	685	748	720	796	853	634	937	786	741	801	898	946	700	1,028
	6 PM - 7 PM	544	563	635	696	740	561	801	624	666	638	727	776	559	870	708	684	672	805	845	608	932
	7 PM - 8 PM	460	490	548	603	624	491	683	533	561	559	626	651	479	760	626	545	563	681	695	546	817
	8 PM - 9 PM	402	413	434	507	501	411	538	455	497	511	535	557	434	647	548	484	469	583	596	486	697
	9 PM - 10 PM	340	357	347	430	421	332	418	390	398	420	430	459	352	506	468	416	402	512	505	413	558
	10 PM - 11 PM	271	278	321	346	330	259	302	298	308	330	369	368	288	367	369	325	352	415	413	335	427
	11 PM - Midnight	229	231	277	278	254	206	213	239	244	269	285	307	214	246	287	271	279	329	329	257	309

Close 2 Lanes	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	306	391	409	423	466	417	303	344	383	413	436	470	456	303	441	451	466	467	534	504	365
	1 AM - 2 AM	239	305	319	322	349	333	214	248	342	331	348	361	337	222	298	357	364	414	434	350	258
	2 AM - 3 AM	198	251	264	283	295	250	166	206	262	278	289	319	254	177	241	300	310	355	365	280	204
	3 AM - 4 AM	171	239	240	253	267	243	156	181	225	250	293	298	248	145	198	261	287	324	332	266	165
	4 AM - 5 AM	190	248	280	273	305	225	147	206	253	276	304	318	229	142	221	286	286	327	307	259	167
	5 AM - 6 AM	268	370	372	372	380	263	143	283	338	398	360	400	279	160	291	382	394	433	422	286	179
	6 AM - 7 AM	431	528	550	562	562	325	199	471	503	574	549	595	353	202	498	584	590	620	610	366	235
	7 AM - 8 AM	591	701	724	713	709	444	293	603	671	770	747	734	469	292	670	779	784	813	791	490	334
	8 AM - 9 AM	709	842	891	901	837	590	436	745	772	889	918	895	654	453	817	949	950	954	952	659	513
	9 AM - 10 AM	815	930	945	989	971	810	641	881	916	1,015	1,081	1,027	891	727	1,001	1,054	1,083	1,117	1,161	905	764
	10 AM - 11 AM	944	1,003	1,060	1,124	1,160	1,047	891	1,015	1,057	1,116	1,166	1,183	1,081	1,017	1,147	1,152	1,180	1,294	1,278	1,175	1,073
	11 AM - 12 PM	1,022	1,131	1,155	1,252	1,319	1,275	1,232	1,215	1,193	1,253	1,384	1,418	1,325	1,377	1,339	1,305	1,322	1,500	1,553	1,479	1,450
	12 PM - 1 PM	1,149	1,167	1,219	1,356	1,463	1,332	1,407	1,268	1,310	1,319	1,446	1,560	1,486	1,602	1,455	1,408	1,409	1,636	1,659	1,557	1,717
	1 PM - 2 PM	1,129	1,207	1,275	1,441	1,549	1,356	1,590	1,412	1,391	1,357	1,513	1,693	1,451	1,710	1,573	1,442	1,507	1,678	1,798	1,624	1,953
	2 PM - 3 PM	1,266	1,324	1,333	1,542	1,665	1,420	1,725	1,443	1,510	1,452	1,605	1,767	1,459	1,867	1,688	1,518	1,583	1,766	1,880	1,698	2,079
	3 PM - 4 PM	1,320	1,372	1,420	1,593	1,793	1,367	1,759	1,523	1,554	1,563	1,699	1,849	1,448	1,907	1,722	1,594	1,625	1,861	2,079	1,553	2,192
	4 PM - 5 PM	1,321	1,370	1,427	1,607	1,755	1,345	1,774	1,493	1,517	1,508	1,705	1,874	1,396	1,952	1,740	1,630	1,647	1,906	2,032	1,481	2,136
	5 PM - 6 PM	1,261	1,309	1,421	1,579	1,696	1,285	1,754	1,370	1,495	1,441	1,593	1,706	1,268	1,874	1,571	1,482	1,602	1,797	1,892	1,399	2,056
	6 PM - 7 PM	1,087	1,127	1,271	1,392	1,479	1,121	1,603	1,248	1,331	1,275	1,454	1,551	1,118	1,740	1,416	1,369	1,344	1,610	1,691	1,215	1,863
	7 PM - 8 PM	919	979	1,095	1,207	1,247	982	1,365	1,066	1,122	1,119	1,253	1,302	958	1,519	1,252	1,089	1,125	1,362	1,391	1,092	1,635
	8 PM - 9 PM	805	826	869	1,014	1,002	823	1,076	911	994	1,023	1,070	1,113	867	1,293	1,095	969	938	1,166	1,192	971	1,394
	9 PM - 10 PM	680	715	695	861	843	665	836	780	796	840	859	917	703	1,012	935	832	804	1,024	1,009	826	1,116
	10 PM - 11 PM	543	555	642	692	661	519	604	596	617	661	737	736	576	734	738	651	703	830	825	669	854
	11 PM - Midnight	457	462	554	556	507	412	426	478	489	539	570	613	427	492	574	541	559	657	659	513	618

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

118 Sandusky - Norwalk

TO

135 Vermilion

Route	I-80/I-90
Direction	EB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	220	218	220	241	257	254	203	240	231	222	242	252	263	200	181	213	209	229	263	261	198
	1 AM - 2 AM	153	171	176	201	211	176	137	178	176	182	197	191	192	148	139	165	170	189	207	197	130
	2 AM - 3 AM	114	136	143	165	175	151	110	134	156	156	157	166	147	105	107	134	137	157	163	150	102
	3 AM - 4 AM	110	118	134	149	162	136	79	105	135	137	156	164	131	90	92	118	134	143	152	124	80
	4 AM - 5 AM	122	130	156	160	166	129	82	118	154	159	176	163	130	82	106	133	137	157	165	126	79
	5 AM - 6 AM	158	177	186	208	216	145	90	153	193	205	197	211	149	93	144	178	182	194	203	143	79
	6 AM - 7 AM	241	269	286	292	313	195	111	254	285	311	311	302	176	112	242	254	274	290	289	165	102
	7 AM - 8 AM	332	350	373	401	392	244	164	363	399	442	450	415	249	173	317	349	359	380	368	239	173
	8 AM - 9 AM	400	431	457	496	463	351	247	454	502	519	519	507	350	260	363	412	433	457	451	322	273
	9 AM - 10 AM	511	505	541	558	577	471	381	531	542	575	602	603	492	419	431	467	494	527	505	433	455
	10 AM - 11 AM	596	580	602	641	688	621	569	606	595	661	684	683	646	630	532	522	543	588	595	588	645
	11 AM - 12 PM	696	669	706	756	813	807	787	714	675	731	725	830	826	851	588	627	597	683	711	715	807
	12 PM - 1 PM	778	742	745	853	891	893	950	798	739	771	794	895	940	1,018	664	676	658	744	788	762	895
	1 PM - 2 PM	815	773	770	894	974	931	1,082	857	787	817	877	957	997	1,134	697	686	703	770	834	769	948
	2 PM - 3 PM	856	826	845	936	1,031	935	1,155	863	827	839	945	1,034	968	1,175	749	725	711	829	907	825	998
	3 PM - 4 PM	865	869	828	948	1,135	956	1,116	921	872	936	1,032	1,083	1,003	1,247	770	750	735	847	947	763	1,003
	4 PM - 5 PM	841	879	840	954	1,120	865	1,138	915	907	968	1,052	1,036	950	1,153	760	756	771	882	964	730	1,013
	5 PM - 6 PM	784	803	804	932	993	776	1,129	885	881	934	988	991	834	1,082	708	708	754	839	938	692	958
	6 PM - 7 PM	718	725	738	818	891	689	971	737	738	778	838	904	741	1,021	638	623	655	748	834	607	898
	7 PM - 8 PM	598	593	627	706	760	607	845	582	611	645	714	773	641	903	510	520	518	644	713	555	774
	8 PM - 9 PM	508	506	542	606	638	510	784	491	510	534	598	633	559	755	449	429	455	547	575	464	630
	9 PM - 10 PM	412	419	443	511	547	442	600	437	426	458	524	530	462	583	372	368	386	463	480	426	495
	10 PM - 11 PM	336	343	366	414	429	334	440	370	341	365	437	428	382	468	300	298	331	392	365	363	367
	11 PM - Midnight	282	290	292	328	333	271	332	301	283	289	339	351	284	328	253	232	274	320	323	303	258

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	440	435	440	482	514	508	406	480	462	444	483	505	525	400	362	427	419	458	526	522	396
	1 AM - 2 AM	305	342	352	402	422	351	274	355	352	364	395	382	383	295	278	331	340	379	413	394	259
	2 AM - 3 AM	228	272	285	331	350	302	221	267	311	312	314	332	294	211	214	268	273	315	325	299	205
	3 AM - 4 AM	220	236	268	297	324	271	159	209	270	274	312	328	262	179	184	237	269	285	304	247	161
	4 AM - 5 AM	243	260	312	321	333	258	163	235	307	317	352	325	261	164	213	267	275	314	330	253	157
	5 AM - 6 AM	316	354	372	416	432	291	181	307	385	411	394	422	299	186	287	356	364	387	406	286	158
	6 AM - 7 AM	481	538	572	585	626	390	223	508	570	621	622	605	351	225	484	509	548	581	578	330	204
	7 AM - 8 AM	664	700	747	802	785	488	328	727	798	885	900	830	498	346	635	699	718	759	736	478	345
	8 AM - 9 AM	800	861	914	992	925	702	495	908	1,004	1,037	1,039	1,015	700	520	726	823	867	914	901	643	547
	9 AM - 10 AM	1,021	1,010	1,082	1,117	1,155	943	763	1,061	1,084	1,149	1,204	1,205	984	839	861	933	987	1,055	1,009	866	910
	10 AM - 11 AM	1,192	1,161	1,204	1,282	1,376	1,242	1,137	1,211	1,191	1,322	1,367	1,366	1,292	1,259	1,064	1,044	1,086	1,177	1,191	1,175	1,291
	11 AM - 12 PM	1,392	1,339	1,412	1,512	1,626	1,614	1,575	1,429	1,349	1,461	1,450	1,660	1,652	1,703	1,175	1,254	1,194	1,366	1,421	1,429	1,613
	12 PM - 1 PM	1,555	1,485	1,489	1,707	1,782	1,787	1,900	1,596	1,479	1,542	1,587	1,791	1,880	2,035	1,329	1,352	1,316	1,488	1,576	1,525	1,790
	1 PM - 2 PM	1,631	1,546	1,541	1,789	1,948	1,862	2,165	1,714	1,573	1,633	1,754	1,914	1,994	2,267	1,394	1,372	1,406	1,540	1,668	1,538	1,895
	2 PM - 3 PM	1,712	1,652	1,690	1,872	2,061	1,870	2,310	1,726	1,655	1,679	1,891	2,067	1,937	2,351	1,497	1,450	1,423	1,657	1,814	1,649	1,997
	3 PM - 4 PM	1,731	1,738	1,656	1,896	2,271	1,913	2,231	1,841	1,744	1,872	2,065	2,166	2,005	2,495	1,539	1,501	1,471	1,693	1,894	1,527	2,006
	4 PM - 5 PM	1,682	1,759	1,679	1,908	2,241	1,731	2,276	1,831	1,813	1,936	2,105	2,073	1,899	2,305	1,520	1,513	1,542	1,763	1,927	1,459	2,027
	5 PM - 6 PM	1,568	1,605	1,608	1,863	1,986	1,553	2,259	1,769	1,762	1,867	1,975	1,981	1,667	2,164	1,415	1,415	1,508	1,678	1,875	1,383	1,916
	6 PM - 7 PM	1,436	1,450	1,476	1,635	1,783	1,378	1,942	1,475	1,476	1,556	1,675	1,808	1,482	2,042	1,276	1,246	1,310	1,496	1,668	1,214	1,795
	7 PM - 8 PM	1,196	1,185	1,253	1,412	1,521	1,215	1,690	1,164	1,222	1,289	1,428	1,547	1,282	1,806	1,020	1,040	1,035	1,287	1,426	1,111	1,548
	8 PM - 9 PM	1,015	1,012	1,085	1,211	1,277	1,021	1,568	982	1,019	1,067	1,196	1,267	1,119	1,510	897	858	911	1,094	1,150	928	1,260
	9 PM - 10 PM	824	839	887	1,022	1,095	884	1,200	874	853	916	1,047	1,061	924	1,165	744	736	773	926	960	852	991
	10 PM - 11 PM	672	686	733	827	858	669	879	740	682	729	874	857	765	936	599	597	662	784	730	725	734
	11 PM - Midnight	563	581	583	657	666	541	664	601	565	579	678	701	568	656	505	464	548	639	646	605	515

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

118 Sandusky - Norwalk

TO

135 Vermilion

Route	I-80/I-90
Direction	EB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	191	209	207	223	234	224	166	151	190	194	216	207	214	169	150	194	191	191	202	186	121
	1 AM - 2 AM	131	177	161	168	192	168	126	122	173	167	161	182	156	152	100	159	163	151	178	152	92
	2 AM - 3 AM	105	143	132	145	169	135	101	95	135	135	142	157	128	85	91	134	135	142	139	127	71
	3 AM - 4 AM	92	126	130	143	153	118	90	83	122	132	137	141	120	69	85	125	132	135	151	110	65
	4 AM - 5 AM	105	139	148	145	156	119	83	99	138	144	150	165	123	74	102	150	147	150	155	112	67
	5 AM - 6 AM	150	185	196	198	206	129	86	146	183	189	209	201	138	82	129	181	192	189	199	120	71
	6 AM - 7 AM	232	270	275	288	278	159	103	229	279	283	278	294	174	115	199	265	277	279	280	147	97
	7 AM - 8 AM	302	347	367	364	349	214	143	298	348	352	370	379	240	165	295	335	348	366	359	197	135
	8 AM - 9 AM	361	413	443	453	428	309	228	376	420	422	454	435	301	265	345	395	420	408	391	266	212
	9 AM - 10 AM	440	479	488	507	522	436	365	443	468	467	497	470	426	438	388	463	467	470	455	372	331
	10 AM - 11 AM	516	518	535	578	589	554	549	474	494	524	548	541	584	581	430	508	530	509	512	483	491
	11 AM - 12 PM	614	590	603	670	699	686	753	550	554	587	615	651	728	762	491	568	614	559	583	605	668
	12 PM - 1 PM	680	634	651	738	768	729	878	607	602	598	671	714	763	833	564	598	647	615	660	653	751
	1 PM - 2 PM	689	645	688	775	793	708	956	631	621	623	702	756	771	858	599	625	673	635	694	681	818
	2 PM - 3 PM	745	678	721	831	869	702	992	672	636	663	763	834	752	915	634	665	697	678	737	704	850
	3 PM - 4 PM	805	712	734	864	916	685	1,001	713	653	674	772	864	725	959	652	724	714	727	795	698	860
	4 PM - 5 PM	773	732	753	854	938	655	966	708	692	698	780	876	706	906	654	712	729	733	804	642	822
	5 PM - 6 PM	698	675	751	829	922	606	930	641	643	684	753	862	667	868	600	658	678	694	737	603	739
	6 PM - 7 PM	617	604	649	735	821	568	869	563	543	583	664	753	577	744	504	571	564	614	699	530	667
	7 PM - 8 PM	511	487	538	612	661	491	708	487	440	491	563	605	484	620	443	485	491	520	569	437	562
	8 PM - 9 PM	429	407	462	515	584	415	577	417	374	391	485	552	407	524	377	413	426	428	474	336	456
	9 PM - 10 PM	391	346	390	446	463	348	467	346	301	342	403	435	356	408	312	344	403	364	374	298	359
	10 PM - 11 PM	308	300	323	367	357	297	344	294	263	317	314	363	297	276	265	276	307	277	306	228	266
	11 PM - Midnight	258	248	268	296	304	218	243	237	213	267	255	269	238	196	222	225	255	246	245	174	183

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	382	418	413	447	467	448	332	302	381	387	432	414	427	338	300	388	381	381	404	371	242
	1 AM - 2 AM	263	353	321	336	383	335	252	244	347	333	322	363	311	304	201	317	325	301	357	304	184
	2 AM - 3 AM	209	287	265	291	339	270	202	189	271	269	284	313	256	169	181	267	269	283	278	253	141
	3 AM - 4 AM	184	251	260	286	307	236	179	166	245	263	275	282	239	138	170	250	265	270	301	220	130
	4 AM - 5 AM	209	277	296	289	313	238	166	198	277	288	300	329	246	148	204	299	294	300	310	225	134
	5 AM - 6 AM	300	371	391	396	413	258	173	292	367	378	417	401	276	164	258	362	384	379	398	239	143
	6 AM - 7 AM	465	540	550	576	556	317	206	458	557	566	555	587	347	229	397	530	554	558	560	293	194
	7 AM - 8 AM	605	694	734	728	698	428	286	596	695	703	740	758	479	329	589	669	696	731	718	393	270
	8 AM - 9 AM	722	826	886	907	856	618	456	751	840	845	908	870	602	530	690	790	839	815	781	531	424
	9 AM - 10 AM	879	957	976	1,013	1,044	873	730	886	936	933	993	940	851	875	775	926	935	940	910	743	662
	10 AM - 11 AM	1,032	1,037	1,070	1,155	1,178	1,108	1,098	947	988	1,047	1,095	1,082	1,167	1,162	860	1,017	1,059	1,019	1,023	966	983
	11 AM - 12 PM	1,228	1,180	1,206	1,340	1,399	1,371	1,506	1,100	1,108	1,173	1,230	1,301	1,456	1,524	982	1,136	1,227	1,117	1,166	1,210	1,337
	12 PM - 1 PM	1,361	1,267	1,302	1,476	1,537	1,458	1,756	1,214	1,204	1,197	1,343	1,428	1,525	1,666	1,127	1,196	1,293	1,229	1,320	1,305	1,501
	1 PM - 2 PM	1,379	1,289	1,376	1,551	1,585	1,416	1,913	1,261	1,242	1,246	1,403	1,512	1,542	1,715	1,198	1,250	1,346	1,271	1,389	1,362	1,636
	2 PM - 3 PM	1,490	1,357	1,441	1,662	1,737	1,404	1,984	1,344	1,273	1,326	1,526	1,667	1,504	1,830	1,268	1,329	1,395	1,355	1,475	1,407	1,701
	3 PM - 4 PM	1,610	1,423	1,468	1,729	1,831	1,369	2,003	1,426	1,306	1,347	1,543	1,727	1,450	1,917	1,303	1,447	1,429	1,455	1,589	1,396	1,720
	4 PM - 5 PM	1,547	1,463	1,506	1,708	1,876	1,309	1,932	1,417	1,384	1,397	1,561	1,752	1,411	1,811	1,308	1,424	1,457	1,467	1,608	1,283	1,644
	5 PM - 6 PM	1,396	1,350	1,501	1,659	1,844	1,213	1,860	1,283	1,287	1,388	1,506	1,723	1,411	1,736	1,199	1,316	1,356	1,388	1,473	1,205	1,478
	6 PM - 7 PM	1,234	1,208	1,297	1,470	1,642	1,136	1,738	1,126	1,085	1,165	1,328	1,506	1,154	1,487	1,009	1,142	1,129	1,229	1,399	1,060	1,334
	7 PM - 8 PM	1,022	973	1,076	1,225	1,322	982	1,415	974	880	981	1,125	1,209	967	1,239	886	970	982	1,039	1,137	873	1,123
	8 PM - 9 PM	858	815	924	1,030	1,168	830	1,154	833	748	781	970	1,103	814	1,048	754	825	852	856	949	671	912
	9 PM - 10 PM	781	691	780	891	925	695	934	692	602	683	806	869	711	816	624	687	806	727	749	595	717
	10 PM - 11 PM	616	600	647	734	714	594	687	587	526	634	628	725	593	552	530	552	614	553	611	456	532
	11 PM - Midnight	516	496	535	593	608	436	487	474	426	533	510	538	475	393	444	449	510	491	489	348	367

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

135 Vermilion

TO

118 Sandusky - Norwalk

Route	I-80/I-90
Direction	WB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	105	183	196	196	196	164	94	124	207	211	202	162	170	113	149	224	213	221	207	185	121
	1 AM - 2 AM	85	134	148	178	158	126	73	96	171	166	153	114	134	79	113	185	171	173	176	141	87
	2 AM - 3 AM	66	126	129	136	135	109	54	85	153	146	128	117	108	62	78	146	150	150	144	107	63
	3 AM - 4 AM	66	119	131	130	126	94	45	71	126	133	118	111	88	57	76	132	128	127	121	96	54
	4 AM - 5 AM	74	121	135	134	140	93	47	84	146	147	126	107	96	52	98	144	150	138	145	93	53
	5 AM - 6 AM	91	156	164	171	166	104	47	117	177	180	148	137	111	56	124	182	186	183	185	115	53
	6 AM - 7 AM	145	225	240	238	213	131	56	197	257	237	226	185	128	73	193	265	249	264	239	158	71
	7 AM - 8 AM	196	296	309	318	299	175	88	276	361	334	289	261	196	107	276	360	369	357	350	221	110
	8 AM - 9 AM	267	402	397	411	374	260	125	366	471	417	370	329	289	155	357	464	446	450	438	314	163
	9 AM - 10 AM	311	447	435	449	415	349	185	397	517	460	401	394	372	226	408	498	495	514	501	423	248
	10 AM - 11 AM	348	482	470	474	470	455	288	465	534	484	457	473	483	350	469	534	534	560	578	533	385
	11 AM - 12 PM	399	508	489	507	530	549	383	503	542	495	471	513	561	461	494	566	563	605	655	623	523
	12 PM - 1 PM	414	542	483	524	574	568	474	507	565	512	489	577	596	514	536	586	580	652	710	676	655
	1 PM - 2 PM	439	559	504	546	619	555	533	533	560	515	479	621	573	577	548	606	601	659	749	669	719
	2 PM - 3 PM	471	569	527	585	619	563	605	545	580	518	508	635	551	618	567	615	607	670	766	632	739
	3 PM - 4 PM	482	594	541	598	657	555	608	569	530	531	524	638	534	633	573	622	627	692	811	601	790
	4 PM - 5 PM	494	579	544	592	652	521	603	570	555	532	509	664	509	635	585	625	633	715	790	585	806
	5 PM - 6 PM	476	544	539	547	637	484	573	554	559	498	478	674	466	630	578	590	601	674	806	530	770
	6 PM - 7 PM	424	485	466	499	608	404	533	488	493	433	412	601	410	552	541	556	550	620	724	458	709
	7 PM - 8 PM	390	424	401	452	486	328	444	443	446	394	351	503	350	463	456	470	486	533	610	387	609
	8 PM - 9 PM	331	358	344	360	380	261	366	385	386	325	292	397	282	387	407	403	406	445	491	311	459
	9 PM - 10 PM	279	308	299	298	307	211	273	323	318	294	250	301	236	289	335	335	334	364	368	264	360
	10 PM - 11 PM	254	264	278	259	243	164	182	284	279	252	222	245	186	219	313	303	312	304	303	205	264
	11 PM - Midnight	217	235	240	228	205	124	133	258	232	235	168	200	136	168	264	256	269	266	242	145	198

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	210	365	391	391	392	329	187	248	413	423	403	324	341	227	298	449	425	441	414	370	241
	1 AM - 2 AM	171	268	296	356	316	251	145	191	341	333	306	229	267	157	225	371	342	346	353	282	174
	2 AM - 3 AM	131	252	258	273	270	218	107	169	305	291	256	234	216	124	157	293	299	300	288	214	126
	3 AM - 4 AM	132	239	261	260	252	189	89	143	252	266	237	221	176	114	153	265	256	254	241	193	108
	4 AM - 5 AM	148	243	271	268	280	186	93	167	293	293	253	215	192	104	196	288	299	276	291	187	106
	5 AM - 6 AM	183	312	328	342	332	208	94	235	353	360	297	274	222	112	249	364	373	366	370	231	106
	6 AM - 7 AM	290	450	480	476	426	263	111	393	514	475	452	369	255	147	387	530	497	527	478	316	142
	7 AM - 8 AM	392	592	617	635	598	351	176	552	723	668	577	522	392	215	551	720	738	714	701	441	220
	8 AM - 9 AM	534	805	794	822	747	520	249	733	943	834	740	658	578	310	714	928	892	901	876	628	326
	9 AM - 10 AM	622	893	870	899	829	697	370	793	1,034	920	801	787	744	452	816	996	990	1,027	1,003	845	495
	10 AM - 11 AM	695	963	939	947	940	911	576	930	1,068	967	913	946	966	700	939	1,068	1,067	1,121	1,155	1,066	771
	11 AM - 12 PM	797	1,015	978	1,014	1,060	1,098	765	1,006	1,085	990	942	1,026	1,122	923	989	1,133	1,125	1,209	1,311	1,246	1,045
	12 PM - 1 PM	829	1,083	966	1,048	1,147	1,137	948	1,014	1,129	1,025	978	1,154	1,191	1,027	1,071	1,171	1,160	1,305	1,421	1,353	1,311
	1 PM - 2 PM	879	1,117	1,008	1,092	1,237	1,111	1,066	1,066	1,121	1,030	959	1,242	1,145	1,155	1,095	1,212	1,201	1,319	1,499	1,338	1,437
	2 PM - 3 PM	942	1,139	1,055	1,169	1,238	1,127	1,211	1,089	1,161	1,036	1,016	1,269	1,101	1,236	1,135	1,230	1,213	1,339	1,532	1,264	1,478
	3 PM - 4 PM	963	1,187	1,083	1,196	1,315	1,110	1,217	1,138	1,060	1,061	1,049	1,277	1,069	1,267	1,145	1,244	1,255	1,383	1,622	1,203	1,579
	4 PM - 5 PM	987	1,159	1,088	1,184	1,304	1,042	1,205	1,139	1,111	1,063	1,018	1,328	1,017	1,269	1,170	1,250	1,265	1,429	1,580	1,169	1,611
	5 PM - 6 PM	952	1,087	1,078	1,095	1,275	967	1,145	1,109	1,118	996	956	1,348	932	1,259	1,155	1,179	1,191	1,349	1,613	1,060	1,540
	6 PM - 7 PM	848	969	931	997	1,215	809	1,066	976	986	865	824	1,201	819	1,104	1,082	1,113	1,099	1,240	1,448	915	1,417
	7 PM - 8 PM	781	848	803	904	972	655	888	885	892	789	701	1,005	699	925	911	940	973	1,066	1,220	773	1,218
	8 PM - 9 PM	661	715	688	720	761	523	732	770	773	651	584	794	564	774	813	806	811	890	983	622	917
	9 PM - 10 PM	557	616	598	596	613	421	545	645	637	588	499	601	472	578	669	670	669	728	736	528	720
	10 PM - 11 PM	507	529	557	517	486	328	364	569	558	505	444	490	371	438	625	606	625	608	606	411	528
	11 PM - Midnight	435	471	481	457	410	249	266	516	465	470	335	401	272	336	529	512	537	532	484	290	396

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

135 Vermilion

TO

118 Sandusky - Norwalk

Route	I-80/I-90
Direction	WB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

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Revision Date: 9/1/2022

Close 1 Lane	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	140	246	235	245	237	213	132	157	215	229	233	239	235	137	168	245	255	252	273	264	159
	1 AM - 2 AM	95	184	183	186	189	160	89	111	174	187	184	200	168	95	122	198	200	206	207	188	117
	2 AM - 3 AM	72	160	151	160	166	130	81	89	139	162	155	160	129	76	94	161	163	177	183	157	90
	3 AM - 4 AM	109	143	131	137	139	112	60	90	126	144	144	161	108	63	89	146	151	163	164	126	70
	4 AM - 5 AM	96	155	154	149	157	116	59	95	134	166	159	156	118	60	105	153	171	172	168	135	67
	5 AM - 6 AM	131	187	191	188	192	141	63	146	175	196	196	197	133	62	146	200	218	217	211	144	66
	6 AM - 7 AM	213	272	270	277	274	175	83	225	263	293	298	291	183	87	233	289	316	311	292	190	97
	7 AM - 8 AM	285	375	376	356	361	252	126	315	356	395	398	381	271	139	325	411	411	421	392	287	149
	8 AM - 9 AM	364	476	477	477	450	370	180	393	444	504	506	478	391	210	414	533	525	535	510	401	231
	9 AM - 10 AM	424	531	531	524	550	494	287	463	514	551	581	588	535	328	510	592	604	626	630	552	389
	10 AM - 11 AM	485	574	573	613	636	626	430	541	584	626	641	710	660	488	608	652	655	688	775	730	578
	11 AM - 12 PM	525	620	597	662	717	714	584	597	634	649	705	804	745	625	675	713	726	809	888	892	747
	12 PM - 1 PM	555	621	612	687	779	767	684	635	685	684	742	861	754	763	714	751	767	844	964	919	877
	1 PM - 2 PM	566	625	631	714	799	721	777	662	729	688	771	920	745	798	755	735	776	876	992	896	954
	2 PM - 3 PM	597	656	661	749	853	723	836	689	747	729	806	923	723	858	748	772	777	902	1,023	866	987
	3 PM - 4 PM	621	649	663	752	863	725	858	681	763	740	832	936	701	885	770	752	806	921	1,053	799	993
	4 PM - 5 PM	605	665	677	769	874	703	899	701	782	767	830	936	652	851	774	748	818	891	1,001	771	980
	5 PM - 6 PM	587	651	658	762	874	633	853	678	721	727	762	901	590	828	763	734	772	879	1,004	694	915
	6 PM - 7 PM	538	591	602	705	782	554	764	600	649	640	696	864	537	734	661	658	684	742	890	624	838
	7 PM - 8 PM	491	505	518	587	644	487	650	520	558	542	603	721	479	654	563	557	585	656	763	531	700
	8 PM - 9 PM	411	426	413	471	529	387	511	436	461	437	490	588	373	559	471	469	489	574	627	455	584
	9 PM - 10 PM	340	355	354	394	430	314	403	353	382	359	406	433	312	436	386	387	390	490	501	371	472
	10 PM - 11 PM	285	302	295	333	335	261	307	327	323	312	345	355	245	299	325	337	333	378	391	298	353
	11 PM - Midnight	245	267	269	294	257	185	208	268	265	281	285	292	179	221	279	296	290	343	321	226	256

Close 2 Lanes	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	279	492	470	491	473	426	264	313	429	459	466	478	469	275	337	489	509	504	546	528	318
	1 AM - 2 AM	190	368	366	371	377	321	179	223	347	373	368	400	336	191	243	397	400	412	413	376	235
	2 AM - 3 AM	145	320	303	320	332	260	162	177	277	324	310	319	258	152	189	321	326	353	366	315	180
	3 AM - 4 AM	218	286	261	274	277	223	120	179	251	288	288	321	216	126	177	292	303	326	327	252	139
	4 AM - 5 AM	192	310	307	299	314	232	118	191	267	331	317	312	237	119	209	307	343	344	337	270	134
	5 AM - 6 AM	262	374	382	376	385	282	125	292	351	393	393	394	265	124	292	400	435	434	422	289	132
	6 AM - 7 AM	426	544	540	555	549	351	167	449	526	587	595	582	365	173	466	577	631	623	583	379	194
	7 AM - 8 AM	570	749	753	712	722	504	252	630	712	790	795	761	542	277	650	821	822	843	783	573	297
	8 AM - 9 AM	727	952	953	954	899	740	360	787	888	1,008	1,011	955	783	421	827	1,066	1,049	1,070	1,021	802	461
	9 AM - 10 AM	848	1,061	1,062	1,049	1,100	988	575	925	1,028	1,103	1,162	1,176	1,070	655	1,020	1,185	1,207	1,252	1,260	1,104	778
	10 AM - 11 AM	970	1,148	1,145	1,226	1,272	1,251	861	1,081	1,168	1,252	1,282	1,421	1,319	977	1,216	1,305	1,310	1,376	1,550	1,459	1,157
	11 AM - 12 PM	1,049	1,240	1,194	1,323	1,434	1,429	1,168	1,193	1,268	1,299	1,409	1,608	1,489	1,250	1,350	1,426	1,452	1,617	1,775	1,784	1,494
	12 PM - 1 PM	1,111	1,241	1,224	1,373	1,559	1,535	1,369	1,270	1,370	1,369	1,483	1,723	1,507	1,525	1,427	1,502	1,534	1,688	1,928	1,839	1,753
	1 PM - 2 PM	1,132	1,249	1,262	1,428	1,599	1,443	1,553	1,324	1,458	1,377	1,541	1,840	1,490	1,596	1,510	1,471	1,551	1,752	1,984	1,792	1,909
	2 PM - 3 PM	1,193	1,312	1,323	1,498	1,706	1,446	1,672	1,379	1,493	1,459	1,613	1,845	1,445	1,717	1,496	1,545	1,553	1,803	2,046	1,732	1,975
	3 PM - 4 PM	1,242	1,298	1,327	1,503	1,726	1,451	1,717	1,362	1,526	1,481	1,664	1,873	1,401	1,770	1,539	1,505	1,612	1,843	2,107	1,598	1,986
	4 PM - 5 PM	1,209	1,330	1,354	1,539	1,749	1,406	1,798	1,402	1,564	1,534	1,659	1,872	1,304	1,703	1,549	1,496	1,637	1,782	2,003	1,543	1,960
	5 PM - 6 PM	1,174	1,303	1,315	1,525	1,747	1,267	1,705	1,357	1,442	1,453	1,524	1,801	1,181	1,656	1,525	1,468	1,544	1,757	2,008	1,388	1,830
	6 PM - 7 PM	1,075	1,183	1,203	1,410	1,563	1,108	1,528	1,200	1,298	1,279	1,392	1,729	1,074	1,469	1,323	1,316	1,369	1,484	1,780	1,248	1,676
	7 PM - 8 PM	982	1,011	1,036	1,174	1,287	974	1,300	1,041	1,116	1,084	1,206	1,441	957	1,308	1,126	1,114	1,170	1,312	1,526	1,063	1,400
	8 PM - 9 PM	822	851	826	942	1,057	774	1,021	872	922	873	980	1,177	745	1,118	942	937	978	1,149	1,254	909	1,167
	9 PM - 10 PM	680	709	707	787	859	627	805	706	765	719	811	867	625	873	773	773	781	979	1,002	742	943
	10 PM - 11 PM	569	605	591	666	669	523	614	653	645	623	689	710	490	599	649	673	667	756	781	595	705
	11 PM - Midnight	490	533	538	588	515	370	415	536	531	561	569	584	358	442	558	591	579	685	642	452	512

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

135 Vermilion

TO

118 Sandusky - Norwalk

Route	I-80/I-90
Direction	WB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	177	218	255	255	283	251	181	184	252	255	258	271	267	187	176	235	231	236	256	251	152
	1 AM - 2 AM	138	169	191	211	215	203	131	135	196	210	204	200	198	148	125	180	192	207	193	192	106
	2 AM - 3 AM	105	137	164	179	181	141	92	106	169	161	181	158	144	112	94	137	165	165	163	150	74
	3 AM - 4 AM	93	134	136	153	157	123	77	97	157	142	158	144	128	78	94	131	137	147	152	127	67
	4 AM - 5 AM	101	135	177	169	171	131	78	110	150	170	171	165	133	66	98	144	157	156	168	129	60
	5 AM - 6 AM	152	175	205	207	210	153	82	146	196	186	200	229	142	72	135	180	180	198	211	140	66
	6 AM - 7 AM	239	268	279	294	292	193	102	216	281	284	296	292	181	95	229	265	265	283	265	190	88
	7 AM - 8 AM	319	369	385	404	387	252	147	309	407	387	398	382	276	144	319	354	375	377	374	267	131
	8 AM - 9 AM	400	464	507	537	514	401	239	404	515	516	542	516	422	253	413	452	458	483	463	405	209
	9 AM - 10 AM	507	548	595	628	669	595	403	511	597	608	635	641	620	382	495	521	545	563	560	551	332
	10 AM - 11 AM	609	629	676	747	796	778	599	609	660	689	740	773	810	592	603	596	610	644	664	678	481
	11 AM - 12 PM	709	725	733	830	925	924	823	723	736	777	849	912	951	813	675	640	643	705	808	791	631
	12 PM - 1 PM	761	765	784	868	1,030	981	971	761	761	811	894	970	967	970	704	654	640	741	891	823	760
	1 PM - 2 PM	763	774	822	905	1,044	933	1,043	767	766	819	935	1,062	948	1,048	692	675	683	770	930	791	788
	2 PM - 3 PM	780	801	794	922	1,112	939	1,085	802	793	814	930	1,095	888	1,082	710	690	708	801	963	777	829
	3 PM - 4 PM	790	796	832	951	1,104	918	1,111	804	792	826	957	1,081	854	1,049	740	693	708	796	963	775	869
	4 PM - 5 PM	812	818	849	939	1,073	874	1,099	794	794	846	918	1,061	866	1,058	705	665	720	833	991	689	859
	5 PM - 6 PM	766	781	803	928	1,034	791	1,025	774	777	793	893	1,083	814	1,030	676	692	708	814	1,001	643	884
	6 PM - 7 PM	679	669	720	797	965	702	900	697	670	692	813	971	715	941	620	616	626	725	898	602	985
	7 PM - 8 PM	569	596	619	695	806	571	779	588	575	607	716	802	605	809	535	519	523	601	795	488	808
	8 PM - 9 PM	522	507	504	576	630	503	635	483	483	510	588	593	483	638	405	439	425	538	589	399	656
	9 PM - 10 PM	420	408	415	484	527	404	470	389	390	426	474	489	395	488	376	364	371	443	456	337	521
	10 PM - 11 PM	350	361	348	385	412	322	354	337	354	362	373	409	319	372	320	316	309	380	375	257	357
	11 PM - Midnight	312	304	299	346	327	235	264	296	296	307	319	341	252	249	298	270	276	332	309	215	234

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	355	435	509	511	566	502	363	367	505	509	517	542	534	374	352	469	461	471	513	502	305
	1 AM - 2 AM	276	338	382	422	429	405	261	270	393	421	408	400	395	296	250	360	383	413	385	385	213
	2 AM - 3 AM	209	274	329	358	361	283	185	213	337	323	362	316	288	225	188	273	330	330	326	300	147
	3 AM - 4 AM	186	267	272	306	314	245	155	193	315	284	316	288	257	157	187	263	275	293	305	255	134
	4 AM - 5 AM	201	270	353	339	343	262	157	219	300	341	342	329	266	132	196	288	314	311	336	258	120
	5 AM - 6 AM	303	349	410	414	421	306	163	292	393	372	400	458	285	144	270	361	360	396	421	280	132
	6 AM - 7 AM	477	536	559	588	583	387	205	432	562	569	593	583	362	190	458	530	529	566	530	379	176
	7 AM - 8 AM	639	738	771	808	774	504	293	618	814	773	796	765	553	288	638	709	750	754	748	533	262
	8 AM - 9 AM	799	929	1,014	1,074	1,029	802	477	807	1,030	1,032	1,085	1,031	843	505	826	905	915	965	927	809	417
	9 AM - 10 AM	1,013	1,095	1,190	1,255	1,337	1,190	805	1,023	1,193	1,216	1,270	1,281	1,240	764	991	1,042	1,091	1,125	1,120	1,103	664
	10 AM - 11 AM	1,218	1,257	1,353	1,495	1,592	1,557	1,198	1,218	1,320	1,377	1,481	1,545	1,620	1,183	1,206	1,192	1,220	1,289	1,329	1,356	961
	11 AM - 12 PM	1,418	1,450	1,466	1,660	1,850	1,848	1,647	1,445	1,471	1,553	1,698	1,824	1,903	1,626	1,351	1,280	1,286	1,409	1,615	1,582	1,261
	12 PM - 1 PM	1,523	1,530	1,568	1,737	2,060	1,961	1,942	1,522	1,523	1,622	1,788	1,941	1,934	1,939	1,407	1,309	1,280	1,483	1,782	1,645	1,519
	1 PM - 2 PM	1,526	1,549	1,643	1,810	2,088	1,866	2,086	1,533	1,533	1,638	1,869	2,125	1,896	2,096	1,384	1,350	1,365	1,539	1,860	1,582	1,577
	2 PM - 3 PM	1,560	1,601	1,588	1,844	2,224	1,877	2,169	1,604	1,586	1,629	1,860	2,189	1,776	2,163	1,420	1,379	1,415	1,602	1,926	1,554	1,658
	3 PM - 4 PM	1,580	1,592	1,665	1,901	2,208	1,835	2,221	1,608	1,584	1,652	1,915	2,163	1,707	2,099	1,479	1,386	1,416	1,591	1,927	1,549	1,737
	4 PM - 5 PM	1,625	1,635	1,698	1,878	2,146	1,749	2,197	1,588	1,588	1,693	1,835	2,123	1,732	2,117	1,409	1,330	1,440	1,665	1,981	1,377	1,719
	5 PM - 6 PM	1,532	1,562	1,606	1,856	2,069	1,582	2,050	1,548	1,555	1,686	1,786	2,167	1,627	2,060	1,353	1,385	1,416	1,627	2,003	1,287	1,768
	6 PM - 7 PM	1,358	1,338	1,440	1,595	1,930	1,404	1,800	1,394	1,341	1,384	1,626	1,942	1,431	1,882	1,240	1,232	1,251	1,449	1,796	1,204	1,970
	7 PM - 8 PM	1,137	1,191	1,238	1,390	1,612	1,143	1,558	1,176	1,149	1,213	1,432	1,604	1,211	1,617	1,070	1,038	1,046	1,202	1,589	977	1,617
	8 PM - 9 PM	1,043	1,015	1,008	1,152	1,261	1,007	1,269	965	966	1,019	1,176	1,187	967	1,276	811	877	849	1,075	1,178	798	1,311
	9 PM - 10 PM	840	816	830	968	1,054	807	940	778	781	852	948	977	790	977	751	728	742	886	911	674	1,041
	10 PM - 11 PM	699	722	697	771	823	643	709	674	709	725	746	817	639	744	640	632	619	759	750	513	714
	11 PM - Midnight	624	609	597	692	653	470	528	592	592	614	638	683	504	499	596	541	552	664	619	430	467

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

135 Vermilion

TO

118 Sandusky - Norwalk

Route	I-80/I-90
Direction	WB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	150	237	225	232	264	243	136	148	220	213	202	219	212	134	132	223	226	219	220	199	107
	1 AM - 2 AM	112	200	186	194	214	172	99	104	181	183	185	186	162	127	97	182	196	181	174	155	88
	2 AM - 3 AM	91	151	170	163	172	136	81	83	153	150	153	158	134	68	83	158	150	144	153	123	64
	3 AM - 4 AM	85	150	146	145	153	117	65	86	145	136	145	134	116	57	77	137	139	146	146	124	59
	4 AM - 5 AM	104	156	159	156	161	118	58	97	158	160	161	156	121	52	95	152	156	151	157	102	56
	5 AM - 6 AM	135	193	189	195	197	137	62	140	189	196	203	190	127	62	131	194	197	189	188	127	65
	6 AM - 7 AM	213	276	279	286	267	166	78	220	274	266	285	276	173	82	200	274	290	262	273	159	81
	7 AM - 8 AM	304	368	367	379	367	246	111	310	379	369	377	356	250	120	282	356	350	345	347	245	110
	8 AM - 9 AM	384	489	452	465	456	378	191	399	470	452	457	444	365	195	336	460	437	448	440	335	176
	9 AM - 10 AM	464	526	525	545	563	534	306	454	523	500	525	517	492	286	400	523	514	521	497	457	266
	10 AM - 11 AM	546	588	578	592	692	672	440	544	553	555	601	622	657	426	455	560	559	551	568	550	416
	11 AM - 12 PM	611	646	608	665	810	758	622	583	596	580	631	729	718	570	514	602	603	581	657	670	566
	12 PM - 1 PM	651	657	662	743	869	767	732	633	614	588	679	788	746	687	536	630	638	592	702	664	689
	1 PM - 2 PM	671	667	657	758	932	758	822	616	638	621	692	787	709	697	536	638	674	656	735	685	752
	2 PM - 3 PM	700	688	672	766	969	735	837	627	675	609	732	850	684	706	562	658	665	675	768	663	768
	3 PM - 4 PM	712	699	722	798	943	709	913	641	667	661	753	873	693	814	588	674	712	687	799	675	765
	4 PM - 5 PM	698	692	712	820	968	659	889	672	637	664	776	888	678	761	591	704	722	696	773	632	744
	5 PM - 6 PM	687	670	682	807	949	618	869	650	632	636	715	883	619	747	555	649	673	658	764	557	716
	6 PM - 7 PM	612	615	605	712	921	542	809	562	553	566	624	801	528	774	498	573	589	558	662	467	635
	7 PM - 8 PM	521	517	511	606	723	458	673	482	467	474	550	665	428	692	421	469	500	489	597	409	567
	8 PM - 9 PM	442	430	432	527	551	372	564	387	386	391	469	542	369	507	365	405	425	395	481	312	450
	9 PM - 10 PM	358	362	365	430	438	314	468	339	320	335	391	408	293	399	333	353	352	363	386	256	340
	10 PM - 11 PM	317	291	303	358	351	246	314	292	289	289	302	350	236	293	333	311	316	310	310	213	237
	11 PM - Midnight	279	269	271	306	297	185	209	251	255	260	280	294	173	183	270	265	268	261	256	156	180

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	300	473	450	465	528	487	273	296	441	426	404	438	424	268	265	446	453	438	441	398	215
	1 AM - 2 AM	223	401	371	387	427	344	197	209	361	366	369	371	324	254	193	364	393	363	348	310	177
	2 AM - 3 AM	182	302	341	326	344	271	163	166	305	300	306	316	268	136	166	315	301	288	306	246	128
	3 AM - 4 AM	170	301	293	289	306	234	130	171	291	272	290	268	232	113	153	274	278	292	293	248	117
	4 AM - 5 AM	209	312	318	312	321	235	116	194	317	319	321	312	242	105	190	304	312	301	315	204	113
	5 AM - 6 AM	270	387	378	390	393	273	124	280	377	391	406	381	254	123	261	387	393	377	377	254	130
	6 AM - 7 AM	425	552	559	571	533	333	157	439	549	531	570	552	346	163	400	548	579	524	546	317	161
	7 AM - 8 AM	608	736	734	758	734	492	222	620	758	737	754	712	499	241	565	712	701	689	693	489	221
	8 AM - 9 AM	767	977	905	930	912	756	382	799	940	904	915	887	730	390	671	919	874	895	880	670	352
	9 AM - 10 AM	927	1,052	1,050	1,091	1,126	1,068	612	907	1,045	1,000	1,050	1,034	984	571	800	1,046	1,029	1,041	993	915	532
	10 AM - 11 AM	1,092	1,175	1,157	1,183	1,384	1,343	880	1,088	1,106	1,109	1,203	1,243	1,314	852	910	1,121	1,118	1,103	1,136	1,101	832
	11 AM - 12 PM	1,221	1,291	1,216	1,330	1,620	1,515	1,244	1,165	1,191	1,160	1,261	1,459	1,435	1,140	1,027	1,204	1,206	1,162	1,314	1,340	1,133
	12 PM - 1 PM	1,303	1,315	1,325	1,485	1,739	1,534	1,465	1,266	1,228	1,175	1,357	1,576	1,491	1,374	1,072	1,260	1,275	1,184	1,404	1,327	1,379
	1 PM - 2 PM	1,342	1,334	1,313	1,515	1,865	1,515	1,644	1,231	1,276	1,243	1,383	1,574	1,418	1,393	1,072	1,276	1,349	1,311	1,469	1,369	1,505
	2 PM - 3 PM	1,399	1,376	1,344	1,532	1,938	1,469	1,674	1,254	1,349	1,218	1,464	1,700	1,368	1,412	1,124	1,315	1,330	1,350	1,536	1,327	1,536
	3 PM - 4 PM	1,424	1,399	1,444	1,595	1,887	1,417	1,826	1,282	1,335	1,322	1,507	1,746	1,386	1,627	1,175	1,349	1,424	1,374	1,597	1,349	1,530
	4 PM - 5 PM	1,395	1,383	1,423	1,640	1,936	1,318	1,778	1,345	1,273	1,329	1,551	1,776	1,357	1,522	1,182	1,407	1,443	1,392	1,547	1,264	1,487
	5 PM - 6 PM	1,373	1,341	1,364	1,614	1,897	1,237	1,738	1,301	1,265	1,271	1,430	1,767	1,357	1,495	1,109	1,298	1,346	1,316	1,527	1,114	1,433
	6 PM - 7 PM	1,224	1,231	1,209	1,423	1,842	1,084	1,618	1,124	1,105	1,131	1,247	1,601	1,057	1,547	996	1,146	1,178	1,116	1,325	933	1,270
	7 PM - 8 PM	1,041	1,034	1,023	1,212	1,447	915	1,346	964	934	949	1,100	1,330	855	1,383	842	938	1,000	978	1,194	818	1,133
	8 PM - 9 PM	883	859	865	1,055	1,101	744	1,127	774	773	782	939	1,084	737	1,014	730	809	851	789	962	624	899
	9 PM - 10 PM	715	725	730	860	875	628	936	677	639	669	783	815	586	798	665	707	703	726	771	513	680
	10 PM - 11 PM	634	581	607	715	702	492	628	584	577	578	603	700	471	586	665	621	631	619	619	425	474
	11 PM - Midnight	558	538	543	612	595	370	417	502	509	520	560	587	347	367	539	530	537	522	512	312	359

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

135 Vermilion

TO

140 Amherst - Oberlin

Route	I-80/I-90
Direction	EB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	105	154	164	163	171	148	110	131	178	194	169	134	166	116	159	187	190	193	196	197	140
	1 AM - 2 AM	86	124	139	131	147	120	83	98	145	157	139	119	135	86	117	149	153	153	157	151	123
	2 AM - 3 AM	73	102	112	114	116	93	70	83	125	124	114	104	102	67	94	124	128	146	148	115	75
	3 AM - 4 AM	66	98	110	116	117	98	55	75	105	123	116	106	92	60	94	117	126	138	132	109	69
	4 AM - 5 AM	78	112	120	132	129	85	56	89	121	134	133	111	96	60	96	139	141	150	145	108	62
	5 AM - 6 AM	114	164	176	183	178	111	63	140	179	185	166	146	114	67	143	197	189	200	205	133	73
	6 AM - 7 AM	188	255	261	266	244	145	75	205	287	278	244	188	145	90	229	285	284	289	291	166	90
	7 AM - 8 AM	239	326	348	335	331	175	105	294	369	382	314	286	197	129	328	386	385	396	369	214	136
	8 AM - 9 AM	290	376	382	374	375	221	146	361	432	400	361	326	265	191	379	440	442	471	429	288	196
	9 AM - 10 AM	325	409	415	410	395	303	224	398	445	421	378	374	357	265	396	440	475	499	472	401	311
	10 AM - 11 AM	364	441	422	440	432	402	323	435	468	436	415	421	457	379	470	497	489	528	528	513	438
	11 AM - 12 PM	409	479	470	482	470	504	418	500	501	477	466	480	537	504	515	526	555	594	612	632	587
	12 PM - 1 PM	466	508	510	529	507	554	493	543	521	508	495	534	563	587	576	560	581	617	667	666	692
	1 PM - 2 PM	480	528	530	556	554	555	568	570	550	505	516	594	565	646	584	604	608	654	717	674	765
	2 PM - 3 PM	540	544	534	586	604	560	612	586	587	554	548	657	569	684	622	615	623	711	791	680	842
	3 PM - 4 PM	572	577	576	625	638	558	649	671	637	586	567	700	581	698	668	654	671	753	861	695	907
	4 PM - 5 PM	564	563	606	631	662	550	674	650	642	598	570	707	544	718	669	663	711	760	872	655	892
	5 PM - 6 PM	525	569	600	606	666	501	590	610	625	557	533	695	512	688	644	666	714	742	867	604	839
	6 PM - 7 PM	462	497	503	499	599	434	482	525	528	483	437	620	444	580	552	547	600	663	759	518	782
	7 PM - 8 PM	399	396	408	416	504	368	411	436	449	402	362	506	382	481	452	463	473	535	638	420	646
	8 PM - 9 PM	322	330	357	365	430	296	336	379	386	336	299	430	311	396	395	394	406	460	502	352	503
	9 PM - 10 PM	269	271	286	313	324	246	272	316	310	289	251	337	255	303	335	328	343	382	415	292	404
	10 PM - 11 PM	228	219	234	256	251	194	208	258	268	220	196	260	207	234	273	262	284	308	324	233	301
	11 PM - Midnight	187	195	198	215	199	146	145	219	217	188	170	192	171	175	232	223	228	244	260	155	220

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	211	307	328	326	342	296	221	262	356	388	338	267	333	232	318	375	381	385	392	395	279
	1 AM - 2 AM	171	248	278	261	293	239	166	196	290	315	279	237	269	173	233	299	305	307	314	301	245
	2 AM - 3 AM	146	205	224	229	231	186	141	166	249	248	228	207	205	134	188	248	256	291	296	229	150
	3 AM - 4 AM	133	195	220	233	235	196	109	150	211	246	232	211	185	119	187	234	252	276	265	217	137
	4 AM - 5 AM	156	224	240	264	258	169	111	178	242	268	266	222	193	120	191	277	283	299	290	215	124
	5 AM - 6 AM	229	329	352	365	356	221	126	281	357	370	331	291	228	135	286	394	379	400	409	265	145
	6 AM - 7 AM	376	510	522	533	489	289	151	411	574	557	488	375	290	179	459	569	567	578	583	332	179
	7 AM - 8 AM	477	652	696	669	662	350	210	587	737	765	627	572	395	257	656	772	770	792	737	428	272
	8 AM - 9 AM	580	753	764	749	750	442	292	722	863	800	722	653	530	382	758	879	884	942	857	577	393
	9 AM - 10 AM	649	819	830	820	789	606	448	795	889	841	755	747	713	531	792	880	951	998	945	803	621
	10 AM - 11 AM	729	881	844	881	863	804	646	869	935	873	830	842	914	758	939	994	977	1,057	1,057	1,025	876
	11 AM - 12 PM	818	958	940	963	939	1,008	836	999	1,002	954	931	960	1,073	1,008	1,030	1,051	1,110	1,187	1,225	1,263	1,173
	12 PM - 1 PM	932	1,015	1,019	1,058	1,013	1,108	986	1,087	1,042	1,016	990	1,068	1,126	1,174	1,153	1,121	1,161	1,235	1,334	1,332	1,383
	1 PM - 2 PM	959	1,055	1,061	1,111	1,108	1,110	1,137	1,139	1,099	1,011	1,033	1,188	1,130	1,293	1,169	1,208	1,216	1,309	1,434	1,348	1,529
	2 PM - 3 PM	1,080	1,087	1,068	1,171	1,208	1,119	1,224	1,173	1,173	1,108	1,095	1,313	1,137	1,367	1,245	1,229	1,245	1,423	1,582	1,361	1,684
	3 PM - 4 PM	1,145	1,153	1,152	1,251	1,276	1,116	1,298	1,343	1,274	1,172	1,135	1,399	1,162	1,395	1,337	1,309	1,342	1,506	1,722	1,389	1,813
	4 PM - 5 PM	1,127	1,125	1,211	1,262	1,325	1,100	1,349	1,300	1,284	1,196	1,139	1,414	1,088	1,435	1,337	1,327	1,421	1,520	1,745	1,311	1,784
	5 PM - 6 PM	1,050	1,137	1,200	1,211	1,332	1,003	1,179	1,221	1,250	1,114	1,065	1,391	1,025	1,375	1,288	1,333	1,428	1,484	1,733	1,208	1,678
	6 PM - 7 PM	923	994	1,007	998	1,198	868	964	1,051	1,056	965	875	1,239	888	1,159	1,103	1,095	1,201	1,325	1,518	1,037	1,564
	7 PM - 8 PM	797	792	815	832	1,007	736	823	872	897	805	725	1,012	765	962	904	926	945	1,071	1,276	840	1,292
	8 PM - 9 PM	643	660	713	730	861	592	672	759	772	672	599	861	623	793	790	788	811	920	1,003	704	1,006
	9 PM - 10 PM	538	542	572	626	648	492	545	631	619	578	501	674	510	607	669	656	687	764	830	585	807
	10 PM - 11 PM	456	438	467	512	503	388	415	517	536	441	393	520	414	468	546	523	568	616	648	466	601
	11 PM - Midnight	373	391	396	430	398	292	291	437	434	376	341	385	341	350	465	446	455	488	520	310	441

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

135 Vermilion

TO

140 Amherst - Oberlin

Route	I-80/I-90
Direction	EB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Close 1 Lane	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	151	196	204	209	232	208	150	171	190	206	217	234	227	153	220	224	231	232	267	250	184
	1 AM - 2 AM	119	152	158	161	174	165	107	124	171	164	173	180	166	109	148	178	182	206	215	175	129
	2 AM - 3 AM	98	126	132	141	148	125	83	104	131	140	146	161	127	87	122	151	157	178	184	141	102
	3 AM - 4 AM	88	123	122	130	137	122	78	91	113	127	147	151	124	73	101	133	146	163	168	133	82
	4 AM - 5 AM	100	130	146	142	158	115	74	108	130	143	156	163	117	72	116	147	146	165	156	131	84
	5 AM - 6 AM	155	203	203	203	207	138	76	163	186	217	198	219	145	83	162	205	213	232	228	149	93
	6 AM - 7 AM	244	296	304	310	304	166	102	261	275	313	300	323	183	104	276	323	325	339	330	188	121
	7 AM - 8 AM	337	384	398	392	387	230	150	343	370	423	416	398	245	153	377	425	426	440	421	253	172
	8 AM - 9 AM	383	454	476	484	446	307	225	405	414	471	490	474	340	235	444	507	504	511	507	342	270
	9 AM - 10 AM	427	476	493	513	502	415	339	460	472	526	556	532	462	381	524	545	561	575	595	472	400
	10 AM - 11 AM	487	513	542	578	598	537	467	522	547	571	598	607	556	534	596	593	604	664	653	603	567
	11 AM - 12 PM	523	577	591	636	670	645	637	621	614	639	703	723	676	718	688	669	674	763	789	751	760
	12 PM - 1 PM	586	598	620	690	744	677	724	650	671	668	739	795	760	835	753	718	716	831	842	792	901
	1 PM - 2 PM	580	612	649	735	783	689	816	720	716	693	769	862	746	889	808	736	767	853	910	831	1,021
	2 PM - 3 PM	649	678	684	788	842	726	892	742	782	742	822	900	752	966	874	775	809	897	957	862	1,080
	3 PM - 4 PM	680	709	732	820	911	700	910	788	808	806	874	947	748	993	881	818	832	951	1,052	798	1,143
	4 PM - 5 PM	681	706	735	825	892	693	910	770	792	779	877	955	710	1,013	895	838	845	969	1,035	762	1,113
	5 PM - 6 PM	645	679	732	808	869	656	901	708	784	746	825	877	657	978	818	770	823	920	969	719	1,074
	6 PM - 7 PM	550	579	649	711	752	579	813	638	697	649	744	789	568	900	725	699	687	818	864	621	970
	7 PM - 8 PM	464	497	553	610	632	499	697	542	583	568	641	656	487	781	637	553	573	688	705	559	855
	8 PM - 9 PM	403	414	435	508	504	418	541	461	511	514	540	560	445	664	556	488	475	588	600	501	727
	9 PM - 10 PM	343	356	333	431	421	340	423	393	405	422	433	463	357	513	472	421	403	516	509	424	576
	10 PM - 11 PM	272	278	310	346	327	260	304	300	314	332	369	366	296	369	373	330	355	419	418	343	433
	11 PM - Midnight	228	229	268	277	253	204	212	238	244	269	285	304	216	246	290	270	280	329	331	261	311

Close 2 Lanes	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	303	393	408	418	464	415	299	341	380	411	433	469	453	305	440	449	462	464	534	501	367
	1 AM - 2 AM	238	304	316	323	349	330	213	248	341	328	346	359	332	219	296	356	363	412	431	349	258
	2 AM - 3 AM	197	251	265	282	296	250	165	208	262	280	292	321	254	174	245	302	313	356	368	282	203
	3 AM - 4 AM	175	246	244	259	275	244	156	182	227	253	294	303	248	146	202	266	291	327	336	266	164
	4 AM - 5 AM	200	259	292	284	316	229	148	217	260	286	312	326	233	143	233	294	293	330	311	262	168
	5 AM - 6 AM	309	407	406	406	413	277	151	327	372	434	396	439	290	166	325	410	425	463	457	298	187
	6 AM - 7 AM	487	592	609	620	607	332	205	521	550	627	600	646	366	209	552	645	650	677	660	377	243
	7 AM - 8 AM	673	768	796	784	773	460	301	687	739	846	832	795	491	306	753	849	853	879	843	506	344
	8 AM - 9 AM	765	908	952	968	892	614	450	810	827	942	980	948	680	471	887	1,015	1,007	1,021	1,013	683	539
	9 AM - 10 AM	854	952	985	1,026	1,004	831	679	921	945	1,053	1,112	1,063	925	762	1,049	1,091	1,123	1,150	1,190	943	799
	10 AM - 11 AM	974	1,027	1,083	1,156	1,196	1,073	935	1,044	1,093	1,142	1,197	1,214	1,112	1,067	1,192	1,185	1,207	1,328	1,305	1,205	1,133
	11 AM - 12 PM	1,046	1,154	1,181	1,271	1,339	1,290	1,273	1,243	1,228	1,278	1,405	1,445	1,351	1,437	1,376	1,338	1,349	1,525	1,578	1,501	1,520
	12 PM - 1 PM	1,173	1,195	1,239	1,380	1,488	1,354	1,448	1,300	1,342	1,336	1,479	1,590	1,521	1,670	1,506	1,435	1,432	1,662	1,685	1,583	1,802
	1 PM - 2 PM	1,160	1,223	1,298	1,470	1,565	1,378	1,632	1,440	1,431	1,385	1,539	1,723	1,492	1,778	1,616	1,472	1,533	1,705	1,820	1,662	2,041
	2 PM - 3 PM	1,297	1,357	1,367	1,577	1,684	1,452	1,785	1,486	1,563	1,484	1,644	1,801	1,503	1,933	1,748	1,551	1,619	1,794	1,913	1,723	2,159
	3 PM - 4 PM	1,359	1,418	1,464	1,641	1,822	1,400	1,820	1,576	1,616	1,611	1,748	1,893	1,495	1,986	1,762	1,635	1,665	1,902	2,103	1,596	2,285
	4 PM - 5 PM	1,361	1,413	1,470	1,650	1,784	1,385	1,819	1,540	1,583	1,557	1,755	1,909	1,421	2,026	1,789	1,675	1,689	1,938	2,070	1,525	2,226
	5 PM - 6 PM	1,290	1,359	1,465	1,617	1,738	1,313	1,802	1,415	1,568	1,492	1,649	1,753	1,314	1,956	1,636	1,540	1,646	1,841	1,938	1,438	2,148
	6 PM - 7 PM	1,100	1,157	1,298	1,421	1,504	1,159	1,625	1,275	1,393	1,297	1,488	1,578	1,135	1,800	1,450	1,398	1,374	1,636	1,727	1,242	1,940
	7 PM - 8 PM	927	993	1,107	1,221	1,264	998	1,394	1,085	1,165	1,137	1,282	1,313	974	1,562	1,274	1,107	1,145	1,375	1,409	1,118	1,709
	8 PM - 9 PM	806	828	869	1,015	1,008	835	1,082	921	1,022	1,028	1,080	1,119	889	1,328	1,113	975	950	1,176	1,199	1,002	1,454
	9 PM - 10 PM	685	711	666	863	841	679	846	787	811	844	865	925	713	1,027	944	842	806	1,032	1,018	849	1,151
	10 PM - 11 PM	544	556	619	693	654	521	608	600	629	664	738	732	592	737	746	661	710	839	836	686	865
	11 PM - Midnight	457	457	536	555	506	409	424	476	488	537	570	609	432	491	580	540	560	657	663	522	622

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

135 Vermilion

TO

140 Amherst - Oberlin

Route	I-80/I-90
Direction	EB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	219	219	219	240	257	254	206	239	230	222	243	251	261	204	181	213	209	229	263	264	200
	1 AM - 2 AM	152	171	176	200	209	174	136	178	176	181	197	191	191	149	138	165	170	189	205	197	131
	2 AM - 3 AM	116	137	143	165	175	151	110	135	157	158	159	166	148	105	107	134	138	159	164	149	103
	3 AM - 4 AM	111	119	135	151	162	136	80	105	136	138	157	165	132	90	93	120	136	143	153	123	82
	4 AM - 5 AM	129	133	159	163	169	130	83	123	158	163	180	165	131	83	109	137	140	159	166	127	79
	5 AM - 6 AM	174	194	202	223	230	151	94	173	210	221	215	227	154	97	161	195	197	208	217	147	82
	6 AM - 7 AM	269	297	313	320	337	201	115	282	316	340	341	326	183	116	267	281	295	313	312	170	104
	7 AM - 8 AM	376	390	414	438	425	250	168	406	438	479	484	446	255	178	359	390	399	424	405	246	176
	8 AM - 9 AM	442	470	489	532	491	365	257	489	533	548	554	534	361	270	394	441	461	488	478	336	283
	9 AM - 10 AM	531	530	559	575	598	486	399	552	558	590	624	619	505	438	456	488	511	549	525	449	471
	10 AM - 11 AM	616	603	621	658	705	629	599	628	612	675	697	699	660	662	549	542	556	605	610	610	673
	11 AM - 12 PM	719	691	718	773	828	824	826	735	688	744	738	844	843	894	608	644	611	699	726	736	853
	12 PM - 1 PM	800	762	757	866	905	908	992	819	753	784	809	909	957	1,071	687	696	667	759	803	785	953
	1 PM - 2 PM	840	793	784	907	987	947	1,132	874	805	827	888	967	1,011	1,177	720	706	714	784	850	792	999
	2 PM - 3 PM	875	846	857	953	1,043	955	1,200	884	838	854	962	1,044	986	1,223	776	749	730	849	924	848	1,045
	3 PM - 4 PM	887	891	847	966	1,149	972	1,164	941	890	948	1,046	1,098	1,024	1,297	793	775	759	867	974	792	1,048
	4 PM - 5 PM	866	904	860	974	1,134	881	1,180	937	931	985	1,064	1,059	987	1,204	786	784	794	909	993	750	1,063
	5 PM - 6 PM	808	831	826	949	1,018	795	1,171	899	902	953	1,003	1,008	873	1,127	739	733	781	871	962	716	1,016
	6 PM - 7 PM	736	745	750	829	899	701	1,010	752	752	793	846	913	760	1,062	657	639	669	762	848	624	933
	7 PM - 8 PM	612	604	636	718	770	618	875	591	618	651	720	778	653	936	521	531	523	649	721	562	802
	8 PM - 9 PM	512	515	545	612	645	522	805	496	515	544	605	639	572	778	454	437	460	552	578	479	651
	9 PM - 10 PM	417	427	446	517	555	455	618	439	429	462	525	537	476	599	374	370	389	466	483	435	510
	10 PM - 11 PM	338	348	368	419	436	343	444	371	343	368	437	437	389	473	301	300	332	393	369	371	371
	11 PM - Midnight	284	290	293	329	337	278	333	300	281	288	339	354	290	325	251	232	275	319	325	307	259

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	437	438	439	481	514	508	413	477	460	444	486	503	521	407	361	425	418	458	527	527	400
	1 AM - 2 AM	304	342	352	401	419	349	272	356	351	363	394	382	383	298	277	330	339	377	410	395	262
	2 AM - 3 AM	231	274	286	330	350	302	220	270	314	316	317	332	296	210	214	268	275	317	327	299	206
	3 AM - 4 AM	221	238	271	301	325	272	160	210	273	275	314	330	264	180	186	239	272	286	305	247	163
	4 AM - 5 AM	257	266	318	326	337	260	166	245	316	327	360	330	263	167	218	274	281	319	333	254	157
	5 AM - 6 AM	349	388	405	446	460	301	187	346	421	442	430	454	307	194	321	390	393	416	434	294	165
	6 AM - 7 AM	539	594	625	639	675	402	230	564	631	679	682	653	365	232	533	561	589	625	624	339	209
	7 AM - 8 AM	751	780	829	876	851	501	337	812	876	958	969	892	510	355	718	780	799	848	810	492	352
	8 AM - 9 AM	885	940	978	1,064	983	729	515	977	1,066	1,096	1,109	1,068	722	540	788	883	922	977	955	671	566
	9 AM - 10 AM	1,062	1,061	1,119	1,149	1,196	972	797	1,104	1,115	1,180	1,249	1,238	1,010	877	911	975	1,021	1,098	1,050	897	941
	10 AM - 11 AM	1,231	1,205	1,241	1,315	1,410	1,259	1,198	1,255	1,224	1,351	1,395	1,398	1,320	1,324	1,098	1,085	1,113	1,211	1,220	1,220	1,347
	11 AM - 12 PM	1,438	1,383	1,435	1,547	1,655	1,648	1,651	1,471	1,377	1,487	1,476	1,688	1,686	1,788	1,215	1,287	1,222	1,398	1,452	1,472	1,706
	12 PM - 1 PM	1,599	1,525	1,514	1,731	1,810	1,815	1,985	1,638	1,505	1,568	1,618	1,817	1,914	2,141	1,375	1,391	1,334	1,517	1,606	1,571	1,906
	1 PM - 2 PM	1,681	1,587	1,569	1,813	1,974	1,894	2,264	1,748	1,610	1,654	1,777	1,935	2,022	2,353	1,440	1,411	1,427	1,567	1,699	1,583	1,997
	2 PM - 3 PM	1,750	1,692	1,715	1,906	2,087	1,911	2,400	1,767	1,676	1,707	1,923	2,088	1,972	2,445	1,551	1,498	1,460	1,697	1,847	1,696	2,091
	3 PM - 4 PM	1,774	1,783	1,695	1,932	2,298	1,944	2,329	1,882	1,779	1,897	2,092	2,196	2,048	2,594	1,587	1,550	1,518	1,735	1,948	1,585	2,096
	4 PM - 5 PM	1,732	1,807	1,721	1,949	2,268	1,761	2,361	1,874	1,861	1,969	2,129	2,118	1,974	2,407	1,572	1,568	1,587	1,817	1,987	1,501	2,126
	5 PM - 6 PM	1,616	1,662	1,652	1,898	2,037	1,589	2,342	1,799	1,804	1,965	2,006	2,017	1,746	2,253	1,479	1,467	1,562	1,742	1,924	1,432	2,031
	6 PM - 7 PM	1,472	1,489	1,501	1,658	1,798	1,403	2,019	1,505	1,505	1,586	1,692	1,826	1,520	2,125	1,314	1,278	1,338	1,524	1,696	1,247	1,865
	7 PM - 8 PM	1,223	1,208	1,273	1,435	1,541	1,236	1,750	1,182	1,236	1,302	1,440	1,556	1,307	1,873	1,042	1,061	1,045	1,297	1,441	1,125	1,604
	8 PM - 9 PM	1,023	1,031	1,091	1,224	1,290	1,045	1,610	993	1,030	1,088	1,209	1,278	1,144	1,557	907	874	919	1,103	1,156	958	1,302
	9 PM - 10 PM	834	854	891	1,033	1,111	910	1,236	879	857	924	1,051	1,073	952	1,198	747	741	778	932	966	869	1,021
	10 PM - 11 PM	675	696	736	838	871	686	889	741	685	735	873	875	777	946	603	601	664	785	738	742	742
	11 PM - Midnight	568	580	585	658	675	557	666	600	563	576	677	707	580	651	503	463	550	637	650	615	518

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

135 Vermilion

TO

140 Amherst - Oberlin

Route	I-80/I-90
Direction	EB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

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Revision Date: 9/1/2022

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	190	209	206	223	234	225	171	151	190	193	215	206	213	169	149	194	190	190	201	185	122
	1 AM - 2 AM	131	175	160	168	192	168	127	121	171	165	160	180	155	151	101	158	162	150	178	151	91
	2 AM - 3 AM	105	144	132	146	170	135	102	95	135	136	142	157	128	84	91	134	135	143	140	126	71
	3 AM - 4 AM	93	127	131	144	155	119	91	84	124	133	139	143	120	69	86	126	134	137	153	110	66
	4 AM - 5 AM	109	141	151	147	159	120	84	103	142	148	152	167	125	76	107	154	151	155	160	114	68
	5 AM - 6 AM	169	201	211	215	219	132	90	161	197	200	219	212	141	84	146	199	208	204	215	125	75
	6 AM - 7 AM	255	296	302	312	299	163	105	251	303	306	298	314	178	116	223	289	303	303	303	152	99
	7 AM - 8 AM	343	385	404	403	380	220	147	334	383	389	410	407	246	169	325	363	380	401	390	203	139
	8 AM - 9 AM	394	442	474	482	455	320	233	405	452	453	482	460	310	272	379	433	448	441	417	277	218
	9 AM - 10 AM	461	497	507	528	538	448	372	460	485	481	514	487	438	447	402	485	481	490	468	384	340
	10 AM - 11 AM	534	532	550	590	602	568	567	486	508	538	561	553	596	594	445	524	545	524	527	496	503
	11 AM - 12 PM	628	604	615	683	711	702	792	563	564	599	629	660	742	782	505	581	627	571	597	618	678
	12 PM - 1 PM	696	653	662	751	782	748	927	622	614	609	682	722	774	848	576	615	655	626	672	666	766
	1 PM - 2 PM	707	660	702	786	807	734	1,005	645	634	633	712	767	784	871	613	638	685	645	708	691	831
	2 PM - 3 PM	768	699	741	848	885	728	1,041	689	654	681	779	847	767	925	649	685	713	701	750	714	862
	3 PM - 4 PM	827	737	758	888	935	712	1,056	733	678	698	792	887	742	969	673	747	730	747	811	712	874
	4 PM - 5 PM	804	759	777	881	958	686	1,022	733	714	717	800	893	718	917	670	738	746	749	822	652	832
	5 PM - 6 PM	724	700	776	859	941	631	970	660	669	710	776	890	684	884	615	679	695	723	759	613	752
	6 PM - 7 PM	631	617	666	751	837	592	898	574	553	598	677	766	581	757	515	582	574	623	710	535	673
	7 PM - 8 PM	521	492	547	619	667	504	723	490	448	498	566	612	491	623	447	491	495	523	570	439	562
	8 PM - 9 PM	432	409	467	517	586	426	588	418	376	394	487	551	411	526	378	414	432	429	475	338	457
	9 PM - 10 PM	392	346	392	447	466	359	474	348	301	342	403	434	357	409	311	344	402	364	375	299	359
	10 PM - 11 PM	310	302	323	372	364	303	346	294	265	317	314	363	297	277	267	276	309	280	304	227	267
	11 PM - Midnight	256	248	266	298	308	224	246	236	213	268	255	268	238	195	222	225	254	246	245	175	183

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	380	417	412	445	467	450	342	301	380	385	429	412	427	339	299	387	380	380	402	370	243
	1 AM - 2 AM	262	351	320	336	384	336	254	243	343	330	320	360	310	301	202	316	324	300	355	302	183
	2 AM - 3 AM	210	288	264	291	339	269	203	191	270	271	284	314	256	168	182	268	270	285	279	251	141
	3 AM - 4 AM	186	254	262	288	310	238	182	168	248	266	277	286	240	139	171	252	268	273	305	220	131
	4 AM - 5 AM	218	281	302	294	318	241	168	206	285	297	305	334	249	151	214	308	302	309	319	229	136
	5 AM - 6 AM	338	403	422	430	438	265	181	323	394	401	437	424	283	169	292	398	416	408	430	250	150
	6 AM - 7 AM	510	592	604	624	597	326	210	503	605	611	595	627	357	232	446	578	607	606	605	303	198
	7 AM - 8 AM	686	769	809	805	761	439	294	667	766	777	820	814	492	337	650	726	760	802	779	407	279
	8 AM - 9 AM	789	883	948	964	910	640	466	809	903	905	963	921	620	545	757	865	897	882	834	554	436
	9 AM - 10 AM	922	994	1,013	1,057	1,075	896	745	920	970	962	1,028	975	876	893	804	970	962	979	937	768	679
	10 AM - 11 AM	1,069	1,063	1,099	1,181	1,204	1,136	1,134	972	1,017	1,075	1,122	1,106	1,193	1,189	889	1,047	1,090	1,048	1,053	992	1,006
	11 AM - 12 PM	1,257	1,208	1,229	1,366	1,422	1,405	1,583	1,126	1,128	1,198	1,257	1,319	1,483	1,564	1,010	1,161	1,254	1,143	1,194	1,236	1,357
	12 PM - 1 PM	1,393	1,307	1,325	1,501	1,564	1,497	1,854	1,243	1,229	1,218	1,364	1,444	1,549	1,695	1,153	1,231	1,310	1,252	1,343	1,332	1,532
	1 PM - 2 PM	1,414	1,320	1,404	1,571	1,614	1,468	2,009	1,290	1,268	1,265	1,424	1,534	1,568	1,741	1,226	1,276	1,370	1,290	1,416	1,382	1,662
	2 PM - 3 PM	1,536	1,397	1,482	1,696	1,770	1,457	2,082	1,377	1,308	1,362	1,558	1,694	1,534	1,850	1,298	1,370	1,426	1,401	1,500	1,427	1,724
	3 PM - 4 PM	1,653	1,473	1,516	1,776	1,871	1,424	2,112	1,465	1,356	1,396	1,583	1,775	1,484	1,937	1,345	1,493	1,460	1,495	1,621	1,424	1,747
	4 PM - 5 PM	1,609	1,518	1,554	1,762	1,915	1,371	2,043	1,467	1,427	1,434	1,599	1,785	1,435	1,833	1,340	1,475	1,493	1,498	1,643	1,305	1,664
	5 PM - 6 PM	1,449	1,400	1,551	1,718	1,881	1,263	1,940	1,319	1,337	1,420	1,552	1,780	1,368	1,767	1,231	1,358	1,389	1,445	1,518	1,226	1,504
	6 PM - 7 PM	1,262	1,233	1,331	1,501	1,673	1,183	1,797	1,149	1,106	1,197	1,353	1,532	1,163	1,513	1,030	1,165	1,148	1,245	1,420	1,070	1,345
	7 PM - 8 PM	1,042	985	1,094	1,237	1,334	1,008	1,447	980	896	997	1,131	1,223	982	1,246	893	981	989	1,045	1,139	877	1,124
	8 PM - 9 PM	864	818	933	1,035	1,173	851	1,176	836	752	787	973	1,102	823	1,051	757	827	864	859	949	676	914
	9 PM - 10 PM	785	691	784	894	931	719	947	695	602	684	806	868	715	818	622	688	805	728	750	597	718
	10 PM - 11 PM	619	604	647	744	728	606	991	588	529	633	629	727	593	554	535	552	619	559	608	455	534
	11 PM - Midnight	513	495	532	596	617	447	491	473	425	535	510	536	476	391	444	451	509	492	490	350	366

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

140 Amherst - Oberlin

TO

135 Vermilion

Route	I-80/I-90
Direction	WB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

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Revision Date: 9/1/2022

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	107	185	200	201	200	169	97	125	209	213	205	164	172	116	150	226	216	224	209	189	125
	1 AM - 2 AM	86	135	150	179	160	129	75	97	172	168	154	115	136	80	113	189	172	175	178	143	89
	2 AM - 3 AM	66	127	128	136	135	110	55	84	152	146	128	117	109	63	79	147	150	150	144	108	64
	3 AM - 4 AM	66	120	132	131	127	95	44	71	126	134	119	111	89	57	76	133	129	128	121	98	56
	4 AM - 5 AM	74	121	135	134	141	93	47	84	146	146	127	109	96	53	98	144	150	139	146	95	54
	5 AM - 6 AM	92	158	165	172	168	103	46	119	179	182	151	137	111	55	126	185	188	184	185	116	53
	6 AM - 7 AM	154	236	252	250	222	133	55	205	268	248	233	189	131	74	203	276	259	276	249	160	70
	7 AM - 8 AM	214	324	335	343	325	177	90	299	387	357	314	275	202	108	303	387	396	387	373	224	112
	8 AM - 9 AM	277	419	411	423	385	265	125	379	485	431	381	342	297	157	368	478	464	467	451	321	167
	9 AM - 10 AM	319	457	449	460	424	356	186	403	525	473	412	402	385	232	416	509	509	529	514	428	253
	10 AM - 11 AM	356	488	479	480	475	469	290	473	543	492	461	479	495	355	478	542	541	567	587	547	392
	11 AM - 12 PM	405	515	498	517	539	564	388	511	551	505	478	522	575	469	505	577	575	616	666	634	529
	12 PM - 1 PM	423	547	495	536	587	583	481	514	577	520	500	589	613	527	544	599	592	664	721	687	669
	1 PM - 2 PM	450	571	521	562	635	571	542	547	573	526	492	631	591	587	559	620	615	673	766	687	734
	2 PM - 3 PM	485	592	548	606	639	579	615	564	601	539	526	657	565	631	585	636	631	696	791	651	756
	3 PM - 4 PM	511	633	580	631	695	574	615	604	568	566	549	667	552	647	612	658	665	734	855	618	802
	4 PM - 5 PM	523	615	582	628	693	538	610	608	594	571	547	702	522	643	620	667	677	758	836	604	819
	5 PM - 6 PM	504	584	577	584	675	498	582	591	604	536	511	722	478	641	616	629	642	716	852	544	783
	6 PM - 7 PM	438	504	490	519	630	417	539	508	512	455	428	622	423	560	559	582	573	642	750	471	716
	7 PM - 8 PM	397	436	413	462	495	336	450	452	461	406	360	514	360	466	467	486	501	548	623	397	614
	8 PM - 9 PM	337	365	353	372	389	268	368	394	396	337	305	402	292	389	416	416	416	456	497	319	463
	9 PM - 10 PM	284	315	305	305	315	217	272	329	324	301	255	307	243	291	342	341	342	371	377	272	363
	10 PM - 11 PM	257	267	281	262	251	168	182	288	283	256	226	250	190	222	318	308	315	310	307	213	266
	11 PM - Midnight	220	240	244	231	211	129	134	263	237	238	171	205	141	169	268	260	274	270	248	148	200

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	215	370	400	401	400	338	194	251	418	427	409	328	344	232	300	452	431	448	418	377	250
	1 AM - 2 AM	172	269	300	358	321	257	150	193	344	335	308	231	272	161	225	377	343	350	357	286	177
	2 AM - 3 AM	131	253	256	272	270	219	111	169	304	293	257	234	217	127	157	294	300	299	288	217	129
	3 AM - 4 AM	133	239	264	262	254	191	89	142	252	267	238	223	177	115	152	266	257	255	243	197	112
	4 AM - 5 AM	148	243	269	269	282	186	94	167	293	293	253	217	192	106	195	288	299	277	292	190	107
	5 AM - 6 AM	183	316	331	344	336	207	93	238	359	364	302	275	222	110	251	370	376	369	370	231	105
	6 AM - 7 AM	309	472	504	501	445	267	111	411	536	496	466	379	261	147	407	552	518	551	498	321	141
	7 AM - 8 AM	428	648	671	686	650	355	181	598	775	715	627	551	404	216	605	774	791	774	747	448	224
	8 AM - 9 AM	554	838	821	846	770	530	251	758	970	863	762	685	594	315	736	956	928	933	901	642	333
	9 AM - 10 AM	639	913	899	921	847	712	373	807	1,051	946	824	804	771	464	833	1,018	1,019	1,057	1,028	856	505
	10 AM - 11 AM	712	975	959	960	949	937	579	945	1,086	985	922	957	990	710	957	1,084	1,082	1,134	1,175	1,093	783
	11 AM - 12 PM	811	1,030	996	1,033	1,077	1,128	775	1,022	1,102	1,011	955	1,045	1,150	937	1,010	1,154	1,150	1,231	1,333	1,268	1,058
	12 PM - 1 PM	847	1,093	990	1,072	1,174	1,167	963	1,028	1,154	1,040	1,000	1,177	1,227	1,054	1,088	1,198	1,184	1,328	1,442	1,374	1,337
	1 PM - 2 PM	900	1,141	1,041	1,124	1,270	1,142	1,084	1,095	1,148	1,052	984	1,262	1,183	1,175	1,118	1,239	1,229	1,346	1,531	1,375	1,467
	2 PM - 3 PM	969	1,185	1,096	1,213	1,278	1,158	1,230	1,129	1,202	1,077	1,051	1,315	1,130	1,262	1,170	1,272	1,262	1,391	1,583	1,303	1,512
	3 PM - 4 PM	1,021	1,267	1,160	1,262	1,389	1,149	1,230	1,208	1,136	1,132	1,097	1,334	1,103	1,294	1,224	1,316	1,330	1,469	1,709	1,235	1,604
	4 PM - 5 PM	1,046	1,229	1,164	1,256	1,385	1,076	1,219	1,216	1,189	1,142	1,095	1,404	1,045	1,286	1,239	1,335	1,355	1,517	1,673	1,209	1,638
	5 PM - 6 PM	1,008	1,167	1,153	1,168	1,351	996	1,164	1,182	1,208	1,072	1,021	1,445	945	1,281	1,232	1,258	1,284	1,431	1,704	1,088	1,566
	6 PM - 7 PM	876	1,008	980	1,038	1,260	835	1,078	1,016	1,023	911	857	1,244	845	1,119	1,118	1,163	1,146	1,283	1,499	941	1,432
	7 PM - 8 PM	794	873	825	925	991	672	900	905	921	813	719	1,027	720	931	934	971	1,002	1,096	1,246	794	1,229
	8 PM - 9 PM	673	731	705	745	778	536	736	788	791	673	610	805	583	778	831	831	833	913	995	638	926
	9 PM - 10 PM	568	630	610	610	630	434	545	657	648	603	510	614	486	581	683	681	683	743	753	545	726
	10 PM - 11 PM	513	535	561	525	501	336	364	576	565	513	452	500	379	444	636	615	630	619	614	425	531
	11 PM - Midnight	441	479	487	461	423	259	268	526	473	476	341	411	282	338	535	521	548	540	497	297	400

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

140 Amherst - Oberlin

TO

135 Vermilion

Route	I-80/I-90
Direction	WB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

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Revision Date: 9/1/2022

Close 1 Lane	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	142	248	238	248	241	217	135	160	218	232	237	245	239	140	171	250	259	257	278	270	163
	1 AM - 2 AM	97	186	185	188	190	161	92	112	177	189	188	202	169	97	123	201	202	209	211	191	121
	2 AM - 3 AM	72	160	151	161	165	130	81	89	139	161	154	160	129	77	95	160	163	177	184	158	91
	3 AM - 4 AM	109	145	131	138	139	113	61	90	127	145	144	161	109	64	89	147	152	163	164	127	70
	4 AM - 5 AM	95	153	154	150	158	117	60	96	135	166	160	157	119	61	105	154	172	173	170	136	68
	5 AM - 6 AM	130	187	192	192	194	142	62	147	177	196	197	198	135	63	146	203	218	220	214	147	67
	6 AM - 7 AM	224	285	284	288	284	179	85	235	273	306	311	300	188	89	243	300	327	325	304	196	99
	7 AM - 8 AM	308	400	401	380	386	259	131	338	382	421	424	407	284	141	341	432	430	440	415	294	154
	8 AM - 9 AM	379	492	495	496	467	387	192	409	466	526	529	504	414	222	430	550	544	558	535	425	243
	9 AM - 10 AM	434	544	545	538	565	519	301	485	534	567	602	621	568	343	533	616	624	648	659	595	409
	10 AM - 11 AM	495	587	586	627	652	655	442	554	602	641	667	745	697	510	627	674	681	715	812	779	602
	11 AM - 12 PM	533	636	608	678	742	741	600	613	650	664	723	831	791	648	694	728	745	833	936	946	779
	12 PM - 1 PM	562	636	624	707	804	791	700	648	701	703	765	894	790	785	733	768	785	873	1,013	976	900
	1 PM - 2 PM	583	636	648	734	828	750	791	677	748	707	797	951	787	824	770	757	800	905	1,047	943	984
	2 PM - 3 PM	616	677	681	775	893	748	850	711	777	760	840	966	760	874	770	795	801	942	1,087	912	1,011
	3 PM - 4 PM	657	693	712	801	920	752	876	722	802	785	887	1,001	736	904	808	797	850	973	1,136	846	1,014
	4 PM - 5 PM	649	715	727	821	942	724	910	744	824	821	897	1,024	684	867	819	800	869	960	1,104	806	999
	5 PM - 6 PM	632	701	702	811	937	648	867	729	764	782	830	1,002	614	845	810	786	824	958	1,122	722	925
	6 PM - 7 PM	561	615	626	731	817	569	773	624	673	667	730	938	555	752	688	684	714	798	964	643	851
	7 PM - 8 PM	503	524	532	606	661	495	659	532	572	559	621	754	491	665	580	575	601	688	802	544	709
	8 PM - 9 PM	423	437	426	485	539	394	514	448	472	452	509	608	384	565	483	483	505	597	647	468	592
	9 PM - 10 PM	343	365	361	403	438	322	404	360	391	370	416	447	321	442	393	400	399	503	515	380	476
	10 PM - 11 PM	287	307	299	341	342	267	311	329	326	316	350	365	252	302	328	343	339	388	399	303	354
	11 PM - Midnight	250	272	273	300	264	190	210	273	270	286	290	300	185	224	284	301	296	351	330	231	259

Close 2 Lanes	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	284	496	476	496	481	434	271	319	436	465	474	490	477	280	342	499	518	515	557	541	327
	1 AM - 2 AM	193	371	371	375	381	322	183	223	354	377	375	404	338	195	245	403	405	418	423	383	241
	2 AM - 3 AM	144	321	302	322	331	260	163	177	277	322	309	320	257	154	190	321	325	355	369	316	182
	3 AM - 4 AM	217	289	262	277	278	225	121	179	253	289	289	322	217	129	179	295	304	326	329	253	141
	4 AM - 5 AM	191	307	307	299	315	235	120	192	269	331	319	315	238	122	209	308	343	347	341	272	136
	5 AM - 6 AM	260	375	384	383	388	284	125	294	354	392	394	395	269	126	292	405	437	440	428	294	134
	6 AM - 7 AM	448	570	568	575	567	359	169	469	546	613	621	600	375	178	486	600	654	650	608	393	198
	7 AM - 8 AM	617	799	801	761	772	517	262	676	763	843	849	813	567	282	682	863	859	880	830	588	308
	8 AM - 9 AM	758	983	991	991	934	774	383	818	932	1,052	1,057	1,008	828	443	859	1,100	1,089	1,117	1,070	850	486
	9 AM - 10 AM	868	1,087	1,090	1,076	1,131	1,037	601	969	1,068	1,135	1,204	1,242	1,136	686	1,066	1,232	1,247	1,295	1,319	1,191	819
	10 AM - 11 AM	989	1,174	1,171	1,253	1,304	1,311	885	1,108	1,205	1,282	1,334	1,489	1,393	1,020	1,253	1,348	1,363	1,431	1,624	1,558	1,203
	11 AM - 12 PM	1,067	1,273	1,216	1,356	1,483	1,483	1,200	1,226	1,301	1,328	1,447	1,662	1,582	1,297	1,388	1,457	1,490	1,666	1,872	1,891	1,557
	12 PM - 1 PM	1,124	1,272	1,248	1,413	1,609	1,581	1,399	1,295	1,402	1,406	1,531	1,789	1,580	1,571	1,466	1,536	1,569	1,745	2,026	1,953	1,800
	1 PM - 2 PM	1,166	1,272	1,296	1,467	1,655	1,500	1,582	1,353	1,495	1,413	1,593	1,902	1,574	1,648	1,541	1,514	1,600	1,811	2,094	1,885	1,969
	2 PM - 3 PM	1,231	1,354	1,363	1,550	1,787	1,495	1,700	1,422	1,553	1,519	1,681	1,933	1,520	1,749	1,541	1,591	1,603	1,884	2,174	1,825	2,021
	3 PM - 4 PM	1,314	1,386	1,424	1,602	1,840	1,504	1,751	1,443	1,603	1,571	1,773	2,002	1,471	1,807	1,616	1,593	1,699	1,946	2,272	1,691	2,028
	4 PM - 5 PM	1,297	1,431	1,454	1,641	1,883	1,449	1,820	1,489	1,648	1,643	1,794	2,048	1,367	1,735	1,637	1,600	1,739	1,921	2,209	1,612	1,998
	5 PM - 6 PM	1,263	1,401	1,404	1,622	1,873	1,297	1,734	1,457	1,527	1,565	1,659	2,003	1,267	1,690	1,620	1,571	1,649	1,916	2,243	1,444	1,849
	6 PM - 7 PM	1,122	1,230	1,252	1,462	1,633	1,137	1,546	1,248	1,346	1,333	1,460	1,876	1,109	1,504	1,377	1,367	1,427	1,595	1,928	1,286	1,701
	7 PM - 8 PM	1,006	1,048	1,065	1,212	1,323	990	1,317	1,065	1,144	1,119	1,242	1,508	982	1,329	1,159	1,149	1,203	1,376	1,603	1,089	1,418
	8 PM - 9 PM	845	874	851	970	1,077	787	1,029	897	944	904	1,019	1,215	768	1,130	967	966	1,009	1,193	1,294	936	1,185
	9 PM - 10 PM	686	730	722	806	876	644	808	721	782	739	833	894	642	884	786	800	799	1,005	1,031	760	952
	10 PM - 11 PM	573	613	598	682	684	534	621	659	652	633	701	730	503	603	657	685	678	776	797	606	707
	11 PM - Midnight	500	544	545	600	528	380	420	545	539	572	580	600	369	448	569	602	591	703	659	461	517

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

140 Amherst - Oberlin

TO

135 Vermilion

Route	I-80/I-90
Direction	WB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	178	220	258	261	291	260	185	185	255	259	263	275	271	190	178	238	235	239	259	256	158
	1 AM - 2 AM	140	172	194	214	219	205	133	136	198	212	207	203	200	150	126	180	193	210	194	193	107
	2 AM - 3 AM	105	137	166	181	182	144	94	106	170	161	181	159	145	113	94	137	166	166	163	150	75
	3 AM - 4 AM	94	134	137	154	159	122	77	97	158	143	159	145	129	79	93	132	138	147	155	129	67
	4 AM - 5 AM	100	134	176	169	171	131	79	109	152	172	170	166	133	67	99	144	158	156	169	129	60
	5 AM - 6 AM	156	178	207	209	211	155	84	146	197	188	202	231	144	74	138	182	183	200	213	140	67
	6 AM - 7 AM	245	278	289	304	298	196	105	223	288	295	309	300	189	99	248	279	277	296	276	195	89
	7 AM - 8 AM	333	384	402	424	406	258	150	331	429	411	419	403	287	151	341	376	400	405	405	275	136
	8 AM - 9 AM	412	482	524	553	535	416	247	418	531	533	562	535	443	260	427	467	474	505	485	426	223
	9 AM - 10 AM	525	569	617	663	704	627	418	527	617	633	661	659	662	402	512	538	564	579	585	582	360
	10 AM - 11 AM	630	650	698	780	834	827	618	624	683	708	765	812	860	609	619	612	626	668	693	734	522
	11 AM - 12 PM	726	748	753	856	964	969	845	736	755	800	874	948	1,007	833	691	656	657	727	838	844	665
	12 PM - 1 PM	779	791	805	897	1,067	1,024	997	774	781	832	921	1,013	1,017	996	717	673	660	762	925	875	793
	1 PM - 2 PM	784	795	840	946	1,092	972	1,076	786	790	844	964	1,113	999	1,075	712	696	705	798	970	838	813
	2 PM - 3 PM	808	833	822	964	1,169	978	1,109	825	825	848	968	1,149	926	1,099	734	720	734	834	1,018	824	855
	3 PM - 4 PM	824	834	876	1,004	1,182	955	1,134	839	827	871	1,006	1,160	890	1,069	779	743	750	849	1,047	813	892
	4 PM - 5 PM	860	869	899	1,005	1,171	908	1,120	837	843	903	986	1,155	901	1,071	742	716	772	903	1,099	728	870
	5 PM - 6 PM	817	835	858	1,003	1,140	821	1,036	817	833	847	960	1,181	843	1,045	725	746	757	885	1,135	670	901
	6 PM - 7 PM	702	701	749	844	1,040	723	910	725	697	723	850	1,043	741	951	644	643	652	765	989	624	999
	7 PM - 8 PM	587	614	639	724	845	584	788	601	593	621	735	840	623	817	552	536	537	623	835	504	816
	8 PM - 9 PM	537	523	516	597	653	514	641	494	498	521	606	613	492	644	416	452	438	554	613	412	661
	9 PM - 10 PM	428	421	426	498	541	414	473	398	398	433	486	499	404	494	382	372	380	455	468	342	523
	10 PM - 11 PM	352	368	353	393	420	332	358	340	359	366	378	420	328	373	323	319	313	383	387	263	358
	11 PM - Midnight	319	311	302	352	335	239	266	300	301	313	324	350	258	251	302	274	281	336	317	217	235

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	355	441	517	521	582	520	370	371	510	518	526	549	543	380	355	476	469	478	518	512	315
	1 AM - 2 AM	279	343	388	427	438	410	267	272	396	425	414	406	400	301	251	360	386	419	389	386	215
	2 AM - 3 AM	209	275	331	361	364	288	188	213	340	321	362	319	290	227	188	275	332	332	327	299	150
	3 AM - 4 AM	189	268	274	308	317	245	155	195	316	286	318	290	257	158	187	264	275	295	309	257	135
	4 AM - 5 AM	199	267	352	338	342	262	158	218	305	343	340	333	265	133	197	288	315	312	337	258	120
	5 AM - 6 AM	313	356	414	419	422	310	168	292	394	377	404	462	289	147	276	364	365	400	425	280	135
	6 AM - 7 AM	490	555	579	607	597	392	209	447	576	591	617	599	378	197	496	558	555	593	551	390	177
	7 AM - 8 AM	665	768	804	847	811	517	300	662	858	822	839	806	575	302	682	752	799	809	809	550	272
	8 AM - 9 AM	825	964	1,047	1,106	1,070	833	495	835	1,063	1,067	1,124	1,070	886	519	855	934	949	1,010	970	851	446
	9 AM - 10 AM	1,051	1,138	1,234	1,326	1,407	1,253	836	1,053	1,234	1,266	1,322	1,318	1,323	805	1,024	1,077	1,127	1,159	1,170	1,163	721
	10 AM - 11 AM	1,261	1,299	1,396	1,560	1,667	1,653	1,237	1,248	1,366	1,416	1,530	1,625	1,721	1,217	1,238	1,223	1,251	1,337	1,386	1,468	1,045
	11 AM - 12 PM	1,452	1,495	1,506	1,713	1,928	1,937	1,690	1,473	1,510	1,599	1,748	1,896	2,015	1,666	1,381	1,312	1,314	1,453	1,676	1,688	1,329
	12 PM - 1 PM	1,558	1,582	1,610	1,795	2,133	2,047	1,995	1,548	1,561	1,663	1,842	2,026	2,034	1,992	1,433	1,346	1,320	1,524	1,849	1,750	1,586
	1 PM - 2 PM	1,568	1,589	1,679	1,892	2,184	1,944	2,152	1,572	1,580	1,688	1,927	2,226	1,997	2,151	1,425	1,392	1,410	1,596	1,940	1,676	1,627
	2 PM - 3 PM	1,615	1,666	1,643	1,928	2,338	1,956	2,218	1,650	1,650	1,695	1,935	2,298	1,852	2,197	1,469	1,440	1,468	1,669	2,035	1,648	1,709
	3 PM - 4 PM	1,648	1,667	1,752	2,009	2,363	1,910	2,268	1,677	1,654	1,741	2,012	2,319	1,779	2,138	1,558	1,485	1,500	1,698	2,094	1,625	1,784
	4 PM - 5 PM	1,721	1,739	1,799	2,011	2,343	1,816	2,239	1,673	1,685	1,805	1,972	2,309	1,801	2,142	1,485	1,431	1,545	1,806	2,199	1,455	1,740
	5 PM - 6 PM	1,634	1,671	1,716	2,007	2,280	1,641	2,072	1,634	1,665	1,694	1,920	2,262	1,687	2,091	1,450	1,492	1,513	1,771	2,271	1,340	1,802
	6 PM - 7 PM	1,405	1,403	1,498	1,688	2,079	1,446	1,821	1,450	1,394	1,445	1,700	2,085	1,481	1,902	1,287	1,285	1,303	1,531	1,978	1,249	1,998
	7 PM - 8 PM	1,174	1,228	1,279	1,447	1,691	1,168	1,576	1,201	1,186	1,243	1,471	1,680	1,245	1,633	1,103	1,071	1,074	1,246	1,670	1,007	1,632
	8 PM - 9 PM	1,074	1,046	1,031	1,194	1,306	1,027	1,283	988	996	1,041	1,212	1,226	983	1,288	832	903	875	1,108	1,225	823	1,323
	9 PM - 10 PM	855	843	852	997	1,082	829	946	796	796	865	973	999	807	989	764	744	759	909	935	685	1,045
	10 PM - 11 PM	704	735	706	785	839	665	716	679	717	731	757	839	656	747	646	639	627	766	774	527	716
	11 PM - Midnight	637	622	603	705	670	478	532	600	601	625	648	699	516	501	604	548	562	673	634	433	469

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

140 Amherst - Oberlin

TO

135 Vermilion

Route	I-80/I-90
Direction	WB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	152	241	228	235	268	249	139	149	223	217	205	223	217	137	135	226	229	222	223	203	110
	1 AM - 2 AM	113	201	187	196	215	174	101	106	182	186	186	188	163	129	98	184	198	184	177	159	89
	2 AM - 3 AM	91	151	170	163	173	136	82	83	153	149	154	159	134	68	83	157	149	143	153	124	65
	3 AM - 4 AM	86	151	146	145	154	119	66	86	147	136	145	136	116	57	77	138	140	146	147	125	59
	4 AM - 5 AM	105	156	158	155	161	119	59	97	158	159	160	157	121	53	94	151	156	151	158	102	57
	5 AM - 6 AM	136	195	190	197	200	138	63	142	191	199	206	193	128	61	131	194	196	191	189	128	65
	6 AM - 7 AM	227	289	294	298	279	172	79	232	288	278	297	290	177	83	209	285	299	274	283	159	81
	7 AM - 8 AM	327	397	396	408	392	257	116	333	406	393	399	383	256	122	306	376	369	372	370	247	112
	8 AM - 9 AM	397	509	472	481	473	393	212	411	483	470	474	463	375	201	347	473	454	465	455	341	180
	9 AM - 10 AM	474	541	544	563	583	574	339	464	536	513	536	529	507	291	412	536	529	532	508	464	272
	10 AM - 11 AM	563	605	600	612	722	729	490	556	567	570	613	636	668	437	466	572	570	564	582	562	423
	11 AM - 12 PM	627	661	626	682	846	817	657	593	611	593	643	743	736	581	524	616	608	594	671	686	575
	12 PM - 1 PM	662	675	679	767	909	816	763	644	628	603	692	809	766	699	550	642	650	611	719	683	704
	1 PM - 2 PM	687	687	682	786	970	810	848	626	657	642	707	807	733	704	549	657	687	675	754	700	767
	2 PM - 3 PM	721	710	701	799	1,016	783	862	646	703	636	757	879	707	712	582	681	688	698	792	683	778
	3 PM - 4 PM	748	736	765	845	1,018	753	927	674	706	700	789	918	714	818	628	719	754	726	843	696	776
	4 PM - 5 PM	739	731	759	880	1,062	703	901	710	680	702	818	938	700	794	631	742	763	738	823	650	756
	5 PM - 6 PM	730	718	729	882	1,053	646	880	691	676	679	761	930	634	762	590	687	719	701	801	569	730
	6 PM - 7 PM	633	639	631	750	987	562	817	584	577	590	649	830	538	779	519	591	611	580	687	477	643
	7 PM - 8 PM	533	533	523	627	750	472	678	495	479	487	563	680	435	694	433	485	513	499	610	418	575
	8 PM - 9 PM	452	440	444	541	566	381	567	396	398	403	484	551	377	510	376	416	438	412	488	322	452
	9 PM - 10 PM	364	370	372	441	449	322	472	344	325	343	400	415	301	402	340	363	360	373	393	266	343
	10 PM - 11 PM	319	294	306	361	359	252	315	295	292	292	304	358	241	295	336	316	320	316	318	220	239
	11 PM - Midnight	281	271	275	310	302	189	209	257	258	266	284	297	177	185	273	272	272	265	260	159	181

Close 2 Lanes	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	304	481	456	470	536	498	277	299	447	434	410	446	433	274	269	452	459	443	445	406	220
	1 AM - 2 AM	226	403	375	391	430	348	202	212	365	371	373	377	327	257	196	369	396	369	354	318	179
	2 AM - 3 AM	182	302	339	326	345	272	165	166	306	298	307	317	268	137	166	314	298	287	306	247	130
	3 AM - 4 AM	173	303	293	291	308	237	131	172	293	272	290	271	233	113	154	277	279	291	294	249	118
	4 AM - 5 AM	209	311	317	311	321	238	117	193	317	318	321	314	243	105	188	303	312	302	316	204	114
	5 AM - 6 AM	273	391	380	393	400	275	126	285	382	399	412	387	255	123	262	388	393	381	378	255	129
6 AM - 7 AM	454	579	587	597	558	343	159	464	575	555	594	579	354	165	417	570	599	547	567	318	161	
7 AM - 8 AM	654	794	792	816	783	514	233	665	812	786	798	765	512	243	613	751	737	743	739	494	223	
8 AM - 9 AM	794	1,018	944	962	945	785	425	821	965	940	947	927	751	403	694	946	907	929	909	682	359	
9 AM - 10 AM	949	1,082	1,088	1,125	1,166	1,148	678	928	1,072	1,026	1,071	1,059	1,014	583	825	1,072	1,057	1,065	1,015	927	544	
10 AM - 11 AM	1,125	1,211	1,200	1,225	1,444	1,458	980	1,113	1,134	1,140	1,226	1,271	1,336	873	932	1,145	1,140	1,128	1,164	1,123	845	
11 AM - 12 PM	1,255	1,322	1,252	1,363	1,692	1,634	1,313	1,187	1,222	1,187	1,285	1,486	1,471	1,162	1,047	1,232	1,216	1,187	1,341	1,371	1,150	
12 PM - 1 PM	1,324	1,349	1,359	1,534	1,818	1,631	1,526	1,288	1,256	1,207	1,384	1,619	1,531	1,397	1,100	1,283	1,301	1,221	1,438	1,366	1,407	
1 PM - 2 PM	1,375	1,375	1,364	1,572	1,939	1,620	1,695	1,252	1,314	1,283	1,414	1,614	1,466	1,409	1,098	1,314	1,374	1,349	1,507	1,401	1,534	
2 PM - 3 PM	1,442	1,420	1,401	1,597	2,031	1,565	1,725	1,291	1,406	1,272	1,513	1,757	1,415	1,425	1,165	1,361	1,375	1,396	1,584	1,366	1,557	
3 PM - 4 PM	1,496	1,472	1,531	1,690	2,036	1,505	1,855	1,349	1,411	1,399	1,579	1,836	1,427	1,635	1,255	1,438	1,507	1,453	1,686	1,392	1,553	
4 PM - 5 PM	1,478	1,462	1,517	1,760	2,123	1,406	1,802	1,421	1,360	1,403	1,635	1,876	1,399	1,587	1,261	1,483	1,525	1,476	1,646	1,301	1,513	
5 PM - 6 PM	1,461	1,436	1,458	1,763	2,106	1,291	1,759	1,383	1,351	1,358	1,521	1,859	1,269	1,524	1,180	1,375	1,437	1,402	1,601	1,138	1,459	
6 PM - 7 PM	1,265	1,278	1,262	1,501	1,975	1,123	1,634	1,169	1,154	1,179	1,297	1,661	1,075	1,558	1,037	1,183	1,221	1,160	1,373	953	1,286	
7 PM - 8 PM	1,066	1,066	1,046	1,254	1,499	944	1,355	989	959	974	1,126	1,359	871	1,387	866	969	1,026	998	1,219	836	1,150	
8 PM - 9 PM	904	880	887	1,082	1,131	761	1,135	792	796	805	969	1,102	755	1,019	753	831	876	824	976	644	905	
9 PM - 10 PM	727	740	743	882	899	644	944	687	650	685	799	830	602	805	680	726	719	745	786	532	686	
10 PM - 11 PM	638	589	612	721	719	504	629	590	583	583	609	717	482	589	672	631	640	632	636	440	477	
11 PM - Midnight	562	541	550	619	604	378	418	513	516	531	568	595	354	369	546	543	545	530	519	318	362	

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

140 Amherst - Oberlin

TO

142 Lorain County West

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

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2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
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Revision Date: 9/1/2022

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	106	155	164	164	172	152	113	133	178	195	169	135	170	118	160	188	191	194	198	200	142
	1 AM - 2 AM	87	125	140	132	147	121	87	99	146	157	140	119	134	90	117	149	153	155	159	152	125
	2 AM - 3 AM	74	104	113	117	117	94	70	83	126	124	115	105	104	68	95	126	128	147	150	116	76
	3 AM - 4 AM	71	102	114	121	122	100	57	82	110	128	120	111	97	62	99	123	132	145	140	113	72
	4 AM - 5 AM	93	128	137	150	146	91	58	102	136	148	146	125	104	63	113	155	158	164	161	114	67
	5 AM - 6 AM	148	200	213	217	210	120	71	182	220	225	199	174	124	75	185	241	235	244	243	146	80
	6 AM - 7 AM	260	340	346	350	326	164	84	289	377	364	322	248	164	99	320	382	379	386	375	185	101
	7 AM - 8 AM	339	443	465	453	437	196	114	420	501	519	421	378	225	143	458	527	524	534	491	242	149
	8 AM - 9 AM	357	454	465	457	451	249	166	445	521	483	432	395	302	214	464	527	530	560	510	325	215
	9 AM - 10 AM	366	462	471	460	444	346	250	451	498	479	422	419	401	294	448	494	529	557	529	454	341
	10 AM - 11 AM	399	475	466	475	474	451	354	481	510	482	447	459	511	418	510	538	534	576	577	573	479
	11 AM - 12 PM	442	507	508	516	502	554	458	542	530	523	497	512	596	548	552	558	596	635	660	697	634
	12 PM - 1 PM	495	534	548	562	544	614	537	586	553	545	526	567	629	644	611	595	628	655	706	739	742
	1 PM - 2 PM	512	562	564	588	586	610	610	613	587	546	550	630	622	701	622	647	647	692	758	731	813
	2 PM - 3 PM	574	587	575	631	645	605	649	629	632	601	586	694	624	726	666	658	672	762	843	735	885
	3 PM - 4 PM	611	623	627	669	692	612	691	718	695	640	610	743	645	737	718	709	734	815	927	752	947
	4 PM - 5 PM	611	622	671	686	721	598	714	713	707	663	619	760	593	753	732	732	780	829	940	709	928
	5 PM - 6 PM	578	629	668	665	729	545	617	684	695	628	586	759	558	728	715	737	792	811	937	655	877
	6 PM - 7 PM	489	530	542	534	641	469	511	562	575	522	471	666	480	606	588	589	646	710	804	556	808
	7 PM - 8 PM	415	419	434	439	523	389	430	457	476	424	383	528	407	500	476	490	496	561	661	451	666
	8 PM - 9 PM	334	350	371	387	450	313	350	394	405	354	315	448	329	410	412	412	423	478	518	369	524
	9 PM - 10 PM	279	286	302	325	337	258	281	326	323	303	259	353	268	313	348	342	359	398	428	309	411
	10 PM - 11 PM	239	230	245	267	261	205	216	270	278	231	203	269	217	245	286	273	297	322	336	244	311
	11 PM - Midnight	192	202	205	219	204	152	148	223	223	192	174	198	177	180	237	229	234	249	267	165	225

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	213	311	329	329	345	303	226	265	356	389	338	269	339	236	321	376	383	388	395	401	285
	1 AM - 2 AM	174	250	281	264	293	243	174	198	292	315	280	237	269	179	235	298	306	310	318	305	250
	2 AM - 3 AM	148	208	227	234	233	188	141	167	252	248	230	210	209	136	190	252	257	294	300	231	153
	3 AM - 4 AM	141	204	227	242	244	200	113	165	221	256	240	222	193	125	198	245	264	291	280	225	144
	4 AM - 5 AM	186	257	274	300	293	181	116	204	273	296	293	250	208	125	226	310	317	328	322	228	134
	5 AM - 6 AM	296	400	426	435	420	241	141	364	440	451	399	349	248	150	369	482	470	488	485	291	161
	6 AM - 7 AM	519	679	692	701	651	328	169	578	754	728	644	496	327	199	640	765	758	771	750	371	202
	7 AM - 8 AM	678	887	931	905	874	393	228	839	1,002	1,038	842	756	450	285	916	1,054	1,047	1,068	982	484	299
	8 AM - 9 AM	713	907	930	913	903	498	332	891	1,041	967	865	791	604	429	929	1,055	1,060	1,119	1,019	650	431
	9 AM - 10 AM	733	924	942	919	888	693	499	903	997	959	844	837	803	589	897	988	1,058	1,114	1,057	908	681
	10 AM - 11 AM	798	950	931	950	948	903	708	963	1,020	963	894	917	1,022	837	1,020	1,077	1,068	1,151	1,155	1,146	958
	11 AM - 12 PM	884	1,014	1,016	1,032	1,005	1,108	915	1,084	1,060	1,045	994	1,024	1,191	1,095	1,105	1,115	1,192	1,270	1,319	1,394	1,267
	12 PM - 1 PM	989	1,068	1,096	1,123	1,089	1,228	1,075	1,172	1,107	1,090	1,052	1,134	1,259	1,287	1,222	1,191	1,256	1,310	1,413	1,477	1,484
	1 PM - 2 PM	1,024	1,125	1,128	1,177	1,172	1,221	1,220	1,227	1,175	1,092	1,100	1,261	1,244	1,401	1,244	1,295	1,295	1,383	1,517	1,461	1,627
	2 PM - 3 PM	1,148	1,174	1,150	1,261	1,290	1,210	1,298	1,257	1,264	1,201	1,171	1,389	1,249	1,453	1,332	1,315	1,343	1,524	1,687	1,470	1,769
	3 PM - 4 PM	1,222	1,247	1,254	1,338	1,383	1,225	1,383	1,435	1,391	1,280	1,219	1,485	1,290	1,474	1,436	1,417	1,468	1,630	1,854	1,505	1,895
	4 PM - 5 PM	1,222	1,245	1,343	1,373	1,442	1,197	1,428	1,426	1,414	1,327	1,239	1,520	1,186	1,506	1,464	1,463	1,559	1,657	1,879	1,419	1,855
	5 PM - 6 PM	1,155	1,258	1,337	1,330	1,458	1,090	1,235	1,367	1,390	1,256	1,172	1,519	1,117	1,456	1,430	1,475	1,585	1,622	1,873	1,309	1,754
	6 PM - 7 PM	977	1,060	1,083	1,068	1,282	938	1,021	1,123	1,151	1,044	942	1,332	960	1,212	1,177	1,178	1,291	1,420	1,607	1,113	1,615
	7 PM - 8 PM	830	837	868	878	1,045	777	860	914	952	848	766	1,056	814	1,000	952	980	992	1,122	1,322	902	1,332
	8 PM - 9 PM	667	701	741	774	901	626	700	788	810	708	630	895	658	820	823	825	845	955	1,036	738	1,048
	9 PM - 10 PM	558	572	605	650	673	516	562	651	645	606	519	706	535	626	696	684	718	795	855	619	822
	10 PM - 11 PM	478	460	490	535	522	411	431	540	557	462	406	538	433	491	571	545	594	644	672	489	622
	11 PM - Midnight	383	403	409	438	408	304	296	446	446	385	348	396	354	360	474	458	467	499	534	330	449

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

140 Amherst - Oberlin

TO

142 Lorain County West

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

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Revision Date: 9/1/2022

Close 1 Lane	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	152	198	206	209	232	210	162	171	191	206	217	235	231	161	222	225	232	233	268	258	209
	1 AM - 2 AM	120	152	158	162	176	167	109	126	172	164	174	180	170	112	149	178	182	206	217	179	137
	2 AM - 3 AM	99	127	134	143	149	127	84	104	133	141	148	161	130	88	122	153	158	180	188	142	104
	3 AM - 4 AM	94	127	126	136	143	126	81	96	116	130	151	156	127	75	106	137	151	168	176	138	85
	4 AM - 5 AM	117	144	159	156	171	119	76	127	144	159	171	177	122	76	130	160	162	180	169	136	88
	5 AM - 6 AM	201	250	249	247	244	156	84	207	225	261	243	258	155	91	207	248	256	275	267	163	102
	6 AM - 7 AM	328	387	395	403	383	183	113	347	353	406	394	406	201	114	363	412	412	428	412	209	132
	7 AM - 8 AM	467	519	535	525	497	260	166	475	482	559	545	511	279	165	480	540	548	555	523	284	188
	8 AM - 9 AM	463	540	567	567	523	351	247	483	485	560	572	548	392	257	521	588	586	595	581	389	289
	9 AM - 10 AM	476	534	548	567	556	464	366	507	518	584	611	583	514	409	570	596	615	627	645	528	427
	10 AM - 11 AM	524	553	586	619	641	605	513	562	584	622	638	650	621	578	638	637	647	704	696	666	604
	11 AM - 12 PM	561	611	629	675	709	715	687	654	651	683	739	755	750	765	721	701	721	801	832	822	808
	12 PM - 1 PM	618	630	657	726	786	744	776	684	710	710	783	832	829	896	790	750	756	871	880	850	944
	1 PM - 2 PM	612	645	690	774	820	756	866	755	753	734	810	896	798	937	846	772	811	892	945	888	1,070
	2 PM - 3 PM	691	720	733	841	893	789	931	785	820	795	871	953	804	1,011	912	821	862	943	1,009	918	1,124
	3 PM - 4 PM	728	763	792	878	970	764	949	845	856	863	934	1,008	800	1,035	922	864	886	999	1,103	865	1,189
	4 PM - 5 PM	740	777	804	886	958	758	944	831	853	856	946	1,024	761	1,054	953	896	905	1,033	1,097	817	1,161
	5 PM - 6 PM	708	748	804	878	932	718	940	776	847	829	900	952	696	1,012	886	840	898	991	1,043	773	1,117
	6 PM - 7 PM	584	629	697	761	802	614	843	673	738	703	786	845	600	931	766	740	726	862	916	663	1,008
	7 PM - 8 PM	486	531	582	641	665	527	713	570	608	607	669	701	518	807	661	579	595	713	734	587	890
	8 PM - 9 PM	418	435	453	531	524	436	556	488	536	543	566	608	463	683	581	510	499	617	628	530	754
	9 PM - 10 PM	354	368	328	446	437	357	434	409	425	444	452	482	374	528	489	440	422	535	533	452	589
	10 PM - 11 PM	283	291	301	360	339	273	314	312	327	343	383	375	312	379	383	342	368	434	433	366	447
	11 PM - Midnight	232	234	270	283	260	215	217	243	249	274	290	312	234	249	295	276	286	334	358	287	316

Close 2 Lanes	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	305	395	411	418	465	420	323	342	381	412	435	471	462	323	444	449	464	466	536	516	419
	1 AM - 2 AM	239	305	317	323	351	335	219	252	343	329	348	360	339	223	299	357	364	413	434	357	275
	2 AM - 3 AM	198	255	268	286	298	253	169	209	266	283	296	322	260	177	245	305	315	359	376	285	207
	3 AM - 4 AM	187	254	252	271	285	251	162	191	233	261	303	312	253	150	212	275	301	336	351	277	170
	4 AM - 5 AM	235	289	319	311	343	238	153	255	288	319	343	354	244	151	260	321	324	359	339	273	177
	5 AM - 6 AM	403	501	498	495	489	312	168	414	451	521	485	516	310	182	415	496	513	549	534	325	203
	6 AM - 7 AM	657	775	790	806	767	366	225	694	706	812	789	812	403	227	727	825	824	856	823	417	264
	7 AM - 8 AM	935	1,038	1,071	1,050	995	520	331	949	963	1,118	1,090	1,022	558	331	960	1,081	1,095	1,110	1,045	567	376
	8 AM - 9 AM	927	1,081	1,134	1,133	1,047	702	494	966	971	1,120	1,145	1,096	784	515	1,042	1,177	1,171	1,190	1,163	777	578
	9 AM - 10 AM	951	1,068	1,096	1,134	1,112	928	732	1,013	1,036	1,167	1,222	1,166	1,029	817	1,140	1,191	1,231	1,253	1,290	1,056	853
	10 AM - 11 AM	1,047	1,105	1,173	1,238	1,282	1,210	1,026	1,125	1,169	1,244	1,276	1,299	1,241	1,155	1,275	1,273	1,295	1,409	1,393	1,332	1,207
	11 AM - 12 PM	1,122	1,221	1,258	1,349	1,418	1,430	1,373	1,309	1,301	1,365	1,479	1,509	1,500	1,530	1,442	1,403	1,441	1,603	1,664	1,643	1,616
	12 PM - 1 PM	1,235	1,260	1,314	1,453	1,573	1,488	1,552	1,367	1,419	1,421	1,565	1,664	1,658	1,792	1,581	1,500	1,512	1,742	1,761	1,699	1,888
	1 PM - 2 PM	1,224	1,291	1,380	1,547	1,640	1,512	1,733	1,511	1,506	1,468	1,620	1,793	1,596	1,875	1,692	1,544	1,623	1,784	1,889	1,776	2,141
	2 PM - 3 PM	1,381	1,440	1,465	1,682	1,787	1,578	1,862	1,570	1,640	1,590	1,743	1,906	1,609	2,021	1,823	1,642	1,723	1,885	2,017	1,836	2,249
	3 PM - 4 PM	1,456	1,527	1,584	1,755	1,939	1,528	1,898	1,690	1,713	1,726	1,867	2,017	1,599	2,071	1,845	1,728	1,772	1,998	2,207	1,729	2,378
	4 PM - 5 PM	1,480	1,555	1,607	1,772	1,917	1,517	1,888	1,662	1,706	1,711	1,892	2,048	1,522	2,108	1,905	1,792	1,811	2,065	2,194	1,634	2,322
	5 PM - 6 PM	1,416	1,496	1,607	1,755	1,864	1,436	1,880	1,553	1,646	1,659	1,800	1,903	1,393	2,025	1,772	1,681	1,795	1,981	2,086	1,546	2,235
	6 PM - 7 PM	1,169	1,258	1,393	1,521	1,603	1,227	1,686	1,347	1,476	1,405	1,572	1,690	1,200	1,863	1,533	1,481	1,452	1,725	1,831	1,326	2,015
	7 PM - 8 PM	972	1,063	1,164	1,282	1,331	1,054	1,425	1,140	1,216	1,214	1,339	1,402	1,036	1,613	1,322	1,158	1,191	1,426	1,468	1,173	1,780
	8 PM - 9 PM	835	869	907	1,062	1,047	872	1,111	976	1,072	1,086	1,132	1,216	926	1,365	1,161	1,019	997	1,233	1,255	1,060	1,508
	9 PM - 10 PM	708	737	655	892	873	715	867	818	851	888	903	964	749	1,056	979	880	844	1,070	1,066	905	1,179
	10 PM - 11 PM	566	583	602	719	677	545	627	625	653	686	766	750	624	758	765	685	736	867	867	731	895
	11 PM - Midnight	464	468	539	567	519	430	434	487	499	547	579	623	469	498	589	553	573	668	715	573	633

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

140 Amherst - Oberlin

TO

142 Lorain County West

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	222	222	223	242	259	258	214	240	231	223	245	252	264	228	181	213	210	230	265	266	202
	1 AM - 2 AM	152	173	177	202	210	177	140	179	177	183	199	192	194	158	139	167	170	188	205	199	132
	2 AM - 3 AM	116	138	145	166	177	153	111	137	158	160	160	169	150	107	108	135	139	160	165	151	103
	3 AM - 4 AM	116	122	140	155	166	138	82	109	143	142	161	171	135	93	100	124	141	149	156	127	84
	4 AM - 5 AM	143	145	173	175	182	139	86	136	172	176	193	179	138	87	123	148	156	172	178	134	83
	5 AM - 6 AM	217	233	241	258	266	163	100	214	252	260	255	259	165	103	202	232	236	244	249	156	90
	6 AM - 7 AM	353	387	394	404	418	222	127	370	403	426	429	408	197	127	350	369	374	394	387	191	116
	7 AM - 8 AM	482	505	534	554	521	280	184	520	563	599	597	544	283	191	473	512	520	546	510	276	189
	8 AM - 9 AM	518	553	567	615	564	403	273	573	619	634	637	611	404	292	476	530	549	574	551	379	304
	9 AM - 10 AM	581	582	611	630	649	528	426	598	608	644	682	667	561	467	505	540	565	607	580	505	504
	10 AM - 11 AM	656	640	669	701	747	684	635	668	654	719	739	743	719	700	590	578	599	648	652	674	710
	11 AM - 12 PM	762	726	758	817	869	891	869	773	725	788	777	887	907	934	643	674	649	736	766	802	897
	12 PM - 1 PM	828	802	804	910	951	965	1,037	856	791	826	844	954	1,023	1,124	720	726	708	794	839	854	1,000
	1 PM - 2 PM	874	830	823	950	1,026	1,001	1,176	916	844	871	929	1,001	1,071	1,223	755	736	751	817	886	861	1,047
	2 PM - 3 PM	912	892	902	1,000	1,089	1,015	1,242	926	878	897	1,003	1,089	1,049	1,272	814	789	772	897	961	905	1,080
	3 PM - 4 PM	932	935	892	1,009	1,196	1,033	1,204	988	939	998	1,091	1,147	1,075	1,340	841	826	813	922	1,035	857	1,082
	4 PM - 5 PM	918	961	918	1,031	1,190	936	1,216	992	987	1,039	1,111	1,118	1,045	1,241	842	848	863	971	1,058	803	1,089
	5 PM - 6 PM	875	899	900	1,016	1,081	837	1,211	960	975	1,020	1,063	1,071	922	1,158	799	799	851	940	1,026	759	1,045
	6 PM - 7 PM	778	789	792	874	949	737	1,036	787	791	837	885	964	798	1,092	691	675	721	802	895	659	961
	7 PM - 8 PM	638	632	656	744	796	643	896	616	641	678	748	810	685	959	542	553	557	673	750	584	823
	8 PM - 9 PM	533	533	562	638	674	547	824	513	537	561	622	659	594	795	466	453	478	572	593	502	669
	9 PM - 10 PM	432	444	459	531	569	474	631	452	445	481	546	551	494	608	385	385	410	488	510	456	518
	10 PM - 11 PM	352	363	381	432	449	358	451	381	356	380	448	447	403	483	312	310	344	403	397	384	381
	11 PM - Midnight	288	295	300	337	344	293	338	302	289	295	345	362	308	330	256	236	280	324	328	314	264

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	443	444	446	484	518	516	428	480	462	445	491	505	527	455	362	426	420	460	530	532	403
	1 AM - 2 AM	305	346	353	404	419	355	279	358	353	366	398	383	387	316	278	334	341	376	410	398	264
	2 AM - 3 AM	232	276	290	333	354	306	223	273	317	320	321	337	300	213	216	271	278	319	331	301	207
	3 AM - 4 AM	231	245	279	310	332	277	164	218	287	285	323	342	270	187	201	249	281	298	313	254	168
	4 AM - 5 AM	286	291	347	350	364	277	173	273	345	352	385	357	276	174	245	296	311	344	355	268	165
	5 AM - 6 AM	433	466	483	517	531	325	201	427	503	520	509	519	329	207	403	465	472	488	498	312	180
	6 AM - 7 AM	706	774	788	807	837	443	255	739	806	852	858	816	394	254	699	738	748	788	773	383	231
	7 AM - 8 AM	963	1,011	1,068	1,107	1,042	561	368	1,040	1,125	1,199	1,195	1,088	567	381	946	1,024	1,039	1,093	1,020	552	378
	8 AM - 9 AM	1,037	1,106	1,134	1,230	1,128	807	547	1,145	1,238	1,267	1,274	1,221	808	583	951	1,060	1,098	1,147	1,101	758	608
	9 AM - 10 AM	1,161	1,165	1,222	1,259	1,297	1,056	851	1,196	1,217	1,289	1,363	1,334	1,123	934	1,010	1,081	1,130	1,214	1,160	1,011	1,007
	10 AM - 11 AM	1,312	1,279	1,338	1,402	1,494	1,369	1,271	1,336	1,308	1,438	1,478	1,487	1,438	1,400	1,179	1,156	1,198	1,295	1,303	1,348	1,419
	11 AM - 12 PM	1,524	1,453	1,516	1,634	1,738	1,782	1,738	1,546	1,450	1,577	1,555	1,773	1,814	1,868	1,286	1,349	1,298	1,471	1,532	1,604	1,795
	12 PM - 1 PM	1,655	1,603	1,608	1,820	1,901	1,930	2,073	1,711	1,581	1,652	1,687	1,907	2,047	2,248	1,440	1,451	1,417	1,588	1,678	1,708	2,001
	1 PM - 2 PM	1,748	1,659	1,645	1,899	2,052	2,001	2,351	1,832	1,689	1,743	1,858	2,002	2,143	2,445	1,509	1,472	1,502	1,635	1,772	1,722	2,094
	2 PM - 3 PM	1,824	1,784	1,804	2,001	2,177	2,031	2,484	1,852	1,755	1,794	2,006	2,177	2,098	2,544	1,627	1,578	1,544	1,795	1,923	1,811	2,160
	3 PM - 4 PM	1,864	1,869	1,784	2,018	2,392	2,066	2,409	1,976	1,879	1,996	2,181	2,295	2,150	2,680	1,682	1,651	1,627	1,845	2,069	1,713	2,163
	4 PM - 5 PM	1,836	1,922	1,836	2,063	2,380	1,873	2,433	1,984	1,975	2,077	2,222	2,235	2,089	2,482	1,683	1,697	1,725	1,941	2,115	1,605	2,178
	5 PM - 6 PM	1,749	1,799	1,801	2,032	2,162	1,675	2,422	1,919	1,950	2,042	2,125	2,141	1,843	2,316	1,597	1,597	1,702	1,881	2,052	1,518	2,090
	6 PM - 7 PM	1,556	1,579	1,584	1,748	1,898	1,474	2,073	1,574	1,582	1,673	1,770	1,928	1,597	2,185	1,383	1,349	1,441	1,603	1,790	1,319	1,922
	7 PM - 8 PM	1,276	1,265	1,312	1,488	1,592	1,285	1,793	1,231	1,281	1,356	1,495	1,621	1,369	1,918	1,085	1,107	1,114	1,346	1,499	1,168	1,646
	8 PM - 9 PM	1,066	1,065	1,125	1,276	1,348	1,095	1,648	1,025	1,074	1,121	1,244	1,319	1,187	1,589	933	905	957	1,144	1,187	1,003	1,338
	9 PM - 10 PM	864	887	918	1,063	1,138	947	1,262	904	890	961	1,093	1,102	989	1,216	770	769	820	977	1,020	913	1,035
	10 PM - 11 PM	703	726	761	863	899	716	903	761	713	760	896	894	805	966	623	620	687	806	794	768	762
	11 PM - Midnight	577	591	599	675	687	587	677	603	578	590	690	723	616	660	511	472	560	648	656	629	527

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

140 Amherst - Oberlin

TO

142 Lorain County West

Route	I-80/I-90
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

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- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	191	210	207	223	235	227	177	152	190	194	215	207	216	171	150	194	192	192	201	186	127
	1 AM - 2 AM	131	175	160	168	193	169	132	123	171	166	160	180	156	152	102	159	164	151	178	152	93
	2 AM - 3 AM	106	146	134	147	172	136	106	96	136	136	142	158	128	85	93	136	137	144	142	128	72
	3 AM - 4 AM	100	133	135	150	160	123	95	89	128	138	144	149	124	71	91	131	140	141	159	113	69
	4 AM - 5 AM	122	153	166	162	173	125	88	118	159	162	169	182	131	78	121	169	168	171	174	121	73
	5 AM - 6 AM	204	239	252	252	249	145	99	200	232	238	251	242	153	92	182	235	247	242	249	136	83
	6 AM - 7 AM	339	386	386	397	373	178	115	328	389	389	375	386	197	127	296	368	375	384	373	168	108
	7 AM - 8 AM	455	507	521	519	481	241	160	449	505	512	525	511	268	179	435	475	486	510	490	225	150
	8 AM - 9 AM	471	526	562	561	532	356	250	480	531	532	559	537	345	290	451	528	523	512	489	310	236
	9 AM - 10 AM	510	550	558	578	585	492	402	503	534	533	570	537	487	481	448	538	539	541	520	431	364
	10 AM - 11 AM	567	571	592	626	642	620	608	519	547	573	600	594	648	631	487	569	589	572	576	549	540
	11 AM - 12 PM	663	634	655	719	749	763	832	598	592	640	668	703	804	827	544	614	667	614	635	674	725
	12 PM - 1 PM	734	686	699	783	816	809	973	653	643	651	714	762	836	899	608	647	699	665	715	722	813
	1 PM - 2 PM	741	699	741	820	843	796	1,047	683	671	668	747	802	836	911	653	674	725	678	744	744	876
	2 PM - 3 PM	812	738	784	892	928	788	1,077	729	696	727	818	890	811	958	695	734	757	746	801	766	905
	3 PM - 4 PM	875	787	813	941	985	774	1,096	781	731	749	843	940	795	1,008	726	796	779	796	862	773	916
	4 PM - 5 PM	860	823	845	938	1,017	741	1,056	792	776	782	861	952	765	953	739	800	809	815	889	717	869
	5 PM - 6 PM	783	763	843	927	1,005	675	1,000	728	734	775	838	963	733	914	677	740	757	804	827	662	785
	6 PM - 7 PM	666	656	708	796	879	629	918	605	589	640	712	814	616	777	554	615	615	666	763	570	700
	7 PM - 8 PM	543	520	571	644	690	530	741	508	473	516	589	632	510	644	467	512	517	545	590	455	582
	8 PM - 9 PM	444	424	482	535	603	447	610	430	392	407	503	569	429	538	389	431	452	447	496	355	471
	9 PM - 10 PM	405	357	406	459	489	374	494	359	315	359	413	447	374	418	324	356	415	380	389	312	368
	10 PM - 11 PM	318	310	333	380	375	319	359	308	277	328	326	381	311	287	278	290	321	293	317	239	273
	11 PM - Midnight	261	251	270	302	315	235	251	239	216	271	259	275	244	199	226	230	261	252	252	184	186

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	382	420	413	446	469	454	353	304	381	388	429	414	432	342	300	388	384	383	402	373	253
	1 AM - 2 AM	263	351	320	335	386	339	263	245	341	331	320	360	312	304	203	317	328	301	355	304	186
	2 AM - 3 AM	213	291	268	294	344	273	212	193	272	272	285	316	256	170	186	273	274	289	284	256	145
	3 AM - 4 AM	200	265	270	300	320	246	189	177	256	275	288	298	248	143	182	262	279	282	317	225	137
	4 AM - 5 AM	245	305	332	324	345	249	177	237	317	325	337	364	261	157	241	337	336	342	347	242	145
	5 AM - 6 AM	408	477	503	505	498	289	198	400	464	476	503	483	306	184	364	471	495	485	498	272	166
	6 AM - 7 AM	679	771	771	793	746	356	230	656	777	778	750	772	393	254	592	735	750	769	745	335	216
	7 AM - 8 AM	911	1,015	1,042	1,037	963	482	320	898	1,011	1,023	1,051	1,023	536	358	870	949	973	1,020	980	449	301
	8 AM - 9 AM	942	1,052	1,124	1,122	1,064	713	499	959	1,061	1,064	1,117	1,074	689	580	902	1,056	1,046	1,023	977	620	472
	9 AM - 10 AM	1,020	1,099	1,116	1,157	1,171	983	805	1,006	1,068	1,066	1,139	1,074	974	961	896	1,077	1,077	1,081	1,040	861	727
	10 AM - 11 AM	1,134	1,141	1,183	1,252	1,285	1,240	1,215	1,038	1,093	1,146	1,199	1,188	1,295	1,263	974	1,137	1,178	1,144	1,151	1,098	1,081
	11 AM - 12 PM	1,326	1,268	1,310	1,437	1,499	1,526	1,664	1,195	1,183	1,279	1,335	1,405	1,607	1,654	1,088	1,227	1,334	1,227	1,269	1,348	1,451
	12 PM - 1 PM	1,469	1,371	1,398	1,566	1,632	1,618	1,946	1,305	1,286	1,302	1,427	1,523	1,673	1,797	1,216	1,294	1,398	1,330	1,430	1,444	1,626
	1 PM - 2 PM	1,481	1,398	1,483	1,640	1,685	1,593	2,094	1,366	1,342	1,335	1,494	1,604	1,671	1,823	1,305	1,348	1,451	1,356	1,489	1,488	1,751
	2 PM - 3 PM	1,623	1,476	1,569	1,784	1,856	1,576	2,154	1,458	1,393	1,454	1,636	1,781	1,622	1,916	1,390	1,467	1,514	1,492	1,602	1,532	1,811
	3 PM - 4 PM	1,751	1,573	1,625	1,881	1,970	1,548	2,191	1,563	1,462	1,498	1,685	1,879	1,589	2,016	1,451	1,593	1,557	1,592	1,723	1,547	1,832
	4 PM - 5 PM	1,721	1,646	1,690	1,875	2,033	1,482	2,111	1,585	1,552	1,563	1,721	1,904	1,529	1,906	1,479	1,599	1,617	1,631	1,778	1,434	1,737
	5 PM - 6 PM	1,567	1,526	1,685	1,854	2,010	1,351	1,999	1,455	1,469	1,549	1,676	1,926	1,465	1,807	1,353	1,480	1,514	1,607	1,653	1,323	1,571
	6 PM - 7 PM	1,331	1,312	1,416	1,592	1,757	1,257	1,836	1,210	1,179	1,281	1,425	1,629	1,232	1,554	1,107	1,229	1,231	1,333	1,526	1,140	1,400
	7 PM - 8 PM	1,086	1,039	1,142	1,288	1,379	1,060	1,482	1,016	947	1,032	1,177	1,265	1,019	1,288	933	1,023	1,034	1,090	1,179	909	1,164
	8 PM - 9 PM	888	847	965	1,070	1,206	893	1,220	860	785	814	1,006	1,138	857	1,077	777	863	904	894	992	710	942
	9 PM - 10 PM	810	714	813	919	978	748	988	718	629	717	827	893	748	836	648	712	830	760	778	624	736
	10 PM - 11 PM	637	620	665	759	750	637	719	615	554	655	653	762	623	575	555	580	643	586	635	477	546
	11 PM - Midnight	522	502	540	604	629	471	501	478	432	542	517	549	487	398	451	460	521	504	504	368	373

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

142 Lorain County West

TO

140 Amherst - Oberlin

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	111	191	207	207	207	181	104	130	216	221	211	169	183	128	155	234	223	231	218	200	139
	1 AM - 2 AM	87	138	153	183	163	134	80	99	176	171	158	119	144	88	117	194	176	180	183	151	96
	2 AM - 3 AM	68	129	130	138	137	114	59	86	155	149	132	120	114	67	81	151	152	154	147	114	70
	3 AM - 4 AM	67	120	133	132	129	98	47	72	127	135	121	113	91	61	77	135	129	129	124	100	60
	4 AM - 5 AM	75	123	136	137	142	94	50	85	146	148	129	111	99	54	100	145	150	142	148	97	56
	5 AM - 6 AM	99	164	172	180	175	110	49	127	186	190	157	144	115	59	132	192	197	192	193	121	57
	6 AM - 7 AM	179	261	280	278	249	144	60	233	295	280	257	209	144	80	233	307	293	309	281	172	76
	7 AM - 8 AM	256	375	391	393	374	195	97	349	446	417	361	312	221	114	362	450	457	450	430	246	119
	8 AM - 9 AM	308	458	456	461	421	289	134	422	534	484	418	381	322	170	415	525	520	509	492	355	180
	9 AM - 10 AM	344	485	486	487	453	388	203	434	557	511	438	437	419	251	453	545	555	563	551	464	274
	10 AM - 11 AM	378	516	513	508	510	505	312	501	579	532	489	506	536	383	505	576	577	602	626	590	419
	11 AM - 12 PM	432	543	534	547	571	609	422	546	584	545	504	553	623	500	534	608	613	656	707	680	560
	12 PM - 1 PM	456	575	535	571	624	633	528	553	615	566	538	622	674	571	582	640	631	707	766	743	713
	1 PM - 2 PM	483	611	564	606	683	628	584	595	618	570	533	672	649	635	606	668	661	721	822	744	791
	2 PM - 3 PM	536	650	602	663	700	634	668	625	660	596	584	717	627	685	648	702	699	762	865	719	809
	3 PM - 4 PM	587	719	674	717	789	634	663	695	670	662	629	751	610	698	708	764	777	835	961	679	861
	4 PM - 5 PM	618	735	711	747	810	597	653	737	723	705	658	812	591	704	753	801	810	901	963	676	875
	5 PM - 6 PM	602	706	694	702	776	550	619	716	740	673	615	826	532	691	740	768	782	853	969	604	831
	6 PM - 7 PM	490	568	558	584	699	468	577	577	593	532	483	684	477	602	624	657	647	717	819	529	762
	7 PM - 8 PM	434	482	458	509	534	375	481	505	511	452	396	554	403	499	514	538	551	600	669	445	651
	8 PM - 9 PM	362	393	384	403	420	300	387	426	431	373	335	432	326	419	452	452	454	502	535	353	494
	9 PM - 10 PM	301	339	330	329	339	244	284	349	355	328	277	334	268	304	365	370	369	405	407	303	381
	10 PM - 11 PM	274	283	301	279	279	191	194	309	303	277	242	276	216	235	339	329	339	330	334	239	278
	11 PM - Midnight	229	249	255	240	235	143	139	274	245	248	177	218	156	179	280	274	287	283	267	166	211

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	223	383	413	415	415	363	207	260	431	443	421	337	365	257	310	468	446	462	436	400	278
	1 AM - 2 AM	175	277	305	367	327	269	159	199	351	342	316	238	287	176	234	388	351	360	366	302	193
	2 AM - 3 AM	137	258	260	277	274	228	118	172	309	298	263	240	227	134	163	302	304	307	294	227	140
	3 AM - 4 AM	134	239	266	264	258	196	94	145	254	270	243	227	181	123	155	269	258	258	247	200	121
	4 AM - 5 AM	150	245	272	274	285	189	99	170	293	295	259	222	198	109	200	290	300	284	296	194	113
	5 AM - 6 AM	197	327	344	361	349	220	99	254	371	380	314	288	230	119	263	383	394	384	385	242	114
	6 AM - 7 AM	358	522	560	556	497	287	120	466	591	561	514	419	288	160	466	613	587	617	562	344	152
	7 AM - 8 AM	512	751	782	786	748	391	194	698	892	834	721	623	443	229	723	899	914	899	860	492	238
	8 AM - 9 AM	617	916	911	922	842	577	269	844	1,068	969	837	762	644	340	830	1,049	1,041	1,019	984	710	360
	9 AM - 10 AM	688	969	971	973	906	775	406	869	1,114	1,022	876	874	838	502	906	1,091	1,109	1,127	1,102	927	547
	10 AM - 11 AM	756	1,033	1,025	1,017	1,020	1,009	624	1,003	1,157	1,064	977	1,013	1,073	766	1,010	1,152	1,153	1,205	1,252	1,181	837
	11 AM - 12 PM	864	1,085	1,069	1,094	1,143	1,219	843	1,093	1,168	1,089	1,008	1,106	1,247	999	1,069	1,217	1,227	1,313	1,414	1,360	1,120
	12 PM - 1 PM	912	1,150	1,070	1,141	1,248	1,265	1,056	1,106	1,230	1,132	1,077	1,244	1,348	1,142	1,164	1,280	1,263	1,415	1,532	1,486	1,426
	1 PM - 2 PM	966	1,222	1,127	1,213	1,365	1,256	1,169	1,191	1,237	1,139	1,065	1,344	1,297	1,270	1,212	1,336	1,322	1,441	1,645	1,488	1,581
	2 PM - 3 PM	1,071	1,300	1,204	1,327	1,400	1,268	1,336	1,250	1,320	1,191	1,168	1,435	1,254	1,371	1,296	1,404	1,398	1,525	1,729	1,438	1,619
	3 PM - 4 PM	1,173	1,437	1,347	1,435	1,579	1,267	1,327	1,391	1,339	1,323	1,258	1,502	1,220	1,395	1,416	1,527	1,554	1,670	1,922	1,357	1,722
	4 PM - 5 PM	1,235	1,469	1,422	1,493	1,619	1,193	1,306	1,473	1,446	1,409	1,317	1,624	1,183	1,407	1,505	1,603	1,621	1,801	1,925	1,352	1,750
	5 PM - 6 PM	1,204	1,413	1,389	1,404	1,553	1,101	1,237	1,432	1,481	1,346	1,230	1,653	1,065	1,383	1,479	1,536	1,565	1,705	1,938	1,208	1,661
	6 PM - 7 PM	979	1,136	1,116	1,169	1,397	937	1,154	1,154	1,185	1,064	966	1,367	953	1,203	1,248	1,313	1,293	1,433	1,638	1,058	1,525
	7 PM - 8 PM	868	963	916	1,018	1,068	750	962	1,011	1,021	904	793	1,107	805	999	1,028	1,077	1,103	1,199	1,338	889	1,302
	8 PM - 9 PM	725	786	768	807	840	599	775	852	863	745	670	865	651	839	904	905	907	1,003	1,071	706	987
	9 PM - 10 PM	601	679	659	659	678	488	568	698	710	655	553	668	535	609	729	740	739	809	814	606	763
	10 PM - 11 PM	548	565	601	559	558	381	387	619	607	553	484	552	432	471	678	658	678	660	667	477	557
	11 PM - Midnight	459	498	510	481	470	287	278	547	490	496	354	437	312	357	560	547	575	566	535	332	421

NOTES:

- Refer to SP 104 for lane closure restrictions.
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- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

142 Lorain County West

TO

140 Amherst - Oberlin

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

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Revision Date: 9/1/2022

Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	146	254	245	257	250	229	148	164	225	239	245	256	250	150	178	259	267	267	288	288	177
	1 AM - 2 AM	100	190	190	192	195	167	98	114	183	194	193	207	176	104	126	206	206	212	217	201	127
	2 AM - 3 AM	75	165	155	166	170	134	85	90	142	165	158	165	135	81	97	164	167	182	188	164	94
	3 AM - 4 AM	110	145	132	140	140	115	62	91	129	147	146	163	110	66	91	150	155	166	168	131	75
	4 AM - 5 AM	97	156	156	153	160	121	63	98	137	171	163	160	124	64	107	156	174	177	173	142	72
	5 AM - 6 AM	137	197	203	199	203	153	66	154	185	210	205	206	148	68	155	211	236	229	222	168	73
	6 AM - 7 AM	257	317	325	321	312	203	91	267	304	352	343	333	212	96	268	326	367	355	334	226	108
	7 AM - 8 AM	363	457	463	433	430	294	141	390	431	484	478	457	317	149	385	475	485	490	456	337	168
	8 AM - 9 AM	424	541	553	549	513	437	205	456	511	583	580	549	462	237	472	599	597	606	574	476	265
	9 AM - 10 AM	464	585	590	580	601	575	322	520	571	615	644	665	616	367	571	654	674	688	701	664	443
	10 AM - 11 AM	522	622	625	662	688	712	479	586	637	682	707	782	753	545	669	710	720	754	854	848	640
	11 AM - 12 PM	567	674	645	714	780	806	638	645	689	703	758	872	856	691	728	763	787	873	985	1,011	826
	12 PM - 1 PM	601	676	669	750	853	857	751	683	743	746	810	947	851	836	773	813	829	919	1,068	1,047	957
	1 PM - 2 PM	629	680	698	790	889	814	856	719	798	753	846	1,011	848	878	816	807	853	955	1,108	1,016	1,037
	2 PM - 3 PM	678	738	743	839	966	823	909	768	833	823	906	1,039	831	934	828	853	863	1,007	1,161	988	1,074
	3 PM - 4 PM	760	801	815	911	1,030	823	937	821	901	898	991	1,111	803	959	899	901	950	1,075	1,250	923	1,077
	4 PM - 5 PM	770	861	867	958	1,065	790	972	871	937	975	1,026	1,160	756	916	940	928	996	1,091	1,240	875	1,058
	5 PM - 6 PM	760	841	841	947	1,049	716	918	861	882	954	965	1,134	684	993	940	922	962	1,097	1,254	797	978
	6 PM - 7 PM	628	696	712	806	884	627	817	693	744	741	801	1,024	615	801	755	757	788	871	1,052	704	894
	7 PM - 8 PM	549	577	585	659	706	542	698	581	613	607	670	804	534	699	625	619	647	736	850	590	749
	8 PM - 9 PM	457	476	462	529	578	433	543	490	510	492	561	648	420	595	521	527	546	642	690	509	623
	9 PM - 10 PM	368	394	388	434	473	355	425	390	422	400	450	480	352	464	422	433	431	541	551	410	500
	10 PM - 11 PM	303	326	321	360	369	291	323	346	346	335	371	391	277	314	348	366	361	411	425	330	366
	11 PM - Midnight	263	285	286	317	285	209	219	285	281	300	301	325	206	232	300	314	312	370	352	250	267

Close 2 Lanes	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	291	508	490	513	500	458	296	327	450	477	490	512	499	300	356	518	535	533	576	576	355
	1 AM - 2 AM	199	380	380	384	391	335	195	228	367	388	385	415	352	207	252	412	412	424	435	402	255
	2 AM - 3 AM	149	330	311	332	339	268	171	181	285	330	316	329	270	161	194	327	334	364	377	328	188
	3 AM - 4 AM	220	290	264	281	281	230	123	181	257	293	292	326	220	133	183	300	310	331	336	262	150
	4 AM - 5 AM	194	311	311	307	321	243	126	196	275	342	326	319	247	129	214	313	348	353	346	284	144
	5 AM - 6 AM	273	393	405	398	406	306	131	309	369	420	410	412	297	135	309	421	472	457	444	336	145
	6 AM - 7 AM	514	635	650	642	625	406	182	533	608	704	686	665	424	192	536	652	734	709	669	452	215
	7 AM - 8 AM	727	913	927	866	860	589	282	780	862	968	956	914	634	298	769	951	969	979	912	674	336
	8 AM - 9 AM	849	1,082	1,107	1,099	1,025	874	409	913	1,022	1,167	1,160	1,098	924	474	944	1,198	1,194	1,212	1,148	953	531
	9 AM - 10 AM	927	1,170	1,181	1,160	1,201	1,151	643	1,040	1,142	1,231	1,287	1,330	1,233	735	1,143	1,309	1,348	1,376	1,402	1,328	885
	10 AM - 11 AM	1,043	1,244	1,250	1,323	1,375	1,424	957	1,172	1,274	1,364	1,415	1,563	1,506	1,090	1,337	1,420	1,439	1,508	1,707	1,696	1,281
	11 AM - 12 PM	1,133	1,348	1,291	1,428	1,559	1,612	1,276	1,290	1,379	1,406	1,515	1,744	1,712	1,382	1,456	1,525	1,575	1,746	1,971	2,021	1,652
	12 PM - 1 PM	1,202	1,352	1,339	1,500	1,705	1,714	1,502	1,366	1,485	1,492	1,620	1,895	1,702	1,672	1,546	1,627	1,658	1,838	2,135	2,094	1,915
	1 PM - 2 PM	1,257	1,359	1,396	1,581	1,778	1,628	1,712	1,439	1,596	1,506	1,693	2,021	1,696	1,755	1,633	1,615	1,705	1,909	2,216	2,032	2,075
	2 PM - 3 PM	1,355	1,477	1,487	1,678	1,932	1,647	1,817	1,536	1,665	1,647	1,812	2,079	1,662	1,868	1,655	1,706	1,726	2,014	2,322	1,976	2,149
	3 PM - 4 PM	1,519	1,602	1,631	1,823	2,059	1,646	1,873	1,641	1,803	1,796	1,982	2,222	1,605	1,919	1,799	1,802	1,901	2,149	2,499	1,846	2,153
	4 PM - 5 PM	1,539	1,723	1,733	1,915	2,130	1,581	1,944	1,742	1,873	1,951	2,051	2,320	1,511	1,831	1,880	1,857	1,992	2,182	2,480	1,749	2,117
	5 PM - 6 PM	1,521	1,681	1,683	1,893	2,097	1,431	1,837	1,721	1,764	1,908	2,031	2,268	1,367	1,787	1,879	1,843	1,923	2,194	2,507	1,594	1,956
	6 PM - 7 PM	1,256	1,392	1,424	1,612	1,768	1,254	1,634	1,386	1,488	1,483	1,601	2,048	1,230	1,603	1,510	1,514	1,576	1,741	2,104	1,407	1,788
	7 PM - 8 PM	1,098	1,153	1,169	1,317	1,411	1,083	1,397	1,161	1,226	1,214	1,339	1,608	1,068	1,398	1,250	1,238	1,294	1,472	1,700	1,180	1,498
	8 PM - 9 PM	914	952	923	1,059	1,155	866	1,086	980	1,019	984	1,121	1,295	840	1,191	1,043	1,055	1,092	1,284	1,380	1,018	1,246
	9 PM - 10 PM	736	787	776	868	945	710	850	780	843	800	901	960	703	927	844	867	862	1,082	1,103	820	1,000
	10 PM - 11 PM	606	653	642	721	737	581	645	692	692	671	741	782	554	627	695	732	723	822	850	659	732
	11 PM - Midnight	526	570	572	634	569	418	438	569	561	600	602	650	412	464	599	629	625	739	704	500	533

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

142 Lorain County West

TO

140 Amherst - Oberlin

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	3

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xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

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Revision Date: 9/1/2022

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	183	228	266	271	306	276	198	191	262	268	272	283	286	203	182	247	243	247	266	272	168
	1 AM - 2 AM	143	177	199	221	224	212	142	140	201	217	213	208	211	158	128	183	197	213	198	200	114
	2 AM - 3 AM	108	140	170	183	186	151	100	110	173	164	184	163	152	117	96	141	167	169	165	155	78
	3 AM - 4 AM	95	136	138	157	161	125	81	99	160	146	161	147	132	81	94	133	138	148	155	131	70
	4 AM - 5 AM	101	134	178	171	174	138	82	110	154	173	172	170	138	69	99	144	158	156	171	134	63
	5 AM - 6 AM	166	187	224	218	221	172	88	153	201	201	210	238	160	77	145	188	193	208	220	152	70
	6 AM - 7 AM	266	298	318	327	321	226	111	247	312	331	335	325	215	104	281	305	316	329	306	222	95
	7 AM - 8 AM	374	432	451	473	448	292	164	382	481	467	472	444	325	161	392	429	458	460	453	309	145
	8 AM - 9 AM	461	528	581	607	574	461	263	468	578	590	611	575	493	281	468	506	530	558	527	483	240
	9 AM - 10 AM	564	610	672	707	746	679	444	564	663	687	698	700	724	433	544	570	606	616	618	631	383
	10 AM - 11 AM	666	684	740	825	874	887	652	657	721	750	802	853	927	642	652	645	665	701	728	795	551
	11 AM - 12 PM	765	782	794	897	1,014	1,027	881	774	797	840	914	989	1,076	883	729	690	694	770	875	911	702
	12 PM - 1 PM	820	833	850	941	1,118	1,087	1,042	815	824	875	969	1,067	1,084	1,047	746	706	700	803	969	938	835
	1 PM - 2 PM	832	839	893	998	1,151	1,033	1,135	834	837	889	1,008	1,177	1,074	1,130	752	738	750	845	1,021	901	860
	2 PM - 3 PM	871	891	883	1,030	1,248	1,041	1,169	883	891	915	1,032	1,232	1,003	1,160	791	787	791	897	1,094	882	901
	3 PM - 4 PM	916	928	970	1,109	1,289	1,022	1,187	930	927	960	1,101	1,268	963	1,126	871	842	842	946	1,152	888	942
	4 PM - 5 PM	985	996	1,025	1,140	1,286	967	1,171	956	976	1,032	1,109	1,279	973	1,129	864	848	912	1,036	1,232	797	918
	5 PM - 6 PM	936	963	990	1,134	1,256	886	1,087	938	964	979	1,080	1,302	906	1,099	842	884	887	1,014	1,263	727	951
	6 PM - 7 PM	769	775	825	916	1,109	776	958	795	773	799	926	1,115	798	1,000	712	717	728	842	1,092	684	1,035
	7 PM - 8 PM	635	659	680	773	891	626	827	645	639	669	784	890	669	852	599	582	582	679	886	541	850
	8 PM - 9 PM	573	563	547	640	692	550	673	526	538	562	645	650	528	675	445	487	478	594	650	455	689
	9 PM - 10 PM	453	453	453	531	572	447	497	422	424	461	518	535	432	513	406	398	411	480	508	367	539
	10 PM - 11 PM	372	387	374	416	449	361	372	358	376	385	406	445	353	386	338	333	331	402	418	290	371
	11 PM - Midnight	335	332	321	376	362	260	277	315	319	327	341	373	281	258	316	286	295	350	340	234	240

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	367	455	532	542	611	552	396	382	523	537	545	566	573	405	365	494	487	494	532	544	336
	1 AM - 2 AM	287	354	398	442	448	424	283	280	403	435	425	417	422	316	256	367	394	426	396	401	228
	2 AM - 3 AM	216	281	339	366	372	302	201	220	347	327	368	325	303	233	192	281	335	337	331	310	156
	3 AM - 4 AM	190	273	275	314	322	250	162	198	321	292	322	294	264	162	187	266	275	295	311	261	141
	4 AM - 5 AM	201	269	357	342	348	276	164	219	309	346	344	340	277	138	198	289	316	312	342	267	125
	5 AM - 6 AM	332	374	447	437	442	344	175	305	403	401	419	475	321	154	290	375	385	417	441	303	140
	6 AM - 7 AM	531	596	636	654	641	452	221	493	623	663	670	649	430	208	561	609	632	657	611	444	189
	7 AM - 8 AM	748	864	901	946	895	585	329	763	962	934	944	889	650	321	785	858	916	920	906	619	290
	8 AM - 9 AM	921	1,057	1,162	1,213	1,149	922	526	935	1,156	1,181	1,222	1,150	986	562	936	1,012	1,060	1,116	1,054	965	479
	9 AM - 10 AM	1,127	1,220	1,343	1,415	1,491	1,358	888	1,128	1,326	1,373	1,396	1,400	1,448	866	1,088	1,141	1,212	1,232	1,237	1,262	766
	10 AM - 11 AM	1,332	1,367	1,479	1,650	1,748	1,774	1,305	1,314	1,442	1,501	1,604	1,706	1,853	1,284	1,305	1,290	1,331	1,402	1,455	1,591	1,101
	11 AM - 12 PM	1,529	1,563	1,587	1,794	2,028	2,054	1,762	1,549	1,595	1,679	1,829	1,978	2,151	1,766	1,458	1,379	1,388	1,540	1,751	1,821	1,404
	12 PM - 1 PM	1,640	1,666	1,700	1,882	2,237	2,175	2,084	1,630	1,648	1,749	1,937	2,133	2,167	2,094	1,491	1,412	1,400	1,606	1,938	1,876	1,671
	1 PM - 2 PM	1,663	1,678	1,786	1,996	2,301	2,066	2,269	1,667	1,674	1,777	2,016	2,354	2,148	2,261	1,504	1,475	1,500	1,691	2,042	1,802	1,720
	2 PM - 3 PM	1,742	1,783	1,766	2,059	2,496	2,082	2,338	1,766	1,782	1,830	2,063	2,465	2,005	2,320	1,582	1,574	1,581	1,795	2,187	1,764	1,801
	3 PM - 4 PM	1,831	1,856	1,941	2,218	2,578	2,044	2,374	1,860	1,854	1,920	2,203	2,537	1,927	2,252	1,742	1,685	1,684	1,893	2,303	1,776	1,883
	4 PM - 5 PM	1,971	1,993	2,049	2,281	2,573	1,934	2,342	1,912	1,953	2,063	2,217	2,558	1,946	2,258	1,728	1,696	1,823	2,073	2,463	1,594	1,835
	5 PM - 6 PM	1,872	1,925	1,979	2,268	2,513	1,772	2,173	1,876	1,927	1,957	2,159	2,603	1,812	2,197	1,684	1,767	1,774	2,028	2,526	1,455	1,901
	6 PM - 7 PM	1,539	1,550	1,650	1,832	2,218	1,552	1,916	1,590	1,546	1,597	1,852	2,231	1,596	2,000	1,424	1,435	1,456	1,683	2,183	1,367	2,070
	7 PM - 8 PM	1,270	1,317	1,360	1,545	1,782	1,251	1,654	1,289	1,278	1,338	1,567	1,779	1,339	1,704	1,198	1,164	1,164	1,359	1,773	1,082	1,700
	8 PM - 9 PM	1,146	1,127	1,095	1,280	1,384	1,100	1,347	1,052	1,077	1,123	1,290	1,300	1,055	1,350	891	975	956	1,188	1,300	910	1,378
	9 PM - 10 PM	905	906	905	1,062	1,144	895	994	844	847	922	1,037	1,070	864	1,025	813	795	821	960	1,016	733	1,077
	10 PM - 11 PM	743	773	749	832	898	722	744	717	752	771	831	890	707	773	675	667	661	803	837	580	743
	11 PM - Midnight	670	665	643	752	725	519	555	630	638	654	682	747	561	516	633	573	590	700	681	467	479

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

142 Lorain County West

TO

140 Amherst - Oberlin

Route	I-80/I-90
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	158	250	238	243	278	265	150	154	231	224	212	230	227	150	139	233	238	230	231	216	120
	1 AM - 2 AM	116	204	190	199	220	181	109	108	187	188	190	192	171	134	101	189	201	189	183	166	94
	2 AM - 3 AM	93	153	173	166	176	140	86	85	156	152	157	162	139	71	84	160	153	144	155	129	68
	3 AM - 4 AM	86	153	148	147	153	121	68	86	147	137	147	135	118	58	78	139	141	147	148	127	61
	4 AM - 5 AM	106	157	160	158	162	122	62	99	160	159	164	160	125	55	95	155	160	153	161	105	59
	5 AM - 6 AM	143	203	199	205	208	145	66	148	198	209	212	199	134	66	139	201	204	198	197	133	68
	6 AM - 7 AM	258	316	330	328	303	189	85	254	313	308	322	312	190	88	234	310	327	300	307	169	88
	7 AM - 8 AM	374	450	458	462	436	281	124	389	465	453	452	431	276	129	356	428	421	425	416	264	116
	8 AM - 9 AM	441	555	529	525	514	435	228	452	526	526	521	511	407	217	385	510	499	510	492	367	190
	9 AM - 10 AM	505	573	585	596	621	624	360	494	568	557	571	559	550	317	450	572	568	569	541	495	289
	10 AM - 11 AM	596	637	631	649	759	785	526	583	599	603	651	666	707	469	492	607	600	597	617	604	448
	11 AM - 12 PM	656	702	665	715	885	878	696	625	647	627	676	777	781	621	554	653	644	627	709	732	611
	12 PM - 1 PM	696	713	716	805	955	881	810	677	665	639	727	849	814	745	588	678	689	652	755	731	750
	1 PM - 2 PM	720	726	722	830	1,019	873	899	669	695	691	755	856	787	743	588	699	734	722	797	758	812
	2 PM - 3 PM	778	766	756	852	1,084	847	912	704	756	690	811	950	762	746	645	738	745	756	854	741	826
	3 PM - 4 PM	846	834	871	941	1,129	819	975	763	797	803	882	1,018	779	850	715	809	852	824	944	760	826
	4 PM - 5 PM	863	865	888	1,002	1,173	762	951	833	815	832	949	1,059	759	842	739	869	883	851	932	706	810
	5 PM - 6 PM	851	847	859	1,013	1,165	708	924	813	800	807	883	1,033	689	804	701	808	838	816	894	626	770
	6 PM - 7 PM	699	708	704	830	1,063	614	852	653	646	659	720	897	585	818	577	658	682	653	755	527	687
	7 PM - 8 PM	573	580	568	672	790	514	715	534	517	536	607	718	474	723	475	524	557	541	647	459	608
	8 PM - 9 PM	482	478	482	580	602	419	593	426	431	437	518	587	413	530	410	445	472	451	517	356	477
	9 PM - 10 PM	386	395	398	469	479	351	487	364	344	370	425	450	328	413	364	389	389	401	425	299	359
	10 PM - 11 PM	334	308	324	382	383	282	325	311	307	307	322	386	264	306	351	333	340	333	348	247	250
	11 PM - Midnight	291	282	288	324	322	212	218	266	267	277	294	312	195	191	284	284	285	278	276	178	188

Close 2 Lanes	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	317	501	476	487	556	530	301	308	462	449	423	460	455	301	278	466	477	460	461	432	240
	1 AM - 2 AM	233	408	380	398	439	361	218	217	374	376	381	384	341	268	202	378	403	377	366	332	189
	2 AM - 3 AM	186	307	347	332	351	280	172	169	312	303	314	323	277	141	168	321	305	289	310	258	137
	3 AM - 4 AM	172	307	296	293	307	241	135	172	294	273	294	270	236	115	156	278	282	294	296	255	122
	4 AM - 5 AM	212	314	320	316	325	243	124	197	321	318	328	319	250	110	189	310	320	307	323	209	118
	5 AM - 6 AM	285	406	398	410	416	291	132	296	396	418	424	398	268	131	279	402	408	395	394	265	136
	6 AM - 7 AM	516	632	660	655	605	378	170	508	625	617	643	624	381	176	467	620	653	601	614	338	175
	7 AM - 8 AM	748	900	915	924	871	562	248	778	930	906	904	862	553	258	713	856	841	850	832	528	233
	8 AM - 9 AM	883	1,110	1,058	1,049	1,028	869	456	904	1,053	1,053	1,042	1,023	814	434	769	1,019	997	1,020	983	733	380
	9 AM - 10 AM	1,009	1,146	1,170	1,192	1,241	1,248	720	988	1,136	1,114	1,141	1,118	1,099	633	900	1,144	1,136	1,137	1,082	990	579
	10 AM - 11 AM	1,192	1,275	1,262	1,298	1,518	1,571	1,052	1,166	1,198	1,206	1,301	1,332	1,414	938	983	1,214	1,201	1,194	1,235	1,207	895
	11 AM - 12 PM	1,312	1,404	1,329	1,430	1,770	1,756	1,393	1,250	1,295	1,253	1,352	1,553	1,562	1,242	1,108	1,306	1,288	1,253	1,417	1,463	1,222
	12 PM - 1 PM	1,392	1,426	1,431	1,610	1,909	1,762	1,620	1,355	1,329	1,279	1,455	1,698	1,627	1,490	1,176	1,356	1,377	1,304	1,511	1,462	1,499
	1 PM - 2 PM	1,441	1,453	1,445	1,660	2,038	1,746	1,798	1,338	1,390	1,382	1,510	1,712	1,575	1,486	1,176	1,399	1,468	1,445	1,595	1,515	1,623
	2 PM - 3 PM	1,555	1,532	1,513	1,704	2,168	1,693	1,825	1,409	1,512	1,380	1,622	1,900	1,525	1,492	1,290	1,476	1,490	1,511	1,708	1,481	1,653
	3 PM - 4 PM	1,692	1,668	1,742	1,883	2,258	1,637	1,950	1,525	1,593	1,605	1,764	2,036	1,557	1,700	1,430	1,618	1,704	1,647	1,889	1,519	1,652
	4 PM - 5 PM	1,727	1,730	1,777	2,004	2,345	1,524	1,902	1,667	1,630	1,664	1,898	2,118	1,517	1,683	1,479	1,738	1,765	1,702	1,864	1,411	1,620
	5 PM - 6 PM	1,703	1,695	1,719	2,025	2,330	1,417	1,847	1,626	1,600	1,614	1,766	2,065	1,378	1,607	1,402	1,615	1,676	1,632	1,789	1,252	1,540
	6 PM - 7 PM	1,398	1,417	1,408	1,659	2,126	1,228	1,705	1,306	1,293	1,319	1,439	1,794	1,171	1,636	1,154	1,317	1,364	1,306	1,510	1,054	1,373
	7 PM - 8 PM	1,146	1,159	1,137	1,344	1,580	1,028	1,429	1,069	1,035	1,071	1,213	1,436	948	1,445	949	1,049	1,113	1,082	1,294	919	1,217
	8 PM - 9 PM	964	955	963	1,160	1,203	838	1,185	853	862	874	1,036	1,174	825	1,061	819	890	943	901	1,034	712	954
	9 PM - 10 PM	773	790	796	938	958	702	973	728	689	740	850	899	657	826	727	778	779	802	849	597	718
	10 PM - 11 PM	667	616	649	763	766	564	649	621	614	614	644	771	528	612	701	665	680	666	695	494	500
	11 PM - Midnight	582	564	576	647	644	423	436	532	534	555	587	625	390	381	569	568	571	556	553	356	376

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

142 Lorain County West

TO

145 Lorain - Elyria

Route	I-80
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	95	138	149	148	155	135	96	117	158	177	152	120	154	102	137	168	171	175	177	176	121
	1 AM - 2 AM	76	111	125	118	132	111	75	89	134	143	129	109	124	77	102	135	138	141	142	136	109
	2 AM - 3 AM	65	93	104	105	105	85	60	76	116	112	103	97	95	62	85	110	113	131	135	103	65
	3 AM - 4 AM	62	92	103	107	110	90	49	74	100	118	108	102	87	55	88	111	121	132	128	101	65
	4 AM - 5 AM	79	115	123	134	131	80	52	91	121	133	129	114	94	57	99	138	142	147	146	104	59
	5 AM - 6 AM	125	174	186	190	180	106	60	157	193	199	175	151	113	66	158	205	206	211	210	134	70
	6 AM - 7 AM	219	289	295	301	278	142	69	239	326	318	276	215	148	88	271	327	326	331	324	162	87
	7 AM - 8 AM	280	380	398	382	374	169	96	349	427	442	361	326	198	121	380	447	446	458	419	207	126
	8 AM - 9 AM	301	388	396	387	381	211	133	375	448	416	372	339	261	181	385	449	445	475	425	274	178
	9 AM - 10 AM	306	390	398	394	376	287	200	384	432	410	365	366	340	250	373	415	447	469	445	377	279
	10 AM - 11 AM	338	404	393	408	392	370	284	407	442	406	382	400	432	353	421	446	445	484	486	478	396
	11 AM - 12 PM	378	431	432	434	413	453	368	458	453	446	431	441	506	466	459	468	502	540	556	568	526
	12 PM - 1 PM	427	460	473	478	456	504	444	493	478	470	457	486	529	543	510	506	529	556	597	614	617
	1 PM - 2 PM	441	478	482	504	489	506	508	525	504	468	472	539	529	590	519	551	554	589	645	609	678
	2 PM - 3 PM	490	511	491	538	543	505	536	538	543	513	503	594	528	610	570	556	572	647	699	617	730
	3 PM - 4 PM	521	527	530	566	570	504	565	612	595	537	525	630	542	622	604	594	608	685	772	631	784
	4 PM - 5 PM	521	529	563	584	597	496	582	606	604	561	530	636	500	635	613	617	654	694	780	588	761
	5 PM - 6 PM	486	525	564	561	596	453	522	578	594	531	504	644	469	612	598	612	665	680	778	537	722
	6 PM - 7 PM	413	456	465	453	535	387	420	475	498	451	406	559	404	516	490	495	547	599	670	463	668
	7 PM - 8 PM	352	360	373	380	430	320	355	395	410	362	333	455	344	427	401	414	426	484	550	373	551
	8 PM - 9 PM	284	303	321	323	373	255	288	342	352	311	275	384	282	353	354	353	361	412	442	308	438
	9 PM - 10 PM	244	247	262	281	285	214	238	287	281	266	227	308	229	269	303	297	308	348	365	262	344
	10 PM - 11 PM	205	201	214	238	222	174	178	239	248	204	182	238	185	213	246	239	258	284	291	199	261
	11 PM - Midnight	171	176	183	191	178	123	125	197	201	171	153	177	150	157	209	204	205	224	231	138	189

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	190	276	298	297	310	269	193	233	317	353	304	240	307	203	275	335	343	351	354	353	242
	1 AM - 2 AM	151	223	250	237	264	223	150	178	267	286	258	218	248	155	204	269	277	282	285	273	219
	2 AM - 3 AM	129	187	207	209	210	170	120	152	233	225	206	195	190	123	171	220	226	261	270	206	131
	3 AM - 4 AM	123	184	207	214	220	179	98	149	200	235	215	205	174	111	176	222	241	265	256	202	130
	4 AM - 5 AM	158	230	246	268	262	161	103	182	241	266	259	227	188	114	198	276	285	293	292	209	117
	5 AM - 6 AM	250	348	372	380	359	212	121	313	386	399	350	302	227	131	315	410	413	422	421	269	140
	6 AM - 7 AM	437	578	590	603	557	284	138	478	651	636	552	431	296	176	542	655	651	661	648	323	175
	7 AM - 8 AM	561	759	796	765	748	338	191	698	853	885	722	652	395	242	761	893	891	916	838	415	251
	8 AM - 9 AM	602	777	791	775	763	423	267	750	896	833	745	678	523	362	770	897	890	950	850	547	356
	9 AM - 10 AM	612	780	795	788	751	574	400	768	864	819	731	733	679	500	746	830	894	938	891	753	558
	10 AM - 11 AM	675	807	786	816	785	740	568	815	885	813	765	800	865	706	843	891	889	968	972	956	792
	11 AM - 12 PM	756	861	865	867	827	905	736	916	906	891	862	882	1,012	933	918	937	1,004	1,081	1,111	1,137	1,051
	12 PM - 1 PM	853	920	945	956	911	1,008	887	985	955	939	914	973	1,058	1,086	1,020	1,011	1,059	1,111	1,194	1,227	1,234
	1 PM - 2 PM	883	956	964	1,009	978	1,012	1,016	1,049	1,008	936	943	1,077	1,057	1,180	1,038	1,102	1,108	1,177	1,290	1,219	1,356
	2 PM - 3 PM	979	1,022	982	1,076	1,086	1,011	1,073	1,077	1,086	1,025	1,007	1,189	1,056	1,221	1,140	1,113	1,144	1,293	1,399	1,233	1,461
	3 PM - 4 PM	1,041	1,055	1,061	1,132	1,141	1,008	1,131	1,225	1,190	1,074	1,051	1,259	1,084	1,244	1,207	1,187	1,215	1,370	1,544	1,262	1,568
	4 PM - 5 PM	1,042	1,058	1,126	1,167	1,195	993	1,165	1,211	1,208	1,121	1,060	1,272	1,000	1,269	1,226	1,235	1,308	1,388	1,560	1,176	1,523
	5 PM - 6 PM	971	1,050	1,128	1,123	1,192	907	1,044	1,157	1,188	1,061	1,009	1,287	939	1,269	1,196	1,224	1,330	1,360	1,555	1,074	1,444
	6 PM - 7 PM	826	912	931	907	1,069	773	841	950	996	902	812	1,118	809	1,033	980	989	1,093	1,198	1,340	926	1,335
	7 PM - 8 PM	703	719	747	760	859	640	711	789	820	725	667	909	689	854	802	827	851	967	1,099	747	1,101
	8 PM - 9 PM	567	605	641	646	746	510	575	684	704	622	551	769	565	706	708	706	721	824	884	615	876
	9 PM - 10 PM	487	494	524	563	570	429	475	574	563	533	454	615	457	538	606	594	615	695	730	525	688
	10 PM - 11 PM	409	403	428	475	444	348	356	478	495	407	365	475	371	426	492	477	515	567	582	397	521
	11 PM - Midnight	343	353	365	382	357	246	251	395	403	343	305	354	300	314	418	407	410	447	462	276	378

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

142 Lorain County West

TO

145 Lorain - Elyria

Route	I-80
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Close 1 Lane	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	129	177	184	144	209	186	136	148	166	182	193	203	200	133	189	198	206	205	237	230	183
	1 AM - 2 AM	102	137	142	114	159	149	92	108	152	143	153	158	149	94	130	158	162	182	197	156	117
	2 AM - 3 AM	89	115	119	98	133	113	72	90	119	126	131	141	115	75	108	138	137	160	169	126	87
	3 AM - 4 AM	84	115	114	107	129	115	71	83	103	117	135	140	115	65	95	125	134	151	159	123	75
	4 AM - 5 AM	97	131	142	134	154	107	69	108	126	139	151	154	108	66	113	145	144	159	149	121	78
	5 AM - 6 AM	170	213	218	214	209	139	73	170	193	228	210	222	134	77	173	216	224	236	232	144	89
	6 AM - 7 AM	280	330	338	346	328	158	97	286	297	339	337	344	177	96	312	348	353	368	355	184	112
	7 AM - 8 AM	394	449	456	453	430	222	144	391	408	471	464	437	239	140	403	460	465	474	450	248	158
	8 AM - 9 AM	393	463	480	474	439	299	209	397	405	468	485	466	324	208	435	495	482	503	490	330	245
	9 AM - 10 AM	394	453	467	482	469	388	312	409	428	486	516	482	427	327	471	500	516	522	538	443	358
	10 AM - 11 AM	438	472	502	513	539	505	434	453	479	510	526	527	501	474	537	530	535	585	583	554	501
	11 AM - 12 PM	465	525	533	565	593	596	570	534	536	555	621	614	622	632	599	580	590	665	703	698	677
	12 PM - 1 PM	515	543	566	619	657	616	654	561	584	587	652	683	677	739	671	619	618	734	740	736	789
	1 PM - 2 PM	520	552	593	655	684	637	726	626	624	614	675	728	647	774	718	644	678	767	788	771	892
	2 PM - 3 PM	586	612	634	710	744	646	776	655	681	665	729	775	653	834	782	683	725	807	851	774	937
	3 PM - 4 PM	611	650	677	747	798	634	797	705	705	713	773	811	648	854	787	726	741	845	918	720	1,000
	4 PM - 5 PM	630	665	686	738	798	627	788	694	705	707	782	833	616	869	798	755	753	864	918	672	965
	5 PM - 6 PM	599	637	682	741	786	592	782	641	700	691	747	791	562	831	749	698	753	840	882	645	935
	6 PM - 7 PM	491	537	584	641	676	509	698	565	628	582	659	692	487	779	640	629	609	727	775	553	839
	7 PM - 8 PM	424	461	504	548	566	438	600	471	523	507	555	589	417	662	564	492	509	607	623	488	745
	8 PM - 9 PM	356	376	379	459	442	366	468	408	449	452	475	512	379	560	497	428	416	523	525	455	635
	9 PM - 10 PM	309	325	281	387	372	300	368	346	360	381	386	409	309	438	425	377	359	451	459	383	490
	10 PM - 11 PM	250	257	212	314	288	233	265	267	282	295	329	318	263	324	333	295	318	376	379	311	382
	11 PM - Midnight	200	209	187	245	226	178	183	211	213	235	252	269	192	212	262	245	249	293	311	246	268

Close 2 Lanes	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	259	354	367	287	417	372	272	296	332	365	386	406	400	265	379	395	413	410	475	460	366
	1 AM - 2 AM	203	274	284	228	319	297	184	216	305	285	307	316	298	187	260	316	325	364	394	312	235
	2 AM - 3 AM	178	229	238	196	266	226	143	180	239	251	263	282	229	151	216	276	274	320	338	252	175
	3 AM - 4 AM	168	229	228	213	257	230	141	166	205	233	270	279	229	130	190	250	267	302	318	245	149
	4 AM - 5 AM	194	262	284	268	307	215	137	216	251	278	301	308	216	133	225	290	289	317	298	243	156
	5 AM - 6 AM	340	427	435	428	418	278	146	340	386	455	419	444	269	153	346	431	448	473	464	288	177
	6 AM - 7 AM	559	659	677	692	657	316	193	572	594	679	674	688	354	193	624	696	706	736	710	368	224
	7 AM - 8 AM	788	898	911	905	860	445	288	781	815	943	929	874	477	281	807	919	929	949	900	496	316
	8 AM - 9 AM	787	925	959	947	878	597	418	794	809	936	969	932	648	416	869	991	963	1,005	980	659	491
	9 AM - 10 AM	787	906	935	965	938	776	623	817	855	972	1,032	964	853	654	942	1,001	1,033	1,044	1,076	886	717
	10 AM - 11 AM	875	945	1,004	1,027	1,078	1,010	868	906	957	1,020	1,051	1,054	1,002	948	1,075	1,059	1,069	1,170	1,165	1,108	1,003
	11 AM - 12 PM	930	1,049	1,067	1,130	1,186	1,193	1,141	1,068	1,072	1,110	1,241	1,227	1,245	1,264	1,198	1,160	1,179	1,330	1,405	1,395	1,355
	12 PM - 1 PM	1,031	1,086	1,133	1,237	1,314	1,233	1,307	1,122	1,168	1,175	1,304	1,367	1,354	1,478	1,342	1,239	1,237	1,469	1,480	1,473	1,578
	1 PM - 2 PM	1,040	1,104	1,187	1,309	1,367	1,274	1,451	1,253	1,249	1,227	1,349	1,456	1,293	1,548	1,436	1,288	1,355	1,533	1,576	1,541	1,784
	2 PM - 3 PM	1,171	1,224	1,269	1,421	1,487	1,292	1,551	1,311	1,362	1,329	1,458	1,549	1,306	1,669	1,564	1,367	1,450	1,614	1,702	1,548	1,875
	3 PM - 4 PM	1,223	1,300	1,354	1,494	1,597	1,268	1,594	1,410	1,410	1,425	1,545	1,621	1,295	1,709	1,575	1,452	1,481	1,689	1,837	1,440	2,000
	4 PM - 5 PM	1,259	1,330	1,372	1,476	1,596	1,255	1,575	1,389	1,409	1,414	1,563	1,666	1,232	1,739	1,596	1,509	1,505	1,728	1,836	1,343	1,930
	5 PM - 6 PM	1,198	1,275	1,364	1,482	1,572	1,185	1,565	1,282	1,401	1,381	1,494	1,581	1,123	1,663	1,498	1,397	1,505	1,680	1,765	1,291	1,870
	6 PM - 7 PM	982	1,074	1,168	1,282	1,352	1,017	1,395	1,130	1,255	1,163	1,317	1,385	974	1,557	1,279	1,258	1,218	1,454	1,550	1,106	1,678
	7 PM - 8 PM	849	921	1,007	1,096	1,132	876	1,201	942	1,047	1,013	1,110	1,178	833	1,323	1,128	984	1,017	1,214	1,246	977	1,489
	8 PM - 9 PM	712	751	757	919	883	733	936	817	898	903	950	1,024	759	1,120	993	855	832	1,047	1,050	909	1,270
	9 PM - 10 PM	617	651	562	775	744	600	736	691	721	761	771	818	617	876	850	753	718	903	919	766	981
	10 PM - 11 PM	500	513	425	627	576	465	531	534	565	590	659	636	525	647	665	590	635	752	757	623	765
	11 PM - Midnight	401	418	373	490	452	355	367	422	426	471	504	538	383	424	525	490	498	586	623	493	537

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

142 Lorain County West

TO

145 Lorain - Elyria

Route	I-80
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	192	197	196	217	225	226	185	208	204	197	215	221	232	195	155	187	184	203	235	231	168
	1 AM - 2 AM	132	154	159	178	184	156	118	155	159	164	178	171	172	137	118	145	151	166	179	175	108
	2 AM - 3 AM	104	122	129	148	153	136	96	119	141	141	139	149	130	92	90	120	121	142	143	128	89
	3 AM - 4 AM	105	109	126	138	150	122	72	99	129	129	145	152	120	81	85	108	123	129	137	110	72
	4 AM - 5 AM	126	127	154	159	160	123	74	116	152	157	170	158	120	73	103	128	133	150	156	118	70
	5 AM - 6 AM	182	201	209	229	232	144	88	179	216	227	221	223	145	91	171	199	198	211	210	138	77
	6 AM - 7 AM	301	333	341	349	358	196	109	316	351	370	373	357	171	109	291	310	313	336	330	163	93
	7 AM - 8 AM	407	423	464	476	449	240	154	435	485	522	519	472	244	160	395	435	440	468	433	232	151
	8 AM - 9 AM	439	466	474	519	476	343	228	479	524	549	543	521	335	239	393	451	460	486	464	316	235
	9 AM - 10 AM	483	481	516	525	542	435	354	497	510	547	575	555	459	389	415	445	465	509	487	423	392
	10 AM - 11 AM	543	533	561	578	623	558	515	546	543	608	617	618	586	574	480	478	497	529	544	556	546
	11 AM - 12 PM	623	598	632	669	714	739	729	630	610	659	662	740	745	784	525	563	534	597	634	653	728
	12 PM - 1 PM	684	667	675	759	786	794	871	709	663	696	698	791	843	929	602	603	581	658	694	693	820
	1 PM - 2 PM	731	703	693	783	862	824	976	763	718	740	781	843	879	1,028	636	612	626	683	740	705	860
	2 PM - 3 PM	772	757	765	841	912	853	1,044	782	751	762	850	924	872	1,078	689	668	644	753	801	739	915
	3 PM - 4 PM	795	787	716	847	988	867	1,005	830	803	843	925	939	877	1,114	713	686	676	767	850	694	882
	4 PM - 5 PM	769	814	750	865	1,004	787	1,013	836	835	887	946	933	872	1,032	704	712	717	817	865	653	892
	5 PM - 6 PM	738	764	765	855	913	702	1,021	815	837	874	921	872	773	960	673	671	716	789	853	615	874
	6 PM - 7 PM	655	674	671	742	798	621	866	675	674	715	756	786	667	913	569	560	600	666	742	541	798
	7 PM - 8 PM	540	540	556	632	667	539	741	529	537	580	640	672	574	792	450	468	469	564	625	474	683
	8 PM - 9 PM	455	455	482	543	573	464	688	441	462	479	520	555	499	655	390	381	401	483	501	411	557
	9 PM - 10 PM	372	384	399	453	481	399	534	383	385	418	467	462	418	510	327	330	346	416	431	376	434
	10 PM - 11 PM	307	316	332	377	388	307	381	335	312	333	392	387	345	403	266	269	296	347	344	319	319
	11 PM - Midnight	251	258	261	298	298	252	286	268	256	261	303	309	265	281	218	204	247	285	278	264	223

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	383	393	391	434	450	452	371	416	408	393	429	441	464	390	310	373	368	407	470	461	335
	1 AM - 2 AM	263	307	317	357	369	312	237	309	318	327	355	342	343	274	236	291	301	332	359	349	217
	2 AM - 3 AM	208	243	259	296	307	271	191	239	283	281	278	299	261	184	181	239	242	284	286	256	179
	3 AM - 4 AM	210	217	252	275	300	245	145	197	258	258	290	303	241	161	170	216	245	258	273	219	143
	4 AM - 5 AM	251	253	308	319	319	245	148	231	303	314	339	315	240	147	205	255	266	301	312	236	140
	5 AM - 6 AM	364	403	418	459	464	288	175	357	431	454	442	447	291	181	341	397	396	422	420	277	153
	6 AM - 7 AM	602	667	683	698	717	391	217	632	703	741	746	715	343	217	581	620	626	673	661	326	186
	7 AM - 8 AM	813	847	927	953	898	480	308	871	969	1,043	1,038	944	488	321	790	871	880	936	865	464	301
	8 AM - 9 AM	878	932	947	1,037	951	686	457	958	1,048	1,099	1,086	1,041	671	479	786	903	921	972	927	631	469
	9 AM - 10 AM	965	963	1,032	1,050	1,085	870	707	994	1,020	1,094	1,150	1,110	918	779	830	889	930	1,018	975	846	785
	10 AM - 11 AM	1,085	1,067	1,122	1,157	1,245	1,115	1,031	1,093	1,085	1,217	1,235	1,237	1,172	1,148	959	955	994	1,058	1,088	1,112	1,092
	11 AM - 12 PM	1,245	1,196	1,263	1,337	1,428	1,478	1,457	1,259	1,220	1,318	1,324	1,481	1,491	1,569	1,051	1,126	1,068	1,195	1,267	1,306	1,456
	12 PM - 1 PM	1,368	1,335	1,351	1,518	1,571	1,588	1,741	1,418	1,326	1,392	1,396	1,583	1,686	1,857	1,203	1,205	1,163	1,317	1,388	1,385	1,640
	1 PM - 2 PM	1,462	1,405	1,386	1,566	1,723	1,649	1,951	1,527	1,436	1,479	1,563	1,687	1,758	2,056	1,272	1,223	1,252	1,366	1,479	1,410	1,719
	2 PM - 3 PM	1,545	1,514	1,531	1,682	1,824	1,706	2,088	1,563	1,501	1,523	1,701	1,847	1,744	2,157	1,378	1,337	1,289	1,507	1,602	1,477	1,830
	3 PM - 4 PM	1,590	1,573	1,431	1,695	1,976	1,734	2,010	1,661	1,605	1,685	1,849	1,878	1,754	2,228	1,425	1,372	1,351	1,535	1,699	1,387	1,764
	4 PM - 5 PM	1,538	1,628	1,501	1,730	2,008	1,574	2,027	1,673	1,669	1,775	1,891	1,866	1,743	2,064	1,407	1,424	1,434	1,634	1,731	1,305	1,784
	5 PM - 6 PM	1,477	1,527	1,529	1,711	1,825	1,404	2,042	1,630	1,675	1,479	1,842	1,744	1,546	1,919	1,346	1,342	1,433	1,578	1,706	1,231	1,748
	6 PM - 7 PM	1,311	1,348	1,342	1,483	1,597	1,242	1,733	1,349	1,349	1,430	1,512	1,572	1,334	1,826	1,139	1,120	1,200	1,331	1,483	1,082	1,597
	7 PM - 8 PM	1,080	1,080	1,112	1,263	1,334	1,078	1,482	1,058	1,074	1,161	1,280	1,345	1,149	1,584	899	935	937	1,129	1,250	949	1,366
	8 PM - 9 PM	910	911	964	1,086	1,146	927	1,375	883	925	958	1,041	1,110	999	1,311	779	762	802	966	1,002	823	1,114
	9 PM - 10 PM	745	767	797	905	962	797	1,068	767	769	835	933	923	837	1,021	654	660	693	832	863	751	868
	10 PM - 11 PM	614	632	665	754	775	613	761	669	625	666	784	775	691	806	532	538	592	693	688	638	638
	11 PM - Midnight	501	517	522	597	597	504	572	536	512	521	607	618	529	563	435	409	493	570	555	528	446

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

142 Lorain County West

TO

145 Lorain - Elyria

Route	I-80
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

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Revision Date: 9/1/2022

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	161	187	181	194	206	201	151	132	167	173	193	185	191	145	135	178	178	175	182	170	113
	1 AM - 2 AM	112	152	141	148	168	147	111	105	147	147	140	164	140	128	91	147	151	134	164	140	85
	2 AM - 3 AM	90	133	118	131	151	120	90	85	121	124	128	139	115	73	84	125	123	132	129	116	67
	3 AM - 4 AM	84	118	117	132	141	107	78	77	115	125	126	133	110	62	84	119	127	126	147	102	63
	4 AM - 5 AM	102	133	147	141	153	111	74	103	139	144	150	165	116	68	106	155	155	158	158	112	66
	5 AM - 6 AM	173	207	217	217	214	128	85	172	201	210	221	208	134	78	155	209	216	215	219	121	76
	6 AM - 7 AM	283	329	331	339	318	153	94	278	336	336	319	336	173	108	260	325	331	339	330	152	94
	7 AM - 8 AM	386	431	443	443	411	206	131	379	437	439	454	445	230	149	375	417	425	451	432	203	131
	8 AM - 9 AM	389	442	469	470	445	296	199	400	458	455	477	464	294	238	390	462	455	444	430	275	206
	9 AM - 10 AM	420	457	464	477	482	402	318	419	457	449	485	456	415	390	380	464	467	472	448	372	310
	10 AM - 11 AM	465	476	496	514	529	500	483	436	462	480	505	501	538	508	421	496	515	491	500	474	455
	11 AM - 12 PM	537	525	538	601	616	621	671	499	495	537	572	597	662	681	467	539	569	526	554	580	626
	12 PM - 1 PM	607	573	572	656	680	657	796	546	548	557	609	651	692	753	527	569	609	572	621	623	703
	1 PM - 2 PM	613	589	619	680	701	650	856	582	572	567	632	676	696	770	562	597	630	582	648	639	755
	2 PM - 3 PM	686	626	659	750	767	650	881	618	594	615	703	744	683	813	601	637	659	648	698	656	777
	3 PM - 4 PM	728	657	674	770	808	631	903	663	616	626	714	779	665	852	615	703	673	686	736	663	788
	4 PM - 5 PM	712	685	706	776	839	608	878	677	661	666	725	800	625	807	643	690	705	709	761	608	747
	5 PM - 6 PM	658	639	700	774	821	550	827	615	624	655	721	807	607	770	590	639	646	697	706	563	672
	6 PM - 7 PM	549	539	598	658	719	507	752	512	500	544	606	673	520	662	478	537	531	577	660	488	599
	7 PM - 8 PM	454	428	482	536	571	435	601	427	410	437	494	540	432	539	415	450	442	479	511	391	498
	8 PM - 9 PM	373	358	407	448	502	363	499	368	339	347	431	482	359	450	344	382	390	397	430	298	397
	9 PM - 10 PM	341	299	343	389	421	308	411	312	273	306	355	383	308	356	293	320	367	335	340	268	323
	10 PM - 11 PM	271	266	285	333	319	262	299	273	241	285	283	334	257	251	248	263	291	259	282	201	240
	11 PM - Midnight	226	218	236	264	271	191	215	212	188	240	227	243	202	173	206	211	237	228	229	160	164

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	323	374	363	387	411	401	303	264	335	345	386	369	381	290	269	355	356	350	363	339	226
	1 AM - 2 AM	223	305	281	296	336	294	223	210	294	294	279	329	281	255	183	293	301	268	327	279	169
	2 AM - 3 AM	179	265	236	262	302	240	180	169	241	247	256	278	229	146	167	249	247	263	258	233	133
	3 AM - 4 AM	169	236	233	265	283	215	157	155	229	250	252	267	220	123	168	238	255	252	293	204	125
	4 AM - 5 AM	205	267	295	283	305	222	148	206	277	288	299	330	233	135	213	309	310	315	316	223	133
	5 AM - 6 AM	345	415	434	434	427	255	170	343	401	420	443	415	269	156	310	418	433	430	439	241	152
	6 AM - 7 AM	566	659	662	678	636	305	189	555	671	672	638	672	347	217	520	649	662	677	660	304	188
	7 AM - 8 AM	773	862	887	885	822	412	261	757	875	877	907	890	460	297	750	833	851	901	865	407	262
	8 AM - 9 AM	777	884	938	940	890	591	399	799	916	910	955	929	588	475	780	923	911	887	861	550	412
	9 AM - 10 AM	840	913	928	955	963	804	635	838	913	898	969	912	831	780	761	928	933	944	897	743	619
	10 AM - 11 AM	930	952	992	1,028	1,057	1,001	965	871	923	959	1,011	1,002	1,077	1,017	841	991	1,030	982	999	947	910
	11 AM - 12 PM	1,074	1,050	1,075	1,202	1,231	1,242	1,342	998	990	1,075	1,145	1,193	1,324	1,362	933	1,078	1,139	1,052	1,108	1,160	1,252
	12 PM - 1 PM	1,215	1,146	1,144	1,312	1,360	1,314	1,592	1,091	1,096	1,113	1,219	1,301	1,384	1,506	1,053	1,137	1,218	1,145	1,242	1,246	1,406
	1 PM - 2 PM	1,226	1,179	1,238	1,359	1,402	1,299	1,712	1,164	1,143	1,134	1,264	1,353	1,392	1,541	1,124	1,195	1,260	1,164	1,297	1,278	1,510
	2 PM - 3 PM	1,371	1,253	1,317	1,499	1,534	1,299	1,762	1,236	1,188	1,230	1,405	1,488	1,365	1,626	1,202	1,274	1,318	1,297	1,395	1,313	1,555
	3 PM - 4 PM	1,457	1,315	1,348	1,541	1,616	1,262	1,806	1,325	1,233	1,252	1,429	1,557	1,330	1,705	1,230	1,405	1,346	1,372	1,473	1,326	1,575
	4 PM - 5 PM	1,423	1,370	1,412	1,553	1,678	1,216	1,755	1,354	1,322	1,331	1,449	1,600	1,250	1,613	1,286	1,379	1,410	1,418	1,522	1,216	1,494
	5 PM - 6 PM	1,317	1,278	1,399	1,549	1,642	1,100	1,653	1,231	1,247	1,309	1,442	1,614	1,213	1,541	1,180	1,278	1,291	1,394	1,412	1,125	1,343
	6 PM - 7 PM	1,098	1,079	1,196	1,316	1,439	1,013	1,505	1,024	1,000	1,087	1,212	1,345	1,039	1,324	956	1,074	1,063	1,154	1,320	977	1,198
	7 PM - 8 PM	908	855	963	1,072	1,142	869	1,203	854	820	874	989	1,080	864	1,078	830	900	885	957	1,022	783	995
	8 PM - 9 PM	746	716	815	896	1,003	726	997	737	678	693	861	963	717	900	688	764	780	794	860	596	794
	9 PM - 10 PM	681	597	685	778	842	615	822	625	545	611	709	766	616	712	585	641	735	669	680	536	647
	10 PM - 11 PM	542	532	569	665	638	524	597	546	482	571	566	667	515	501	496	525	582	518	564	402	480
	11 PM - Midnight	452	435	473	529	543	382	430	424	376	479	454	485	405	345	412	421	474	456	458	320	328

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

145 Lorain - Elyria

TO

142 Lorain County West

Route	I-80
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

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Revision Date: 9/1/2022

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	95	168	188	186	187	160	87	113	196	200	190	148	160	107	132	213	203	211	198	177	116
	1 AM - 2 AM	74	123	139	158	145	117	69	87	160	154	144	107	129	74	98	178	161	163	166	134	83
	2 AM - 3 AM	59	116	114	123	124	102	50	77	139	134	120	109	101	57	72	135	138	139	132	103	62
	3 AM - 4 AM	57	106	114	117	114	86	41	64	114	122	108	101	80	52	67	120	115	115	111	91	53
	4 AM - 5 AM	64	108	122	122	126	86	42	73	133	132	115	101	90	45	91	131	132	126	132	87	49
	5 AM - 6 AM	83	141	148	158	151	94	42	109	165	166	140	127	103	49	110	170	172	172	171	105	51
	6 AM - 7 AM	147	220	238	235	212	118	50	190	252	239	220	182	124	67	194	259	251	264	237	148	64
	7 AM - 8 AM	208	312	326	330	312	164	81	286	371	348	309	265	189	96	294	375	379	373	362	214	101
	8 AM - 9 AM	248	384	384	386	350	244	110	345	447	408	349	321	272	145	339	441	434	429	414	296	148
	9 AM - 10 AM	281	400	405	409	375	315	164	356	465	430	376	373	340	204	369	459	466	473	461	380	226
	10 AM - 11 AM	314	432	432	427	428	413	247	416	484	443	409	426	440	312	420	478	488	505	524	480	334
	11 AM - 12 PM	355	456	445	455	473	501	328	448	494	459	431	464	512	403	446	513	521	554	592	555	454
	12 PM - 1 PM	373	481	448	476	514	524	417	455	521	478	455	523	559	467	484	541	527	597	634	616	577
	1 PM - 2 PM	394	508	467	505	559	518	468	483	514	474	452	565	540	515	509	560	558	600	685	617	645
	2 PM - 3 PM	438	542	494	551	567	522	538	516	552	493	486	597	524	557	534	595	582	644	723	599	673
	3 PM - 4 PM	485	598	555	591	646	525	529	580	557	547	527	627	514	574	588	642	655	704	792	564	708
	4 PM - 5 PM	516	607	585	622	664	487	526	605	594	590	550	670	494	585	628	667	666	768	808	560	728
	5 PM - 6 PM	506	601	578	578	641	457	499	598	620	573	516	699	432	580	625	648	662	718	809	504	693
	6 PM - 7 PM	413	483	468	491	578	381	465	490	507	451	411	589	402	507	537	562	553	601	693	438	648
	7 PM - 8 PM	368	412	391	433	449	307	390	431	437	386	343	470	337	420	438	466	472	517	566	375	559
	8 PM - 9 PM	311	338	332	346	357	247	312	368	372	322	291	368	273	360	399	394	396	428	456	294	420
	9 PM - 10 PM	266	298	290	284	289	205	227	308	312	289	242	290	221	259	323	325	327	355	353	256	329
	10 PM - 11 PM	242	249	263	246	228	160	163	276	271	243	211	242	180	201	302	293	299	290	293	197	242
	11 PM - Midnight	206	222	224	212	190	120	119	247	222	222	159	191	132	156	242	246	253	254	236	139	186

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	190	337	376	373	373	320	174	226	393	399	381	296	321	215	264	427	407	421	397	353	232
	1 AM - 2 AM	149	245	278	316	291	235	138	174	320	307	289	214	259	148	196	356	321	326	332	268	165
	2 AM - 3 AM	119	233	228	245	249	203	100	153	278	269	241	219	203	113	143	271	277	277	265	206	124
	3 AM - 4 AM	113	212	228	235	227	171	82	128	229	243	216	201	161	104	134	240	231	231	222	182	107
	4 AM - 5 AM	127	216	245	243	253	173	84	146	266	265	230	202	180	89	181	261	265	252	264	175	98
	5 AM - 6 AM	167	283	297	316	301	187	83	217	331	332	280	254	205	98	221	340	345	344	341	211	102
	6 AM - 7 AM	294	441	475	469	425	237	99	381	504	479	440	363	248	134	387	519	503	528	475	297	127
	7 AM - 8 AM	416	624	652	660	624	329	162	572	743	697	617	529	377	191	588	750	758	745	723	427	203
	8 AM - 9 AM	496	768	769	772	700	487	221	691	894	816	697	642	544	290	678	881	868	858	828	591	296
	9 AM - 10 AM	561	801	810	818	750	630	327	711	930	860	752	746	679	409	737	918	932	945	921	760	451
	10 AM - 11 AM	627	865	863	854	856	825	493	833	967	887	817	851	880	624	839	956	975	1,009	1,047	961	668
	11 AM - 12 PM	709	911	890	910	946	1,002	656	895	988	918	862	928	1,025	806	893	1,025	1,041	1,108	1,184	1,109	909
	12 PM - 1 PM	746	962	896	953	1,028	1,048	834	910	1,042	956	910	1,046	1,118	934	968	1,082	1,054	1,193	1,269	1,231	1,154
	1 PM - 2 PM	788	1,016	935	1,009	1,118	1,036	936	966	1,028	949	905	1,130	1,080	1,029	1,018	1,121	1,116	1,200	1,371	1,234	1,289
	2 PM - 3 PM	875	1,084	987	1,101	1,135	1,044	1,075	1,031	1,103	986	972	1,195	1,048	1,114	1,068	1,190	1,164	1,287	1,446	1,198	1,347
	3 PM - 4 PM	969	1,197	1,110	1,182	1,292	1,049	1,059	1,159	1,114	1,094	1,054	1,254	1,028	1,148	1,175	1,283	1,311	1,407	1,584	1,129	1,417
	4 PM - 5 PM	1,032	1,214	1,170	1,243	1,328	974	1,053	1,210	1,188	1,179	1,100	1,341	988	1,170	1,257	1,333	1,333	1,537	1,616	1,121	1,455
	5 PM - 6 PM	1,012	1,201	1,157	1,157	1,282	914	999	1,196	1,241	1,146	1,031	1,397	865	1,160	1,250	1,297	1,325	1,437	1,617	1,007	1,387
	6 PM - 7 PM	826	966	937	982	1,157	762	931	981	1,014	901	822	1,177	804	1,014	1,074	1,124	1,105	1,202	1,386	875	1,297
	7 PM - 8 PM	736	824	783	866	898	613	781	862	874	771	687	941	674	839	875	931	943	1,034	1,131	750	1,117
	8 PM - 9 PM	622	676	665	692	715	493	625	735	745	644	583	735	546	720	797	787	791	856	912	589	839
	9 PM - 10 PM	532	596	580	567	578	410	455	617	623	577	483	580	442	519	646	651	654	710	706	513	658
	10 PM - 11 PM	485	499	526	491	456	320	326	552	541	485	422	485	361	403	603	585	598	581	587	395	483
	11 PM - Midnight	411	443	449	424	380	239	238	494	444	443	318	382	263	312	485	492	505	509	471	278	373

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

145 Lorain - Elyria

TO

142 Lorain County West

Route	I-80
Direction	WB

Terrain	Level
Lanes Per Direction	3

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xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

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Revision Date: 9/1/2022

Close 1 Lane	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	130	229	223	227	226	200	130	143	202	217	219	232	223	126	156	234	240	243	257	256	153
	1 AM - 2 AM	91	171	173	170	177	149	86	102	167	175	175	190	158	87	111	187	185	191	197	179	112
	2 AM - 3 AM	64	150	140	151	154	122	75	80	129	151	144	151	122	69	85	148	151	164	170	149	83
	3 AM - 4 AM	99	128	121	126	128	102	53	78	114	132	131	150	99	59	79	134	140	149	151	116	65
	4 AM - 5 AM	83	140	141	135	144	108	55	86	126	154	144	144	111	57	93	142	159	158	156	129	62
	5 AM - 6 AM	116	174	177	177	177	135	56	133	164	187	178	186	131	60	132	186	206	200	195	151	63
	6 AM - 7 AM	215	272	273	274	269	175	78	225	264	301	297	289	182	83	224	284	319	308	289	195	93
	7 AM - 8 AM	294	381	387	361	361	251	122	315	363	403	404	383	265	126	325	403	412	414	385	284	141
	8 AM - 9 AM	344	448	464	463	431	364	173	377	431	492	487	458	388	196	386	506	505	506	488	395	218
	9 AM - 10 AM	383	481	495	486	503	477	262	420	477	513	533	566	506	303	469	547	567	580	588	551	363
	10 AM - 11 AM	439	516	534	561	577	580	393	484	536	574	594	665	622	438	553	598	599	632	717	707	531
	11 AM - 12 PM	480	570	540	603	658	653	530	537	574	601	636	736	704	570	610	646	662	731	830	847	680
	12 PM - 1 PM	507	569	566	629	717	705	612	566	625	630	686	794	716	687	645	687	695	771	901	889	794
	1 PM - 2 PM	526	575	586	664	746	684	711	597	671	638	715	838	713	723	682	681	710	806	940	871	864
	2 PM - 3 PM	574	622	630	707	808	694	754	641	706	692	772	859	699	779	696	722	727	852	972	842	903
	3 PM - 4 PM	644	673	687	763	857	692	791	689	763	762	836	928	673	801	759	758	804	912	1,056	788	904
	4 PM - 5 PM	648	731	727	803	895	667	824	731	787	812	866	973	633	774	792	776	846	921	1,051	751	895
	5 PM - 6 PM	637	719	708	802	882	607	779	732	750	792	827	964	578	749	799	780	821	943	1,063	680	829
	6 PM - 7 PM	529	598	600	685	742	540	705	584	639	632	683	892	526	667	652	644	683	741	897	599	749
	7 PM - 8 PM	462	502	499	563	604	462	599	498	530	517	572	700	453	594	531	533	557	628	720	500	641
	8 PM - 9 PM	391	415	402	454	496	372	473	426	440	429	486	560	353	506	454	456	470	551	591	430	525
	9 PM - 10 PM	322	349	343	383	408	301	371	346	366	348	394	413	290	399	364	379	377	467	485	346	430
	10 PM - 11 PM	269	292	282	320	323	248	287	312	301	296	328	340	230	271	307	326	319	361	374	277	321
	11 PM - Midnight	235	256	249	280	247	177	194	253	248	267	267	283	175	203	268	279	281	327	309	212	234

Close 2 Lanes	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	260	458	447	454	453	401	259	287	404	433	439	463	446	252	313	467	480	486	514	513	306
	1 AM - 2 AM	181	343	345	340	353	298	172	205	334	349	351	379	315	174	222	374	370	382	394	357	224
	2 AM - 3 AM	129	300	280	301	308	244	151	160	259	301	289	301	243	139	169	295	302	328	341	297	165
	3 AM - 4 AM	197	255	242	251	256	204	106	157	228	264	263	300	197	118	157	267	280	297	302	232	129
	4 AM - 5 AM	166	280	282	270	288	216	110	172	251	307	288	289	222	115	186	284	317	316	312	258	125
	5 AM - 6 AM	232	347	355	353	354	271	113	266	328	375	357	372	262	120	265	371	412	401	391	302	125
	6 AM - 7 AM	430	545	546	547	537	350	157	449	529	601	593	577	363	165	449	567	638	616	577	391	186
	7 AM - 8 AM	587	762	775	723	722	502	244	629	726	805	808	765	530	251	649	806	824	828	770	567	282
	8 AM - 9 AM	687	896	928	927	862	729	345	754	862	984	975	915	776	392	772	1,011	1,011	1,011	976	790	435
	9 AM - 10 AM	766	963	989	972	1,006	955	524	840	953	1,026	1,067	1,131	1,011	606	938	1,095	1,133	1,159	1,176	1,102	726
	10 AM - 11 AM	879	1,032	1,068	1,123	1,154	1,160	785	968	1,073	1,148	1,188	1,330	1,245	876	1,106	1,197	1,199	1,263	1,434	1,415	1,061
	11 AM - 12 PM	960	1,141	1,081	1,205	1,316	1,307	1,061	1,075	1,147	1,202	1,273	1,472	1,408	1,139	1,220	1,291	1,323	1,461	1,661	1,695	1,360
	12 PM - 1 PM	1,015	1,138	1,131	1,259	1,434	1,410	1,223	1,133	1,250	1,260	1,372	1,588	1,432	1,375	1,291	1,375	1,390	1,543	1,801	1,778	1,588
	1 PM - 2 PM	1,053	1,150	1,173	1,328	1,491	1,368	1,422	1,195	1,343	1,276	1,430	1,676	1,426	1,446	1,364	1,363	1,421	1,612	1,880	1,742	1,727
	2 PM - 3 PM	1,148	1,243	1,260	1,415	1,615	1,387	1,508	1,282	1,411	1,385	1,543	1,718	1,399	1,558	1,392	1,443	1,454	1,704	1,944	1,685	1,806
	3 PM - 4 PM	1,287	1,346	1,374	1,527	1,714	1,385	1,582	1,377	1,525	1,525	1,671	1,856	1,346	1,601	1,518	1,517	1,608	1,823	2,112	1,576	1,807
	4 PM - 5 PM	1,295	1,461	1,453	1,607	1,790	1,335	1,648	1,463	1,575	1,624	1,731	1,947	1,266	1,548	1,585	1,552	1,693	1,842	2,103	1,503	1,790
	5 PM - 6 PM	1,274	1,438	1,417	1,604	1,765	1,214	1,558	1,463	1,501	1,584	1,654	1,928	1,155	1,498	1,597	1,559	1,641	1,887	2,126	1,359	1,658
	6 PM - 7 PM	1,058	1,196	1,200	1,370	1,485	1,080	1,410	1,169	1,278	1,263	1,367	1,783	1,052	1,334	1,304	1,289	1,366	1,482	1,793	1,197	1,498
	7 PM - 8 PM	925	1,003	997	1,127	1,207	924	1,198	997	1,059	1,035	1,144	1,400	906	1,188	1,062	1,065	1,113	1,256	1,440	999	1,282
	8 PM - 9 PM	782	831	804	909	991	744	945	851	879	857	973	1,120	705	1,012	907	912	940	1,102	1,183	859	1,050
	9 PM - 10 PM	644	697	685	765	816	603	743	692	732	696	787	825	579	797	728	759	753	934	970	693	860
	10 PM - 11 PM	537	583	563	641	645	497	573	624	603	592	656	681	459	541	613	652	639	723	747	554	642
	11 PM - Midnight	471	512	498	560	494	355	387	505	497	534	535	567	351	407	537	559	561	654	618	425	468

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

145 Lorain - Elyria

TO

142 Lorain County West

Route	I-80
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	160	202	240	245	270	242	165	171	235	239	244	256	248	163	150	221	214	216	228	232	140
	1 AM - 2 AM	125	158	181	201	194	185	118	126	181	195	190	188	185	127	108	162	178	189	174	170	91
	2 AM - 3 AM	94	128	154	167	165	133	85	99	156	150	167	149	135	94	84	124	150	147	140	135	65
	3 AM - 4 AM	84	121	125	142	145	113	72	87	144	129	146	131	116	69	79	116	122	131	137	114	62
	4 AM - 5 AM	89	121	161	149	157	120	69	96	138	155	153	151	122	59	86	124	138	135	149	117	53
	5 AM - 6 AM	140	166	195	192	194	150	76	131	179	175	185	210	140	67	123	162	166	181	193	131	60
	6 AM - 7 AM	220	256	272	284	272	192	95	205	266	284	290	282	187	91	231	257	269	278	265	189	80
	7 AM - 8 AM	312	366	382	398	382	243	139	315	406	393	399	378	273	134	318	346	381	386	380	252	119
	8 AM - 9 AM	378	438	487	508	484	379	218	385	488	495	520	486	409	231	379	411	441	461	441	385	190
	9 AM - 10 AM	467	516	567	590	629	562	368	461	550	575	581	586	598	360	438	463	499	508	511	504	305
	10 AM - 11 AM	549	570	617	684	740	734	536	539	604	627	667	717	768	518	517	526	547	579	605	646	434
	11 AM - 12 PM	638	659	660	752	854	857	716	652	665	709	763	827	887	716	584	557	569	630	731	740	561
	12 PM - 1 PM	686	702	705	793	947	910	848	677	693	734	811	896	907	857	598	581	571	652	793	750	661
	1 PM - 2 PM	705	707	746	839	970	861	910	699	700	746	842	975	899	932	597	599	609	692	834	733	697
	2 PM - 3 PM	736	750	742	874	1,055	862	961	739	746	771	872	1,029	841	954	638	624	641	729	899	716	726
	3 PM - 4 PM	764	772	813	929	1,080	851	992	779	777	809	927	1,069	792	919	712	670	687	773	942	714	763
	4 PM - 5 PM	829	841	853	971	1,093	809	977	799	811	868	939	1,090	820	940	698	687	745	848	1,030	650	741
	5 PM - 6 PM	797	817	846	967	1,076	747	922	797	812	826	923	1,107	766	920	699	736	736	842	1,073	582	763
	6 PM - 7 PM	654	654	702	782	949	661	812	685	652	679	780	948	673	844	598	604	604	705	933	557	791
	7 PM - 8 PM	542	569	579	662	759	525	702	556	549	573	663	748	574	722	495	487	484	572	754	438	659
	8 PM - 9 PM	494	484	467	551	582	460	583	450	460	484	546	552	449	569	365	409	395	499	542	374	557
	9 PM - 10 PM	390	396	394	464	492	373	428	363	365	399	446	459	364	444	348	338	346	409	419	305	448
	10 PM - 11 PM	323	340	331	362	384	308	323	314	329	337	356	385	291	335	293	291	284	341	351	235	311
	11 PM - Midnight	297	296	284	325	316	221	245	277	284	289	299	318	230	228	277	249	254	300	283	193	205

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	321	405	480	490	541	484	330	341	470	479	488	512	496	325	300	442	429	432	456	463	279
	1 AM - 2 AM	249	316	363	401	388	369	236	251	361	390	379	376	370	254	216	325	355	378	348	340	182
	2 AM - 3 AM	188	256	308	333	329	267	170	198	311	300	334	299	271	187	169	247	300	293	280	269	130
	3 AM - 4 AM	168	241	251	284	290	226	144	173	287	258	293	261	232	138	157	232	244	261	273	228	124
	4 AM - 5 AM	178	241	323	299	314	240	139	193	276	311	307	301	243	118	172	248	276	271	299	234	105
	5 AM - 6 AM	280	332	390	384	388	301	152	261	358	350	370	419	280	133	245	323	331	363	386	261	119
	6 AM - 7 AM	441	512	544	568	545	384	189	411	532	568	580	564	373	183	461	515	538	557	531	377	160
	7 AM - 8 AM	623	732	764	796	764	486	278	631	812	786	797	756	547	269	636	692	761	771	761	504	238
	8 AM - 9 AM	756	876	973	1,015	968	758	437	770	976	989	1,040	971	819	462	758	823	883	921	882	770	379
	9 AM - 10 AM	934	1,032	1,135	1,180	1,257	1,124	735	921	1,100	1,151	1,162	1,172	1,196	721	875	926	999	1,017	1,022	1,009	610
	10 AM - 11 AM	1,097	1,139	1,235	1,369	1,480	1,468	1,072	1,078	1,207	1,253	1,335	1,435	1,536	1,035	1,033	1,053	1,094	1,159	1,210	1,292	868
	11 AM - 12 PM	1,275	1,317	1,320	1,503	1,708	1,714	1,431	1,304	1,329	1,417	1,525	1,655	1,774	1,433	1,168	1,114	1,137	1,259	1,462	1,479	1,123
	12 PM - 1 PM	1,372	1,405	1,411	1,586	1,895	1,820	1,695	1,354	1,385	1,467	1,622	1,792	1,815	1,714	1,196	1,162	1,141	1,304	1,586	1,500	1,321
	1 PM - 2 PM	1,410	1,415	1,492	1,677	1,940	1,722	1,821	1,397	1,400	1,491	1,685	1,950	1,799	1,864	1,195	1,197	1,218	1,385	1,667	1,466	1,393
	2 PM - 3 PM	1,472	1,500	1,484	1,749	2,110	1,725	1,923	1,478	1,493	1,541	1,743	2,058	1,683	1,908	1,275	1,248	1,282	1,457	1,798	1,433	1,451
	3 PM - 4 PM	1,528	1,544	1,626	1,858	2,161	1,701	1,983	1,557	1,554	1,618	1,855	2,137	1,583	1,838	1,423	1,340	1,375	1,547	1,884	1,427	1,525
	4 PM - 5 PM	1,657	1,683	1,706	1,942	2,185	1,619	1,954	1,599	1,622	1,737	1,878	2,180	1,641	1,879	1,395	1,373	1,490	1,696	2,060	1,299	1,481
	5 PM - 6 PM	1,593	1,635	1,693	1,935	2,152	1,495	1,843	1,593	1,624	1,652	1,847	2,213	1,532	1,840	1,399	1,473	1,473	1,684	2,146	1,164	1,525
	6 PM - 7 PM	1,308	1,308	1,403	1,564	1,898	1,322	1,624	1,369	1,304	1,357	1,560	1,895	1,346	1,689	1,197	1,208	1,208	1,411	1,866	1,113	1,583
	7 PM - 8 PM	1,084	1,138	1,158	1,324	1,518	1,050	1,403	1,111	1,098	1,145	1,326	1,495	1,147	1,445	990	974	968	1,144	1,507	875	1,318
	8 PM - 9 PM	987	968	935	1,103	1,164	920	1,166	900	921	968	1,092	1,103	899	1,137	731	819	790	998	1,083	748	1,114
	9 PM - 10 PM	781	792	787	929	984	747	856	726	729	799	891	918	728	887	696	675	692	817	837	609	896
	10 PM - 11 PM	647	680	662	724	769	616	645	628	659	675	713	769	583	671	586	582	567	683	702	471	622
	11 PM - Midnight	594	593	567	650	632	442	489	554	568	578	599	635	460	456	554	499	507	600	566	385	409

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

145 Lorain - Elyria

TO

142 Lorain County West

Route	I-80
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	135	221	213	211	240	226	127	127	207	200	188	203	194	126	122	212	215	207	205	194	103
	1 AM - 2 AM	102	177	166	173	175	160	93	91	169	169	169	171	146	105	89	175	183	169	168	147	80
	2 AM - 3 AM	80	134	155	148	151	123	76	72	140	135	140	144	122	59	74	147	137	129	140	117	55
	3 AM - 4 AM	75	134	132	130	134	106	57	73	130	120	128	120	101	49	67	126	127	130	134	113	51
	4 AM - 5 AM	92	139	140	137	144	107	52	86	144	140	145	142	109	49	83	140	142	138	144	92	51
	5 AM - 6 AM	121	178	172	181	179	126	56	125	174	182	187	169	117	54	121	176	180	175	172	119	59
	6 AM - 7 AM	211	266	279	283	260	163	72	212	269	265	276	266	164	71	193	270	280	260	265	150	74
	7 AM - 8 AM	302	376	378	387	362	230	105	311	386	381	379	357	232	109	290	358	351	358	349	229	99
	8 AM - 9 AM	357	460	437	437	426	354	187	370	440	443	429	427	335	180	319	435	419	429	411	311	159
	9 AM - 10 AM	408	476	489	493	511	501	289	399	474	456	475	456	442	251	369	480	483	484	455	412	238
	10 AM - 11 AM	488	529	523	536	624	639	423	473	493	505	543	544	566	377	408	515	506	504	518	506	364
	11 AM - 12 PM	531	574	548	589	718	707	552	502	546	515	554	638	632	491	464	549	543	529	598	604	492
	12 PM - 1 PM	557	582	581	660	778	718	649	547	561	536	612	708	664	596	486	577	578	551	635	606	607
	1 PM - 2 PM	586	591	592	678	833	712	724	542	584	570	631	699	635	605	488	595	618	613	669	629	674
	2 PM - 3 PM	629	627	620	699	882	686	734	579	633	567	669	778	630	595	548	629	627	628	716	627	685
	3 PM - 4 PM	690	679	706	771	938	661	796	626	663	668	729	844	640	674	604	690	718	694	793	643	696
	4 PM - 5 PM	705	703	731	829	983	620	780	699	681	686	793	885	624	681	620	726	741	723	775	600	680
	5 PM - 6 PM	705	698	716	850	983	584	748	690	673	679	737	866	562	645	603	694	715	691	753	539	650
	6 PM - 7 PM	582	594	594	710	890	507	681	562	546	560	605	743	482	629	497	562	584	556	635	455	565
	7 PM - 8 PM	480	480	473	576	657	426	585	452	443	456	512	589	387	567	409	456	486	464	555	386	514
	8 PM - 9 PM	404	400	408	488	495	347	477	364	370	372	444	488	341	446	354	388	414	394	447	305	404
	9 PM - 10 PM	330	333	340	397	401	294	391	317	299	315	367	377	271	356	314	349	342	355	366	256	309
	10 PM - 11 PM	285	268	282	323	321	235	269	273	268	263	279	321	219	267	284	297	305	296	304	213	220
	11 PM - Midnight	257	246	253	277	264	175	186	235	237	242	257	257	163	167	247	257	253	249	245	150	166

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	269	442	427	422	480	452	255	254	413	401	375	406	387	252	243	424	430	414	410	387	206
	1 AM - 2 AM	203	354	332	346	350	320	186	181	339	338	337	343	292	209	179	349	366	337	335	294	160
	2 AM - 3 AM	160	268	309	295	303	245	151	145	280	271	280	287	244	118	148	293	275	259	280	234	109
	3 AM - 4 AM	149	268	264	259	268	212	114	146	260	240	256	240	202	97	134	253	254	259	268	226	102
	4 AM - 5 AM	184	279	279	273	287	214	104	171	288	280	290	284	218	98	165	280	284	276	287	185	103
	5 AM - 6 AM	243	356	344	361	358	252	112	250	349	364	375	337	234	108	242	351	360	349	345	237	118
	6 AM - 7 AM	423	533	558	565	519	325	144	423	538	529	552	532	327	142	386	540	560	519	529	300	148
	7 AM - 8 AM	603	752	756	774	725	459	209	623	772	761	757	715	463	218	580	716	701	717	697	458	198
	8 AM - 9 AM	715	921	874	873	852	708	374	740	879	885	859	855	670	359	638	870	839	859	821	622	318
	9 AM - 10 AM	817	953	978	986	1,022	1,002	578	799	948	913	950	913	884	503	737	960	967	967	909	825	476
	10 AM - 11 AM	975	1,058	1,046	1,072	1,249	1,278	847	946	987	1,011	1,086	1,088	1,131	754	816	1,030	1,012	1,008	1,036	1,012	727
	11 AM - 12 PM	1,063	1,149	1,096	1,178	1,436	1,414	1,105	1,005	1,092	1,030	1,107	1,276	1,264	981	927	1,099	1,086	1,059	1,195	1,208	984
	12 PM - 1 PM	1,115	1,164	1,162	1,320	1,555	1,436	1,298	1,094	1,122	1,071	1,223	1,417	1,328	1,191	973	1,154	1,156	1,102	1,269	1,213	1,214
	1 PM - 2 PM	1,171	1,181	1,184	1,356	1,665	1,423	1,447	1,084	1,167	1,141	1,262	1,398	1,270	1,209	976	1,189	1,235	1,225	1,339	1,257	1,348
	2 PM - 3 PM	1,257	1,255	1,240	1,398	1,764	1,372	1,469	1,157	1,266	1,133	1,338	1,556	1,260	1,189	1,095	1,258	1,254	1,256	1,433	1,254	1,370
	3 PM - 4 PM	1,379	1,358	1,412	1,542	1,876	1,321	1,592	1,253	1,327	1,337	1,458	1,688	1,280	1,348	1,209	1,380	1,436	1,387	1,586	1,285	1,393
	4 PM - 5 PM	1,410	1,406	1,462	1,657	1,967	1,240	1,559	1,399	1,363	1,373	1,585	1,770	1,249	1,362	1,240	1,452	1,482	1,446	1,550	1,200	1,360
	5 PM - 6 PM	1,411	1,395	1,431	1,701	1,966	1,169	1,495	1,380	1,346	1,357	1,473	1,732	1,125	1,291	1,205	1,388	1,429	1,382	1,507	1,078	1,300
	6 PM - 7 PM	1,165	1,188	1,187	1,421	1,780	1,014	1,361	1,125	1,092	1,120	1,210	1,486	964	1,258	993	1,123	1,167	1,112	1,270	911	1,129
	7 PM - 8 PM	961	960	946	1,152	1,314	853	1,170	903	886	912	1,023	1,179	775	1,133	818	912	972	928	1,109	773	1,028
	8 PM - 9 PM	807	800	817	976	990	694	953	728	740	744	887	976	682	891	709	776	828	788	893	610	809
	9 PM - 10 PM	660	666	680	793	802	588	782	634	599	631	733	755	541	711	627	697	683	709	733	511	617
	10 PM - 11 PM	570	537	564	647	642	571	537	546	536	526	557	642	437	534	567	594	610	593	608	425	439
	11 PM - Midnight	513	493	506	554	528	350	373	469	475	484	513	514	325	334	494	514	505	498	490	301	333

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

145 Lorain - Elyria

TO

151 N Ridgeville - Cleveland

Route	I-80
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	106	148	162	162	169	156	115	130	170	187	166	130	175	125	152	183	185	193	191	197	142
	1 AM - 2 AM	84	120	135	127	143	124	87	98	144	153	138	120	137	91	113	146	149	151	154	149	122
	2 AM - 3 AM	74	104	115	116	118	93	68	86	125	124	112	104	106	70	93	122	126	144	148	117	76
	3 AM - 4 AM	75	113	126	127	134	104	60	89	119	139	128	121	100	68	109	135	143	156	151	116	78
	4 AM - 5 AM	129	171	183	192	184	108	65	138	169	185	175	154	118	76	161	199	204	208	204	138	81
	5 AM - 6 AM	230	299	318	314	300	150	87	275	310	324	276	237	154	92	290	335	341	346	332	179	94
	6 AM - 7 AM	427	523	532	541	505	205	107	483	585	575	493	393	216	125	526	593	586	597	573	231	129
	7 AM - 8 AM	531	666	707	683	657	247	140	665	753	779	623	562	284	169	712	788	791	797	734	307	179
	8 AM - 9 AM	503	629	644	640	622	342	193	647	718	683	601	538	389	251	647	733	722	757	687	410	247
	9 AM - 10 AM	448	555	575	568	554	424	284	566	621	596	526	513	479	355	554	603	645	656	649	536	386
	10 AM - 11 AM	467	549	538	557	539	531	408	574	601	573	512	530	608	497	582	615	618	659	672	667	551
	11 AM - 12 PM	514	568	575	577	564	629	509	630	608	589	547	573	702	646	634	633	670	704	741	770	710
	12 PM - 1 PM	566	612	623	633	617	683	605	665	637	632	587	629	731	739	673	675	700	739	795	804	823
	1 PM - 2 PM	579	638	643	669	658	692	671	706	683	641	619	693	731	792	687	731	739	774	841	819	884
	2 PM - 3 PM	652	689	687	726	753	696	694	740	730	700	663	766	732	798	769	776	779	865	941	834	928
	3 PM - 4 PM	705	760	770	783	809	686	713	842	828	774	717	821	743	811	823	839	856	929	1,031	850	976
	4 PM - 5 PM	723	781	828	830	865	682	724	874	876	835	746	855	702	811	879	889	937	979	1,064	787	958
	5 PM - 6 PM	677	756	809	800	849	630	649	835	851	788	695	866	657	790	858	865	929	945	1,050	740	901
	6 PM - 7 PM	538	619	627	611	710	519	539	644	672	610	541	724	556	660	650	663	727	783	869	624	808
	7 PM - 8 PM	432	450	471	482	530	413	448	501	517	457	408	562	455	518	498	532	540	607	673	478	666
	8 PM - 9 PM	347	379	402	399	454	324	368	423	435	391	334	462	368	420	433	451	456	507	528	392	530
	9 PM - 10 PM	294	314	328	346	344	278	297	349	352	326	275	361	307	329	372	364	388	423	435	340	414
	10 PM - 11 PM	254	253	265	289	263	230	227	283	306	249	218	286	253	263	301	304	317	352	348	260	313
	11 PM - Midnight	189	197	205	211	209	159	145	218	224	191	169	206	191	182	232	226	232	248	267	176	212

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	212	296	324	324	337	312	229	259	340	374	333	259	350	250	304	365	370	385	382	393	284
	1 AM - 2 AM	167	240	269	254	285	249	174	195	289	306	276	240	274	182	226	292	299	303	308	298	245
	2 AM - 3 AM	149	209	230	232	236	187	136	171	251	248	224	207	212	140	186	244	251	288	297	235	152
	3 AM - 4 AM	150	225	251	253	267	207	120	178	238	279	256	242	200	135	217	270	287	312	303	232	155
	4 AM - 5 AM	257	342	365	385	368	215	130	276	337	371	350	307	235	153	321	397	407	417	408	277	162
	5 AM - 6 AM	460	598	636	629	601	299	174	549	620	647	552	473	309	183	579	669	681	691	663	359	187
	6 AM - 7 AM	855	1,046	1,063	1,082	1,010	409	214	966	1,169	1,149	986	786	433	250	1,052	1,187	1,171	1,193	1,146	461	257
	7 AM - 8 AM	1,063	1,332	1,414	1,366	1,313	494	280	1,331	1,506	1,558	1,245	1,123	568	338	1,424	1,575	1,582	1,594	1,468	614	358
	8 AM - 9 AM	1,005	1,258	1,288	1,279	1,244	683	385	1,293	1,435	1,366	1,202	1,076	777	503	1,295	1,465	1,444	1,514	1,374	821	494
	9 AM - 10 AM	896	1,111	1,149	1,136	1,108	847	569	1,132	1,242	1,192	1,052	1,027	957	709	1,109	1,206	1,290	1,313	1,298	1,072	772
	10 AM - 11 AM	934	1,098	1,076	1,114	1,077	1,061	816	1,148	1,202	1,146	1,024	1,060	1,215	994	1,164	1,230	1,235	1,319	1,344	1,334	1,102
	11 AM - 12 PM	1,029	1,135	1,150	1,155	1,128	1,258	1,017	1,260	1,216	1,177	1,095	1,145	1,403	1,293	1,268	1,266	1,339	1,408	1,483	1,541	1,420
	12 PM - 1 PM	1,131	1,223	1,246	1,265	1,234	1,365	1,211	1,331	1,275	1,263	1,174	1,259	1,462	1,478	1,347	1,351	1,400	1,477	1,590	1,607	1,647
	1 PM - 2 PM	1,157	1,276	1,286	1,338	1,315	1,385	1,342	1,411	1,366	1,282	1,239	1,386	1,461	1,584	1,374	1,462	1,478	1,548	1,682	1,638	1,769
	2 PM - 3 PM	1,304	1,377	1,373	1,453	1,505	1,391	1,389	1,480	1,460	1,399	1,327	1,532	1,464	1,596	1,538	1,552	1,558	1,730	1,882	1,668	1,855
	3 PM - 4 PM	1,409	1,520	1,540	1,567	1,618	1,372	1,427	1,684	1,656	1,547	1,434	1,643	1,486	1,623	1,646	1,678	1,712	1,858	2,063	1,699	1,953
	4 PM - 5 PM	1,446	1,561	1,656	1,660	1,729	1,364	1,448	1,747	1,751	1,671	1,493	1,709	1,404	1,622	1,757	1,778	1,873	1,958	2,128	1,574	1,916
	5 PM - 6 PM	1,355	1,512	1,618	1,599	1,698	1,260	1,298	1,670	1,701	1,577	1,389	1,731	1,314	1,581	1,715	1,731	1,858	1,890	2,099	1,480	1,803
	6 PM - 7 PM	1,076	1,237	1,254	1,222	1,420	1,039	1,078	1,287	1,345	1,219	1,082	1,448	1,112	1,321	1,301	1,325	1,453	1,566	1,739	1,248	1,617
	7 PM - 8 PM	865	899	942	965	1,059	826	895	1,001	1,033	913	816	1,124	911	1,035	996	1,064	1,080	1,215	1,346	956	1,332
	8 PM - 9 PM	694	759	804	798	907	648	737	845	869	781	668	925	736	840	866	901	912	1,014	1,056	785	1,059
	9 PM - 10 PM	588	629	656	691	688	555	594	697	704	652	549	721	615	659	744	729	775	845	870	681	829
	10 PM - 11 PM	508	506	530	579	527	459	453	566	612	498	436	572	506	526	602	608	634	703	696	520	626
	11 PM - Midnight	378	394	410	422	418	319	291	435	447	382	337	412	382	363	464	452	464	496	533	352	424

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

145 Lorain - Elyria

TO

151 N Ridgeville - Cleveland

Route	I-80
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	145	195	201	203	229	211	159	160	197	201	211	221	234	165	217	232	237	234	266	282	251
	1 AM - 2 AM	112	146	153	163	170	163	111	117	165	154	164	172	167	112	145	175	179	195	212	181	149
	2 AM - 3 AM	97	127	132	138	147	128	82	98	129	137	143	154	127	88	119	154	151	174	184	142	106
	3 AM - 4 AM	108	139	139	157	155	133	85	104	127	144	160	168	132	80	120	151	161	181	188	143	92
	4 AM - 5 AM	158	196	210	212	208	138	87	172	178	199	210	204	135	88	166	203	203	217	204	150	99
	5 AM - 6 AM	307	351	357	355	330	190	105	304	312	365	351	355	182	109	320	357	377	382	371	200	124
	6 AM - 7 AM	564	609	625	629	577	228	138	548	531	618	612	599	258	145	589	628	637	650	615	278	176
	7 AM - 8 AM	742	811	820	811	753	335	206	758	721	835	838	773	356	207	745	799	810	823	764	376	239
	8 AM - 9 AM	675	759	775	766	695	461	299	682	664	758	776	746	494	311	721	792	771	787	762	505	366
	9 AM - 10 AM	585	664	665	683	670	561	452	606	624	681	714	683	611	482	687	707	737	738	737	633	531
	10 AM - 11 AM	599	639	673	699	726	707	613	627	673	686	709	728	712	686	728	725	729	781	778	766	743
	11 AM - 12 PM	632	690	700	745	786	802	776	715	731	739	801	807	871	893	821	773	787	868	918	940	958
	12 PM - 1 PM	681	715	736	803	845	849	889	739	791	768	841	891	928	1,033	895	825	824	946	959	981	1,105
	1 PM - 2 PM	695	738	780	851	891	878	973	825	850	814	869	942	890	1,069	946	851	877	996	1,020	1,017	1,212
	2 PM - 3 PM	805	832	864	942	989	890	1,017	875	932	901	965	1,029	899	1,127	1,031	918	971	1,054	1,132	1,020	1,251
	3 PM - 4 PM	853	899	931	1,014	1,070	892	1,052	969	990	992	1,064	1,106	888	1,144	1,051	977	1,007	1,120	1,215	966	1,299
	4 PM - 5 PM	903	968	989	1,045	1,087	877	1,025	998	1,020	1,022	1,116	1,156	867	1,174	1,096	1,066	1,046	1,171	1,215	927	1,274
	5 PM - 6 PM	859	917	964	1,037	1,074	820	1,015	930	1,020	971	1,057	1,093	824	1,119	1,087	1,015	1,067	1,165	1,152	913	1,257
	6 PM - 7 PM	649	713	770	830	875	705	892	767	849	773	874	933	712	1,045	868	844	838	958	1,018	786	1,127
	7 PM - 8 PM	526	584	623	675	703	589	761	606	712	628	718	746	595	893	740	647	671	772	811	709	1,005
	8 PM - 9 PM	435	465	474	560	541	476	594	541	590	565	614	660	522	762	642	561	557	668	696	669	869
	9 PM - 10 PM	365	400	367	470	447	398	455	453	477	461	500	539	454	604	556	512	473	598	624	604	690
	10 PM - 11 PM	297	321	288	377	350	309	321	345	369	351	414	398	377	414	433	404	408	488	527	496	517
	11 PM - Midnight	225	230	252	271	265	226	208	241	248	264	285	326	245	247	343	313	305	360	428	385	346

Close 2 Lanes	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	290	391	403	407	457	423	319	320	393	401	422	443	467	329	434	465	475	467	532	564	502
	1 AM - 2 AM	223	291	305	326	341	326	222	235	330	308	327	344	334	224	290	350	357	390	424	362	298
	2 AM - 3 AM	195	253	263	276	293	255	165	197	258	274	286	307	255	175	237	307	301	347	368	284	211
	3 AM - 4 AM	215	278	277	314	311	267	169	208	254	289	321	335	264	159	240	302	323	361	376	287	184
	4 AM - 5 AM	317	392	419	423	415	276	174	344	356	398	419	408	270	177	332	407	406	433	408	300	199
	5 AM - 6 AM	614	701	713	710	659	380	209	609	624	730	701	709	363	219	641	714	754	764	743	400	248
	6 AM - 7 AM	1,128	1,218	1,251	1,258	1,154	457	275	1,096	1,063	1,236	1,223	1,198	516	289	1,179	1,255	1,273	1,300	1,231	556	352
	7 AM - 8 AM	1,483	1,621	1,639	1,623	1,506	670	411	1,515	1,441	1,670	1,676	1,546	711	413	1,490	1,598	1,619	1,645	1,528	752	478
	8 AM - 9 AM	1,350	1,518	1,550	1,532	1,390	922	597	1,364	1,327	1,515	1,552	1,492	988	623	1,443	1,584	1,543	1,574	1,525	1,009	732
	9 AM - 10 AM	1,170	1,328	1,330	1,365	1,339	1,122	904	1,211	1,247	1,361	1,428	1,366	1,223	963	1,374	1,415	1,474	1,475	1,474	1,267	1,063
	10 AM - 11 AM	1,198	1,278	1,346	1,399	1,452	1,413	1,225	1,253	1,347	1,371	1,418	1,456	1,424	1,372	1,456	1,450	1,459	1,562	1,557	1,532	1,485
	11 AM - 12 PM	1,264	1,380	1,400	1,490	1,572	1,603	1,552	1,431	1,462	1,477	1,601	1,614	1,741	1,787	1,641	1,545	1,574	1,736	1,836	1,880	1,916
	12 PM - 1 PM	1,362	1,429	1,471	1,607	1,689	1,697	1,777	1,478	1,583	1,536	1,681	1,782	1,855	2,065	1,790	1,649	1,648	1,891	1,917	1,961	2,211
	1 PM - 2 PM	1,389	1,475	1,561	1,702	1,781	1,756	1,945	1,651	1,700	1,629	1,737	1,883	1,780	2,138	1,892	1,702	1,754	1,991	2,041	2,033	2,424
	2 PM - 3 PM	1,610	1,664	1,729	1,884	1,978	1,779	2,033	1,750	1,864	1,802	1,930	2,058	1,797	2,254	2,061	1,837	1,942	2,109	2,265	2,040	2,502
	3 PM - 4 PM	1,707	1,798	1,861	2,028	2,139	1,784	2,103	1,939	1,980	1,983	2,127	2,211	1,776	2,287	2,101	1,954	2,014	2,240	2,430	1,931	2,597
	4 PM - 5 PM	1,806	1,936	1,979	2,090	2,173	1,754	2,049	1,997	2,040	2,044	2,232	2,311	1,734	2,348	2,192	2,132	2,092	2,342	2,431	1,854	2,549
	5 PM - 6 PM	1,718	1,833	1,929	2,073	2,148	1,640	2,030	1,859	2,041	1,942	2,115	2,185	1,648	2,239	2,175	2,030	2,134	2,330	2,305	1,827	2,513
	6 PM - 7 PM	1,298	1,425	1,541	1,660	1,749	1,409	1,783	1,534	1,699	1,547	1,749	1,866	1,423	2,090	1,736	1,689	1,676	1,916	2,036	1,572	2,254
	7 PM - 8 PM	1,052	1,169	1,246	1,350	1,406	1,177	1,522	1,212	1,424	1,257	1,435	1,491	1,189	1,786	1,480	1,295	1,342	1,545	1,621	1,418	2,009
	8 PM - 9 PM	869	931	948	1,120	1,081	952	1,188	1,082	1,180	1,130	1,228	1,320	1,043	1,524	1,283	1,123	1,113	1,335	1,391	1,338	1,738
	9 PM - 10 PM	730	799	734	940	894	796	911	907	954	923	999	1,079	908	1,208	1,113	1,024	946	1,195	1,248	1,208	1,379
	10 PM - 11 PM	594	642	576	754	700	618	642	691	739	703	828	797	754	829	866	809	816	975	1,054	991	1,035
	11 PM - Midnight	450	461	504	541	531	452	416	483	495	528	571	652	491	494	686	626	611	721	855	770	692

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

145 Lorain - Elyria

TO

151 N Ridgeville - Cleveland

Route	I-80
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	221	262	239	252	276	323	303	244	230	244	247	258	319	294	173	199	200	218	254	301	251
	1 AM - 2 AM	147	185	175	196	203	187	161	169	174	177	193	189	204	183	130	156	161	179	193	227	173
	2 AM - 3 AM	116	137	145	162	170	155	113	130	154	155	152	165	147	110	98	134	133	156	157	146	115
	3 AM - 4 AM	130	135	155	166	177	141	89	123	155	157	175	179	140	98	102	132	142	150	157	126	84
	4 AM - 5 AM	186	182	208	214	209	154	99	172	208	213	224	209	152	92	157	181	189	208	206	142	88
	5 AM - 6 AM	334	342	353	375	365	203	128	330	362	374	364	357	201	125	309	335	331	346	335	186	114
	6 AM - 7 AM	598	622	634	634	614	278	170	594	637	651	643	620	251	158	585	599	598	634	609	246	144
	7 AM - 8 AM	743	768	804	812	761	359	230	780	830	855	855	784	357	235	751	784	787	822	769	351	209
	8 AM - 9 AM	722	769	764	801	739	507	342	761	813	845	836	780	492	357	679	764	748	791	740	492	341
	9 AM - 10 AM	692	717	739	747	750	620	529	708	717	764	786	765	647	563	616	652	667	726	701	616	572
	10 AM - 11 AM	737	739	763	778	844	778	761	741	734	796	811	811	806	825	664	671	664	716	732	768	791
	11 AM - 12 PM	824	817	841	882	942	992	1,020	840	803	851	849	969	976	1,101	703	745	710	777	817	873	1,022
	12 PM - 1 PM	899	901	894	968	1,014	1,046	1,202	929	861	889	913	1,019	1,085	1,268	802	790	761	846	896	927	1,162
	1 PM - 2 PM	945	931	912	990	1,103	1,082	1,292	982	921	946	988	1,082	1,116	1,378	840	796	814	888	944	943	1,159
	2 PM - 3 PM	1,019	1,007	1,017	1,101	1,186	1,102	1,362	1,024	986	1,001	1,096	1,199	1,114	1,408	915	897	871	994	1,056	966	1,210
	3 PM - 4 PM	1,051	1,068	966	1,111	1,277	1,112	1,316	1,088	1,059	1,104	1,191	1,228	1,121	1,438	974	957	949	1,048	1,136	935	1,146
	4 PM - 5 PM	1,062	1,125	1,046	1,177	1,322	1,029	1,324	1,117	1,131	1,200	1,239	1,247	1,106	1,344	1,017	1,029	1,031	1,132	1,168	903	1,158
	5 PM - 6 PM	1,050	1,083	1,101	1,175	1,250	953	1,328	1,114	1,143	1,167	1,209	1,186	1,018	1,259	950	952	1,007	1,076	1,155	861	1,166
	6 PM - 7 PM	872	922	892	981	1,060	842	1,155	881	892	928	967	1,041	907	1,180	756	753	786	873	974	763	1,051
	7 PM - 8 PM	701	701	690	811	856	743	989	679	684	730	784	850	795	1,032	581	588	596	708	790	671	898
	8 PM - 9 PM	597	606	597	706	734	671	896	568	594	615	655	695	708	873	488	482	515	599	614	580	767
	9 PM - 10 PM	508	517	508	584	626	594	711	483	513	550	583	603	611	692	401	408	434	507	533	547	619
	10 PM - 11 PM	427	440	432	502	535	496	511	415	425	438	496	526	501	521	323	330	356	409	448	461	416
	11 PM - Midnight	347	352	344	411	430	402	380	318	352	323	375	427	401	353	249	230	278	317	357	373	254

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	441	524	478	503	551	646	605	489	460	487	494	516	639	587	346	398	400	436	507	601	502
	1 AM - 2 AM	294	370	349	392	405	375	322	338	347	354	385	378	408	366	261	311	322	358	386	454	346
	2 AM - 3 AM	232	275	290	325	340	310	226	260	308	310	303	330	295	220	196	268	266	311	314	291	230
	3 AM - 4 AM	259	269	311	333	353	283	178	247	310	315	351	357	279	197	205	265	284	300	313	252	168
	4 AM - 5 AM	372	364	416	428	418	308	198	343	415	426	449	418	305	184	313	361	377	416	412	284	175
	5 AM - 6 AM	668	683	707	750	729	405	256	659	723	748	728	714	401	250	618	671	662	691	670	371	228
	6 AM - 7 AM	1,195	1,244	1,267	1,269	1,228	556	340	1,187	1,273	1,301	1,285	1,241	502	316	1,169	1,199	1,196	1,267	1,217	492	288
	7 AM - 8 AM	1,487	1,536	1,608	1,623	1,522	718	460	1,560	1,659	1,710	1,710	1,569	714	469	1,503	1,567	1,573	1,643	1,537	702	417
	8 AM - 9 AM	1,444	1,538	1,527	1,603	1,477	1,014	684	1,523	1,627	1,690	1,672	1,560	984	714	1,358	1,528	1,497	1,581	1,481	983	681
	9 AM - 10 AM	1,383	1,434	1,478	1,494	1,500	1,241	1,057	1,416	1,434	1,528	1,571	1,530	1,294	1,126	1,232	1,304	1,334	1,452	1,403	1,231	1,144
	10 AM - 11 AM	1,474	1,477	1,526	1,556	1,688	1,556	1,523	1,482	1,468	1,592	1,623	1,623	1,612	1,650	1,327	1,342	1,328	1,432	1,463	1,535	1,582
	11 AM - 12 PM	1,648	1,634	1,682	1,763	1,884	1,985	2,040	1,679	1,605	1,701	1,698	1,939	1,952	2,201	1,406	1,490	1,420	1,553	1,634	1,745	2,044
	12 PM - 1 PM	1,798	1,801	1,788	1,935	2,029	2,092	2,404	1,858	1,721	1,778	1,827	2,038	2,170	2,536	1,604	1,580	1,522	1,692	1,791	1,855	2,324
	1 PM - 2 PM	1,890	1,862	1,825	1,979	2,207	2,164	2,584	1,964	1,842	1,892	1,976	2,164	2,231	2,757	1,680	1,592	1,628	1,776	1,889	1,885	2,317
	2 PM - 3 PM	2,038	2,014	2,034	2,201	2,373	2,204	2,723	2,047	1,973	2,001	2,192	2,399	2,227	2,816	1,830	1,794	1,743	1,988	2,111	1,933	2,420
	3 PM - 4 PM	2,101	2,137	1,931	2,223	2,555	2,225	2,633	2,175	2,118	2,209	2,381	2,455	2,241	2,876	1,947	1,914	1,897	2,095	2,272	1,869	2,291
	4 PM - 5 PM	2,125	2,250	2,092	2,355	2,644	2,059	2,647	2,234	2,263	2,401	2,478	2,493	2,212	2,689	2,033	2,058	2,061	2,264	2,336	1,807	2,317
	5 PM - 6 PM	2,099	2,166	2,202	2,350	2,500	1,906	2,656	2,228	2,265	2,334	2,419	2,273	2,036	2,519	1,899	1,904	2,014	2,153	2,310	1,721	2,332
	6 PM - 7 PM	1,743	1,843	1,784	1,963	2,119	1,684	2,309	1,762	1,783	1,855	1,934	2,082	1,815	2,361	1,513	1,506	1,572	1,747	1,948	1,525	2,102
	7 PM - 8 PM	1,402	1,402	1,379	1,621	1,713	1,486	1,978	1,357	1,369	1,461	1,568	1,701	1,590	2,064	1,162	1,176	1,192	1,415	1,580	1,342	1,797
	8 PM - 9 PM	1,195	1,211	1,194	1,412	1,468	1,342	1,792	1,136	1,188	1,230	1,310	1,391	1,416	1,746	975	964	1,029	1,199	1,228	1,160	1,535
	9 PM - 10 PM	1,017	1,033	1,015	1,167	1,252	1,187	1,422	966	1,026	1,100	1,167	1,206	1,223	1,384	803	815	867	1,014	1,066	1,093	1,237
	10 PM - 11 PM	855	881	863	1,004	1,069	992	1,023	831	850	877	992	1,052	1,001	1,041	646	660	713	817	896	922	832
	11 PM - Midnight	693	704	689	822	860	804	759	636	704	646	751	855	801	706	498	460	556	634	714	746	508

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

145 Lorain - Elyria

TO

151 N Ridgeville - Cleveland

Route	I-80
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	205	203	199	209	259	277	275	153	183	188	210	200	219	171	151	195	195	190	198	197	138
	1 AM - 2 AM	125	163	153	159	209	208	210	114	155	155	148	178	153	146	98	157	162	146	175	153	101
	2 AM - 3 AM	98	147	130	141	169	138	153	95	133	139	141	156	128	84	92	138	138	145	140	127	77
	3 AM - 4 AM	101	133	135	154	163	124	105	97	138	148	148	155	127	73	105	136	148	148	170	118	75
	4 AM - 5 AM	164	194	205	200	208	138	96	162	198	204	205	224	143	90	162	215	218	217	217	143	85
	5 AM - 6 AM	313	344	359	351	341	176	118	311	336	350	343	329	188	112	289	342	347	352	348	175	111
	6 AM - 7 AM	568	616	614	625	576	220	140	554	612	603	591	587	256	158	525	581	580	609	571	229	141
	7 AM - 8 AM	719	782	802	792	730	310	190	725	777	805	806	788	344	204	690	728	758	789	749	302	187
	8 AM - 9 AM	680	742	769	764	717	450	287	675	735	750	772	755	452	321	639	713	722	715	684	407	273
	9 AM - 10 AM	634	668	673	684	693	588	468	607	651	642	688	663	593	525	564	662	654	665	645	535	421
	10 AM - 11 AM	641	650	675	687	705	697	695	604	636	650	685	691	728	678	588	670	683	663	684	650	601
	11 AM - 12 PM	723	696	711	780	811	848	947	675	660	711	747	773	878	879	635	717	742	703	755	785	810
	12 PM - 1 PM	804	748	757	830	886	897	1,107	723	706	732	791	845	894	977	700	747	780	761	817	831	905
	1 PM - 2 PM	821	781	805	883	914	904	1,151	771	750	755	816	879	907	971	747	780	816	767	847	862	955
	2 PM - 3 PM	925	844	892	972	1,016	897	1,151	823	812	832	917	987	897	990	819	858	889	871	939	869	967
	3 PM - 4 PM	980	911	940	1,037	1,091	890	1,183	914	868	896	979	1,059	883	1,021	869	957	936	936	1,007	880	978
	4 PM - 5 PM	1,000	984	1,014	1,091	1,151	846	1,136	955	963	958	1,016	1,106	851	991	914	969	986	997	1,034	813	919
	5 PM - 6 PM	932	906	980	1,053	1,126	796	1,080	879	894	920	1,000	1,102	827	950	843	911	915	979	999	768	836
	6 PM - 7 PM	727	717	795	844	941	734	949	677	680	736	786	886	697	812	635	709	719	759	862	642	727
	7 PM - 8 PM	568	542	618	659	727	625	775	535	517	555	619	673	551	633	511	556	554	590	638	503	592
	8 PM - 9 PM	467	449	500	544	618	532	665	441	421	425	517	574	449	526	422	473	480	488	514	381	469
	9 PM - 10 PM	403	370	419	475	520	454	553	378	346	373	431	453	380	420	352	393	433	405	418	339	385
	10 PM - 11 PM	326	325	348	404	429	400	412	331	302	342	338	394	309	294	301	313	342	311	340	265	281
	11 PM - Midnight	249	241	261	328	371	317	309	236	214	268	249	277	237	195	226	234	262	254	265	204	188

Close 2 Lanes	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	410	407	397	419	518	554	550	305	365	375	420	401	437	342	301	389	390	381	396	394	277
	1 AM - 2 AM	249	327	305	318	418	417	421	229	309	310	296	355	305	292	196	313	323	292	349	306	203
	2 AM - 3 AM	197	294	260	282	337	276	306	189	265	277	282	312	256	167	184	276	276	289	279	253	154
	3 AM - 4 AM	201	265	269	308	325	248	210	193	276	296	297	309	254	145	210	272	295	297	340	235	150
	4 AM - 5 AM	328	389	410	401	416	277	192	323	396	409	411	448	286	180	324	431	436	435	433	287	169
	5 AM - 6 AM	626	687	719	703	682	352	236	622	672	700	685	658	376	223	578	684	695	703	696	349	222
	6 AM - 7 AM	1,137	1,231	1,227	1,249	1,153	439	279	1,108	1,223	1,205	1,182	1,174	512	316	1,051	1,162	1,160	1,217	1,141	459	281
	7 AM - 8 AM	1,439	1,564	1,604	1,583	1,461	620	380	1,450	1,554	1,609	1,613	1,576	688	408	1,380	1,455	1,515	1,577	1,498	603	374
	8 AM - 9 AM	1,360	1,484	1,537	1,528	1,433	900	574	1,351	1,470	1,500	1,545	1,510	904	642	1,278	1,425	1,444	1,430	1,368	814	546
	9 AM - 10 AM	1,267	1,337	1,346	1,369	1,385	1,176	935	1,214	1,302	1,284	1,375	1,327	1,186	1,050	1,128	1,324	1,307	1,329	1,290	1,069	843
	10 AM - 11 AM	1,283	1,299	1,350	1,375	1,411	1,395	1,389	1,208	1,271	1,300	1,370	1,381	1,456	1,356	1,176	1,340	1,367	1,326	1,368	1,299	1,203
	11 AM - 12 PM	1,447	1,392	1,421	1,560	1,621	1,696	1,894	1,350	1,319	1,422	1,494	1,546	1,755	1,758	1,271	1,434	1,484	1,405	1,510	1,570	1,621
	12 PM - 1 PM	1,607	1,497	1,514	1,660	1,772	1,794	2,214	1,446	1,413	1,463	1,581	1,689	1,788	1,955	1,400	1,494	1,560	1,521	1,635	1,662	1,809
	1 PM - 2 PM	1,643	1,562	1,611	1,766	1,827	1,808	2,303	1,541	1,499	1,511	1,633	1,758	1,814	1,942	1,493	1,559	1,632	1,534	1,693	1,724	1,911
	2 PM - 3 PM	1,849	1,688	1,783	1,944	2,032	1,794	2,301	1,645	1,624	1,664	1,833	1,974	1,794	1,979	1,637	1,716	1,777	1,741	1,877	1,739	1,935
	3 PM - 4 PM	1,960	1,823	1,881	2,075	2,182	1,779	2,366	1,827	1,737	1,793	1,957	2,118	1,765	2,042	1,738	1,913	1,872	1,873	2,013	1,760	1,956
	4 PM - 5 PM	2,000	1,967	2,028	2,181	2,301	1,693	2,272	1,909	1,926	1,916	2,031	2,213	1,703	1,981	1,827	1,937	1,972	1,993	2,068	1,626	1,839
	5 PM - 6 PM	1,885	1,812	1,960	2,106	2,253	1,591	2,160	1,758	1,789	1,841	2,000	2,203	1,654	1,901	1,685	1,823	1,829	1,958	1,998	1,536	1,671
	6 PM - 7 PM	1,454	1,434	1,589	1,689	1,883	1,469	1,898	1,355	1,361	1,471	1,571	1,771	1,393	1,623	1,270	1,418	1,437	1,518	1,723	1,284	1,453
	7 PM - 8 PM	1,137	1,085	1,236	1,319	1,455	1,251	1,550	1,069	1,034	1,110	1,237	1,346	1,102	1,265	1,022	1,112	1,108	1,180	1,276	1,006	1,185
	8 PM - 9 PM	933	898	1,001	1,088	1,236	1,063	1,329	882	842	849	1,034	1,148	897	1,051	843	946	959	975	1,027	761	939
	9 PM - 10 PM	806	740	838	950	1,040	908	1,107	756	692	746	862	906	761	839	704	786	865	810	836	679	770
	10 PM - 11 PM	653	649	696	809	857	801	825	662	604	684	675	788	618	589	601	625	685	622	679	530	562
	11 PM - Midnight	499	482	521	656	742	634	619	473	428	535	499	554	475	390	451	468	523	507	529	408	376

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

151 N Ridgeville - Cleveland

TO

145 Lorain - Elyria

Route	I-80
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	117	202	224	220	224	207	124	137	224	230	221	171	198	143	160	251	240	248	241	226	164
	1 AM - 2 AM	86	139	156	178	165	143	88	100	177	173	161	124	158	103	116	200	181	185	189	164	107
	2 AM - 3 AM	68	130	134	139	141	121	68	89	154	150	135	123	119	75	86	151	156	155	153	124	85
	3 AM - 4 AM	65	122	130	132	130	100	54	75	130	139	120	112	95	65	78	136	131	130	126	104	70
	4 AM - 5 AM	82	134	144	146	150	106	53	98	158	155	136	119	105	58	116	158	157	155	153	107	63
	5 AM - 6 AM	135	203	215	224	210	118	59	176	240	238	204	173	134	71	180	244	241	244	241	134	67
	6 AM - 7 AM	270	370	393	382	354	181	90	336	412	399	346	277	198	115	339	417	404	419	391	219	105
	7 AM - 8 AM	400	558	577	561	548	238	134	537	637	617	523	434	295	164	556	651	655	642	620	330	176
	8 AM - 9 AM	411	579	592	596	541	337	165	547	654	627	527	476	381	210	551	659	658	659	628	410	219
	9 AM - 10 AM	416	561	572	566	529	429	226	522	649	604	519	506	457	293	536	648	654	656	636	519	316
	10 AM - 11 AM	430	578	571	557	580	552	339	558	633	599	530	548	585	439	579	640	647	658	689	643	454
	11 AM - 12 PM	469	597	579	600	626	662	432	605	638	611	552	588	692	540	595	667	680	705	759	731	588
	12 PM - 1 PM	499	621	585	626	681	709	537	625	675	628	581	662	758	630	642	703	693	770	820	814	743
	1 PM - 2 PM	525	663	631	667	742	707	604	666	679	646	589	723	768	691	677	741	747	784	895	835	827
	2 PM - 3 PM	621	745	706	769	797	729	692	731	771	706	663	806	740	750	764	827	811	883	981	825	859
	3 PM - 4 PM	715	874	841	881	951	736	674	853	855	826	768	896	741	748	872	944	963	1,021	1,116	793	889
	4 PM - 5 PM	762	897	904	936	996	694	668	929	926	912	804	960	721	769	952	1,001	1,018	1,115	1,157	791	913
	5 PM - 6 PM	772	913	905	889	947	659	639	927	961	901	777	982	646	759	957	1,014	1,019	1,086	1,164	720	886
	6 PM - 7 PM	579	679	673	682	801	547	602	699	728	661	570	794	585	675	733	788	780	843	950	634	826
	7 PM - 8 PM	489	552	529	564	601	431	495	578	592	533	461	627	483	550	588	627	643	687	739	533	706
	8 PM - 9 PM	398	443	449	460	472	356	383	475	488	435	381	486	401	450	515	517	527	568	599	430	523
	9 PM - 10 PM	336	379	369	375	385	295	277	397	401	372	310	385	322	324	412	416	424	469	462	359	406
	10 PM - 11 PM	301	316	329	312	299	229	203	348	344	306	257	323	255	258	373	357	375	367	382	278	296
	11 PM - Midnight	253	276	276	267	256	172	149	296	274	270	195	255	197	201	298	305	317	317	318	199	222

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	234	403	448	440	449	414	247	275	448	460	442	343	395	286	320	501	481	496	482	451	329
	1 AM - 2 AM	173	277	313	356	330	286	177	200	353	345	323	249	315	207	232	399	361	371	378	328	213
	2 AM - 3 AM	135	260	267	279	283	242	136	177	308	301	271	246	238	150	171	303	312	310	306	247	170
	3 AM - 4 AM	129	245	260	265	261	199	109	150	260	278	241	224	191	130	156	272	263	261	252	208	140
	4 AM - 5 AM	165	268	287	291	299	211	106	196	317	311	272	238	210	115	231	317	314	310	306	214	126
	5 AM - 6 AM	269	405	430	448	420	237	118	352	480	475	407	347	268	141	361	487	482	488	482	269	133
	6 AM - 7 AM	540	740	786	765	709	363	179	672	824	798	692	555	395	229	679	834	807	837	783	437	209
	7 AM - 8 AM	801	1,116	1,154	1,123	1,096	477	268	1,073	1,274	1,235	1,047	869	589	329	1,113	1,301	1,311	1,284	1,241	660	352
	8 AM - 9 AM	822	1,158	1,185	1,192	1,081	674	330	1,094	1,308	1,255	1,054	952	762	421	1,101	1,317	1,316	1,318	1,256	820	437
	9 AM - 10 AM	832	1,123	1,145	1,132	1,059	858	452	1,045	1,297	1,209	1,039	1,011	913	586	1,071	1,296	1,307	1,313	1,272	1,038	631
	10 AM - 11 AM	860	1,155	1,143	1,115	1,159	1,103	678	1,116	1,267	1,199	1,059	1,095	1,171	877	1,157	1,281	1,294	1,317	1,378	1,286	909
	11 AM - 12 PM	937	1,193	1,159	1,201	1,252	1,324	863	1,211	1,276	1,222	1,103	1,175	1,384	1,080	1,191	1,334	1,361	1,409	1,518	1,462	1,176
	12 PM - 1 PM	999	1,242	1,171	1,252	1,361	1,418	1,074	1,249	1,351	1,256	1,163	1,324	1,516	1,260	1,284	1,406	1,386	1,539	1,640	1,627	1,487
	1 PM - 2 PM	1,049	1,325	1,263	1,333	1,483	1,414	1,209	1,332	1,358	1,292	1,179	1,447	1,535	1,381	1,354	1,482	1,495	1,568	1,789	1,671	1,654
	2 PM - 3 PM	1,241	1,491	1,413	1,537	1,593	1,458	1,384	1,462	1,542	1,412	1,327	1,612	1,479	1,499	1,528	1,654	1,622	1,767	1,962	1,650	1,719
	3 PM - 4 PM	1,430	1,748	1,683	1,763	1,902	1,471	1,347	1,705	1,710	1,651	1,536	1,793	1,483	1,495	1,745	1,887	1,926	2,042	2,232	1,587	1,777
	4 PM - 5 PM	1,525	1,793	1,808	1,871	1,993	1,387	1,335	1,858	1,852	1,824	1,608	1,920	1,441	1,538	1,903	2,002	2,035	2,230	2,315	1,583	1,826
	5 PM - 6 PM	1,544	1,826	1,809	1,778	1,895	1,318	1,279	1,853	1,921	1,802	1,553	1,963	1,293	1,519	1,914	2,028	2,037	2,172	2,328	1,440	1,771
	6 PM - 7 PM	1,157	1,358	1,347	1,365	1,602	1,093	1,204	1,397	1,455	1,322	1,140	1,588	1,171	1,350	1,465	1,575	1,560	1,686	1,899	1,268	1,652
	7 PM - 8 PM	977	1,105	1,058	1,128	1,203	861	991	1,157	1,183	1,065	923	1,254	967	1,100	1,177	1,253	1,285	1,374	1,478	1,066	1,412
	8 PM - 9 PM	797	886	899	920	944	712	765	950	977	871	762	972	801	900	1,029	1,034	1,055	1,136	1,197	860	1,047
	9 PM - 10 PM	671	757	739	750	770	590	554	795	803	743	619	770	644	649	824	833	849	938	924	717	811
	10 PM - 11 PM	601	632	659	624	597	459	406	696	689	611	515	646	510	516	746	714	751	735	764	556	592
	11 PM - Midnight	507	552	553	535	512	345	299	592	547	540	389	510	393	401	596	610	633	634	636	398	444

NOTES:

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Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

151 N Ridgeville - Cleveland

TO

145 Lorain - Elyria

Route	I-80
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	153	269	264	268	266	257	180	175	237	249	260	283	279	175	192	273	285	283	309	323	212
	1 AM - 2 AM	111	194	196	195	206	180	115	121	189	199	200	219	198	121	131	209	209	218	234	218	145
	2 AM - 3 AM	77	168	156	167	175	148	99	90	150	169	165	173	147	92	98	170	173	186	193	177	109
	3 AM - 4 AM	108	145	138	144	146	120	65	90	130	147	147	170	115	76	90	150	159	169	168	135	80
	4 AM - 5 AM	112	169	171	165	172	132	71	113	155	184	175	174	136	74	120	174	189	192	191	156	84
	5 AM - 6 AM	189	249	255	255	245	183	82	205	232	260	260	259	178	88	209	266	289	284	280	206	98
6 AM - 7 AM	377	442	444	437	420	273	134	393	411	477	466	449	269	135	383	447	486	469	469	293	151	
7 AM - 8 AM	569	671	672	629	613	395	220	606	617	701	706	677	417	209	580	684	686	669	656	449	234	
8 AM - 9 AM	571	687	711	701	655	532	264	629	648	740	768	721	603	313	667	783	771	787	773	638	374	
9 AM - 10 AM	561	676	693	686	699	673	383	665	686	717	805	820	756	488	778	824	845	868	896	887	597	
10 AM - 11 AM	598	684	700	748	765	815	538	672	726	736	815	888	876	647	795	829	831	882	983	1,017	772	
11 AM - 12 PM	643	743	707	780	857	884	699	714	762	774	838	964	972	789	833	856	866	970	1,104	1,148	942	
12 PM - 1 PM	666	738	748	811	939	948	830	740	816	809	886	1,009	1,006	928	856	895	908	1,008	1,183	1,209	1,062	
1 PM - 2 PM	702	753	780	863	986	939	925	790	865	827	940	1,077	1,005	978	903	907	935	1,044	1,242	1,177	1,137	
2 PM - 3 PM	787	854	864	965	1,098	954	957	891	942	937	1,048	1,152	1,001	1,027	951	975	981	1,137	1,325	1,166	1,169	
3 PM - 4 PM	926	991	1,010	1,088	1,212	968	994	988	1,048	1,080	1,168	1,304	954	1,030	1,071	1,087	1,137	1,271	1,449	1,106	1,147	
4 PM - 5 PM	980	1,082	1,095	1,170	1,271	921	1,038	1,067	1,106	1,175	1,244	1,418	906	979	1,150	1,139	1,215	1,308	1,495	1,038	1,125	
5 PM - 6 PM	981	1,088	1,080	1,191	1,246	850	977	1,103	1,080	1,162	1,219	1,396	835	961	1,164	1,150	1,211	1,353	1,481	951	1,046	
6 PM - 7 PM	734	830	831	935	1,032	745	893	809	863	885	949	1,195	727	860	877	902	942	1,048	1,232	833	945	
7 PM - 8 PM	600	674	669	750	813	636	745	659	685	698	767	933	616	756	700	695	735	855	961	686	797	
8 PM - 9 PM	498	551	538	612	656	521	585	560	572	575	653	742	498	624	595	596	626	734	779	589	645	
9 PM - 10 PM	410	451	451	503	528	425	465	447	468	466	517	557	408	484	461	493	485	596	638	479	529	
10 PM - 11 PM	333	368	371	408	422	346	351	395	390	389	425	447	331	339	379	414	408	464	490	377	396	
11 PM - Midnight	299	320	319	357	336	244	228	323	320	346	346	381	255	245	338	349	353	414	417	301	282	

Close 2 Lanes	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	305	538	527	537	532	514	360	350	475	498	519	565	557	349	385	547	569	566	619	646	424
	1 AM - 2 AM	221	388	392	391	411	361	229	242	377	397	399	438	395	242	262	418	419	436	469	435	290
	2 AM - 3 AM	153	337	311	334	350	296	197	181	300	339	330	346	295	184	195	339	345	372	386	353	219
	3 AM - 4 AM	215	290	277	288	293	241	130	179	259	293	295	341	230	152	180	299	318	338	337	270	160
	4 AM - 5 AM	223	338	342	329	344	264	141	225	311	367	350	348	273	149	240	347	379	384	382	312	168
	5 AM - 6 AM	377	497	511	510	491	366	164	410	465	520	520	518	355	175	419	533	578	567	560	413	197
6 AM - 7 AM	755	884	889	874	839	547	267	786	821	954	932	898	538	270	767	893	973	938	939	586	301	
7 AM - 8 AM	1,138	1,342	1,344	1,258	1,226	790	441	1,211	1,234	1,402	1,412	1,353	834	419	1,160	1,367	1,372	1,337	1,313	898	469	
8 AM - 9 AM	1,142	1,373	1,423	1,402	1,309	1,063	528	1,259	1,296	1,480	1,537	1,442	1,205	627	1,334	1,567	1,542	1,574	1,546	1,276	749	
9 AM - 10 AM	1,122	1,353	1,386	1,371	1,399	1,347	766	1,331	1,373	1,434	1,610	1,639	1,512	976	1,555	1,648	1,690	1,735	1,792	1,773	1,193	
10 AM - 11 AM	1,196	1,368	1,401	1,497	1,529	1,630	1,077	1,343	1,452	1,471	1,629	1,776	1,751	1,294	1,591	1,658	1,663	1,765	1,966	2,035	1,544	
11 AM - 12 PM	1,285	1,486	1,414	1,560	1,713	1,768	1,397	1,429	1,524	1,548	1,676	1,929	1,943	1,578	1,666	1,713	1,733	1,940	2,207	2,297	1,883	
12 PM - 1 PM	1,331	1,476	1,497	1,622	1,877	1,896	1,660	1,479	1,631	1,618	1,772	2,018	2,012	1,855	1,711	1,790	1,816	2,016	2,366	2,418	2,124	
1 PM - 2 PM	1,405	1,506	1,560	1,725	1,972	1,879	1,850	1,580	1,729	1,654	1,880	2,154	2,011	1,956	1,805	1,813	1,869	2,088	2,485	2,355	2,273	
2 PM - 3 PM	1,573	1,709	1,727	1,929	2,196	1,907	1,914	1,782	1,885	1,874	2,097	2,304	2,002	2,054	1,903	1,951	1,962	2,274	2,650	2,333	2,337	
3 PM - 4 PM	1,851	1,982	2,020	2,176	2,424	1,935	1,988	1,976	2,096	2,160	2,335	2,608	1,908	2,059	2,143	2,173	2,273	2,541	2,897	2,212	2,294	
4 PM - 5 PM	1,960	2,165	2,191	2,340	2,541	1,842	2,076	2,134	2,212	2,351	2,487	2,836	1,812	1,958	2,299	2,278	2,429	2,615	2,989	2,077	2,250	
5 PM - 6 PM	1,961	2,176	2,160	2,383	2,492	1,699	1,954	2,207	2,161	2,324	2,437	2,793	1,670	1,922	2,327	2,300	2,422	2,707	2,961	1,901	2,092	
6 PM - 7 PM	1,469	1,660	1,662	1,869	2,064	1,491	1,786	1,618	1,726	1,771	1,898	2,390	1,454	1,721	1,754	1,805	1,883	2,095	2,463	1,666	1,891	
7 PM - 8 PM	1,200	1,347	1,338	1,499	1,625	1,272	1,491	1,318	1,370	1,396	1,535	1,866	1,233	1,513	1,399	1,390	1,469	1,709	1,922	1,372	1,594	
8 PM - 9 PM	996	1,102	1,076	1,223	1,312	1,042	1,169	1,121	1,143	1,149	1,306	1,483	995	1,248	1,189	1,193	1,251	1,468	1,557	1,177	1,290	
9 PM - 10 PM	819	902	902	1,005	1,056	851	931	894	936	931	1,034	1,114	817	968	923	986	970	1,193	1,276	959	1,058	
10 PM - 11 PM	665	735	742	816	845	692	702	790	780	779	851	894	662	677	758	829	816	929	979	754	792	
11 PM - Midnight	598	640	638	713	672	488	456	646	641	691	692	762	509	489	675	699	706	827	835	601	563	

NOTES:

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Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

151 N Ridgeville - Cleveland

TO

145 Lorain - Elyria

Route	I-80
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	190	234	280	300	332	309	223	203	269	290	291	302	312	213	178	253	249	263	264	298	200
	1 AM - 2 AM	145	181	206	230	230	230	158	147	200	223	217	219	223	160	126	180	197	211	195	205	116
	2 AM - 3 AM	104	144	175	185	186	159	111	115	174	170	188	173	156	115	96	136	165	161	157	155	87
	3 AM - 4 AM	95	136	140	160	161	133	93	95	159	145	162	150	134	86	86	131	138	145	153	130	78
	4 AM - 5 AM	118	152	190	179	190	149	94	122	165	182	184	181	146	77	107	152	160	158	173	135	63
	5 AM - 6 AM	205	236	269	265	271	200	106	200	253	254	262	279	184	96	194	232	238	257	267	166	83
	6 AM - 7 AM	374	418	435	435	431	268	144	366	426	456	456	438	263	131	400	419	445	458	435	268	125
	7 AM - 8 AM	559	607	637	665	632	378	205	593	676	670	682	638	397	198	577	591	645	652	642	372	189
	8 AM - 9 AM	640	725	761	805	767	595	354	638	767	770	795	755	627	350	617	634	686	704	673	562	314
	9 AM - 10 AM	758	815	864	918	957	873	597	705	838	872	867	889	924	579	634	648	705	715	714	759	496
	10 AM - 11 AM	788	835	864	954	1,048	1,075	778	756	839	866	912	1,000	1,101	749	686	692	725	779	804	953	674
	11 AM - 12 PM	870	887	882	1,003	1,133	1,181	964	848	876	933	981	1,101	1,212	947	746	720	731	815	945	1,011	791
	12 PM - 1 PM	904	932	921	1,043	1,239	1,245	1,098	868	904	951	1,036	1,166	1,225	1,108	769	751	742	841	1,038	1,068	888
	1 PM - 2 PM	948	941	976	1,097	1,288	1,187	1,177	917	927	963	1,067	1,279	1,232	1,186	783	789	797	914	1,103	1,059	909
	2 PM - 3 PM	997	1,006	1,010	1,164	1,396	1,165	1,216	987	1,003	1,009	1,150	1,373	1,164	1,187	863	849	876	984	1,211	1,014	928
	3 PM - 4 PM	1,107	1,094	1,144	1,283	1,509	1,160	1,237	1,089	1,093	1,118	1,262	1,479	1,106	1,152	1,007	963	976	1,102	1,333	1,012	961
	4 PM - 5 PM	1,179	1,204	1,225	1,361	1,531	1,100	1,207	1,140	1,169	1,220	1,291	1,530	1,093	1,174	1,045	1,025	1,097	1,221	1,470	934	965
	5 PM - 6 PM	1,161	1,205	1,226	1,380	1,535	1,010	1,132	1,146	1,173	1,188	1,302	1,519	1,012	1,158	1,040	1,086	1,088	1,221	1,525	858	960
	6 PM - 7 PM	886	902	971	1,066	1,322	887	1,001	920	890	946	1,048	1,285	895	1,039	820	840	841	962	1,303	783	964
	7 PM - 8 PM	703	738	747	886	1,007	718	856	711	710	748	850	993	769	881	656	654	649	772	1,016	621	806
	8 PM - 9 PM	622	624	609	716	775	611	706	579	605	619	705	737	606	683	493	545	535	662	730	532	690
	9 PM - 10 PM	491	510	497	600	630	505	525	463	469	509	574	597	487	538	436	431	445	520	565	434	529
	10 PM - 11 PM	401	425	419	462	502	413	400	387	406	420	456	502	391	403	362	363	354	431	478	348	376
	11 PM - Midnight	368	378	367	424	422	301	289	343	362	365	380	424	314	270	348	322	329	381	387	277	249

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	380	467	559	601	663	619	446	406	537	580	582	604	624	426	356	506	498	526	529	596	401
	1 AM - 2 AM	290	361	412	459	461	460	316	294	400	445	435	437	446	321	251	360	393	423	390	410	231
	2 AM - 3 AM	209	287	349	370	372	318	223	231	348	339	375	346	312	231	192	271	330	322	314	309	175
	3 AM - 4 AM	191	271	280	320	322	267	186	190	318	290	323	299	267	171	172	261	277	291	306	260	156
	4 AM - 5 AM	235	304	379	359	381	298	189	245	329	364	369	361	293	155	213	304	320	317	345	270	127
	5 AM - 6 AM	411	472	538	531	542	400	212	399	505	507	524	559	367	192	387	463	476	515	535	331	167
6 AM - 7 AM	748	836	869	871	861	537	288	731	852	912	911	876	525	263	799	838	889	915	869	536	250	
7 AM - 8 AM	1,118	1,213	1,274	1,331	1,265	757	411	1,185	1,352	1,340	1,364	1,276	794	395	1,154	1,182	1,290	1,304	1,283	744	378	
8 AM - 9 AM	1,281	1,449	1,521	1,610	1,534	1,189	708	1,276	1,535	1,540	1,591	1,509	1,254	700	1,234	1,268	1,372	1,408	1,346	1,124	627	
9 AM - 10 AM	1,516	1,630	1,728	1,836	1,915	1,745	1,193	1,410	1,676	1,745	1,735	1,778	1,847	1,157	1,268	1,296	1,410	1,429	1,429	1,518	991	
10 AM - 11 AM	1,576	1,669	1,729	1,909	2,097	2,149	1,555	1,512	1,678	1,731	1,823	2,000	2,203	1,498	1,371	1,383	1,450	1,559	1,608	1,906	1,347	
11 AM - 12 PM	1,741	1,774	1,764	2,006	2,265	2,362	1,927	1,696	1,752	1,866	1,962	2,202	2,424	1,895	1,492	1,440	1,463	1,630	1,889	2,021	1,581	
12 PM - 1 PM	1,809	1,863	1,842	2,086	2,477	2,490	2,197	1,736	1,807	1,902	2,071	2,332	2,449	2,216	1,537	1,502	1,485	1,681	2,077	2,135	1,776	
1 PM - 2 PM	1,896	1,882	1,952	2,193	2,576	2,373	2,354	1,834	1,854	1,927	2,135	2,558	2,463	2,373	1,566	1,577	1,594	1,828	2,206	2,118	1,818	
2 PM - 3 PM	1,993	2,012	2,021	2,329	2,792	2,329	2,432	1,973	2,006	2,018	2,301	2,747	2,328	2,374	1,726	1,698	1,751	1,967	2,421	2,029	1,856	
3 PM - 4 PM	2,213	2,187	2,288	2,565	3,018	2,321	2,474	2,178	2,187	2,235	2,525	2,958	2,212	2,304	2,013	1,926	1,953	2,204	2,665	2,024	1,922	
4 PM - 5 PM	2,359	2,408	2,451	2,722	3,062	2,200	2,414	2,280	2,338	2,440	2,582	3,059	2,187	2,349	2,089	2,050	2,194	2,441	2,939	1,868	1,929	
5 PM - 6 PM	2,321	2,409	2,452	2,761	3,069	2,020	2,265	2,293	2,346	2,375	2,603	3,038	2,025	2,316	2,080	2,172	2,176	2,441	3,050	1,716	1,920	
6 PM - 7 PM	1,772	1,805	1,943	2,132	2,645	1,775	2,002	1,839	1,781	1,892	2,096	2,570	1,789	2,078	1,640	1,679	1,683	1,923	2,606	1,566	1,928	
7 PM - 8 PM	1,405	1,477	1,493	1,772	2,014	1,437	1,711	1,422	1,420	1,496	1,700	1,987	1,539	1,761	1,312	1,307	1,299	1,543	2,032	1,242	1,613	
8 PM - 9 PM	1,243	1,247	1,218	1,432	1,550	1,221	1,411	1,158	1,209	1,238	1,410	1,475	1,212	1,366	987	1,089	1,070	1,323	1,460	1,064	1,381	
9 PM - 10 PM	983	1,020	994	1,200	1,260	1,010	1,049	926	937	1,019	1,148	1,195	975	1,076	871	862	891	1,040	1,130	867	1,059	
10 PM - 11 PM	802	850	838	923	1,003	825	800	774	813	840	912	1,005	781	805	724	726	708	862	957	695	753	
11 PM - Midnight	735	756	733	847	843	601	577	685	723	729	760	847	628	539	695	643	658	762	773	554	499	

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

151 N Ridgeville - Cleveland

TO

145 Lorain - Elyria

Route	I-80
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

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Revision Date: 9/1/2022

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	162	263	255	251	291	298	186	156	246	238	229	239	250	170	146	252	256	250	251	254	148
	1 AM - 2 AM	122	198	185	194	201	194	130	107	189	187	189	193	172	140	106	192	206	188	190	177	109
	2 AM - 3 AM	91	152	170	163	170	146	95	83	155	149	157	160	142	76	81	164	153	148	156	141	73
	3 AM - 4 AM	86	151	147	147	153	126	73	85	146	137	143	134	120	64	73	143	143	144	154	130	64
	4 AM - 5 AM	111	162	161	162	164	127	64	106	170	163	169	164	125	62	102	167	166	160	171	110	62
	5 AM - 6 AM	184	248	243	253	243	158	78	195	249	258	259	239	155	76	184	251	249	248	239	151	75
	6 AM - 7 AM	387	441	455	457	417	237	118	381	449	441	455	430	232	109	340	440	445	437	419	201	105
	7 AM - 8 AM	543	650	655	655	610	340	168	574	678	663	639	620	325	156	514	613	599	616	592	302	141
	8 AM - 9 AM	575	685	679	679	641	522	298	583	667	670	655	635	461	255	518	652	634	654	611	423	223
	9 AM - 10 AM	592	672	694	695	742	768	467	580	667	653	677	645	596	357	543	655	668	666	642	552	331
	10 AM - 11 AM	646	699	697	717	849	962	655	633	658	679	704	712	736	517	558	674	665	671	687	658	490
	11 AM - 12 PM	690	741	717	776	921	1,017	789	657	696	676	721	810	830	641	620	716	706	696	767	785	620
	12 PM - 1 PM	729	759	757	844	1,003	1,035	884	710	714	710	784	896	871	784	649	759	745	720	824	813	774
	1 PM - 2 PM	777	772	780	879	1,092	1,026	949	724	758	744	818	920	856	807	668	777	806	802	874	842	862
	2 PM - 3 PM	854	859	856	960	1,187	986	943	800	863	814	915	1,058	850	780	782	867	871	876	985	852	867
	3 PM - 4 PM	986	989	1,022	1,114	1,332	968	1,001	922	960	967	1,032	1,178	886	851	898	989	1,031	1,011	1,135	895	881
	4 PM - 5 PM	1,034	1,040	1,081	1,216	1,402	924	985	1,038	1,030	1,039	1,150	1,269	862	895	944	1,070	1,075	1,063	1,117	848	875
	5 PM - 6 PM	1,051	1,039	1,089	1,287	1,398	853	945	1,048	1,012	1,045	1,101	1,234	778	838	935	1,038	1,061	1,042	1,064	783	845
	6 PM - 7 PM	806	842	861	1,006	1,226	730	842	797	780	799	851	1,033	689	797	703	783	813	784	893	660	733
	7 PM - 8 PM	639	660	659	773	890	608	725	595	595	612	675	778	542	692	550	616	658	629	726	547	647
	8 PM - 9 PM	533	526	544	632	666	495	613	473	475	497	572	632	484	547	479	520	544	534	584	446	512
	9 PM - 10 PM	412	424	433	505	527	408	476	404	395	411	469	501	385	423	409	446	445	455	495	381	394
	10 PM - 11 PM	348	339	356	407	443	340	325	343	336	338	363	433	306	319	356	373	386	372	404	309	278
	11 PM - Midnight	316	311	325	348	374	261	228	294	303	307	323	337	232	207	317	329	323	324	339	225	208

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	325	525	510	503	581	596	371	312	492	476	458	479	500	340	291	503	512	501	502	508	296
	1 AM - 2 AM	244	396	370	389	402	389	260	214	377	374	378	387	344	279	212	383	412	376	379	353	218
	2 AM - 3 AM	182	304	339	326	340	292	189	166	309	299	315	321	285	152	163	328	305	295	312	282	146
	3 AM - 4 AM	172	302	294	293	305	253	145	169	293	274	285	269	240	127	145	286	286	289	307	259	129
	4 AM - 5 AM	222	324	323	324	328	254	129	211	339	326	339	328	249	124	204	334	332	320	341	219	125
	5 AM - 6 AM	369	497	486	506	487	317	156	390	498	515	518	478	310	152	367	502	497	497	479	301	150
	6 AM - 7 AM	775	882	911	914	833	473	236	762	898	883	909	861	463	218	680	880	891	874	837	401	210
	7 AM - 8 AM	1,086	1,300	1,310	1,310	1,219	680	335	1,149	1,355	1,325	1,278	1,241	649	311	1,028	1,226	1,198	1,232	1,183	605	282
	8 AM - 9 AM	1,150	1,369	1,359	1,358	1,282	1,043	595	1,166	1,334	1,340	1,311	1,271	922	510	1,036	1,303	1,269	1,308	1,222	846	446
	9 AM - 10 AM	1,183	1,344	1,387	1,391	1,484	1,536	934	1,160	1,334	1,306	1,354	1,290	1,191	715	1,085	1,311	1,336	1,333	1,285	1,104	663
	10 AM - 11 AM	1,293	1,398	1,395	1,434	1,697	1,924	1,310	1,265	1,316	1,359	1,408	1,424	1,472	1,034	1,117	1,348	1,330	1,341	1,375	1,316	980
	11 AM - 12 PM	1,381	1,483	1,434	1,553	1,841	2,035	1,579	1,314	1,392	1,353	1,443	1,619	1,661	1,283	1,241	1,431	1,412	1,391	1,534	1,570	1,239
	12 PM - 1 PM	1,458	1,517	1,514	1,688	2,005	2,070	1,768	1,419	1,428	1,421	1,568	1,792	1,743	1,568	1,297	1,518	1,489	1,441	1,649	1,625	1,549
	1 PM - 2 PM	1,553	1,544	1,561	1,759	2,184	2,053	1,897	1,447	1,516	1,487	1,635	1,840	1,713	1,615	1,335	1,554	1,612	1,605	1,748	1,684	1,724
	2 PM - 3 PM	1,708	1,718	1,712	1,919	2,374	1,972	1,885	1,601	1,727	1,629	1,829	2,116	1,701	1,561	1,564	1,734	1,743	1,752	1,969	1,703	1,733
	3 PM - 4 PM	1,972	1,978	2,045	2,228	2,665	1,936	2,003	1,844	1,919	1,933	2,064	2,355	1,772	1,702	1,796	1,978	2,062	2,021	2,269	1,790	1,762
	4 PM - 5 PM	2,069	2,081	2,162	2,432	2,803	1,847	1,969	2,076	2,059	2,099	2,300	2,538	1,725	1,791	1,887	2,140	2,150	2,126	2,235	1,697	1,749
	5 PM - 6 PM	2,102	2,077	2,178	2,573	2,796	1,705	1,890	2,096	2,024	2,071	2,201	2,467	1,555	1,676	1,870	2,075	2,122	2,083	2,128	1,565	1,691
	6 PM - 7 PM	1,612	1,683	1,723	2,012	2,452	1,460	1,685	1,593	1,560	1,599	1,702	2,065	1,378	1,593	1,407	1,565	1,626	1,567	1,787	1,319	1,465
	7 PM - 8 PM	1,277	1,319	1,318	1,547	1,779	1,216	1,449	1,190	1,191	1,224	1,351	1,555	1,084	1,383	1,099	1,231	1,317	1,257	1,453	1,093	1,294
	8 PM - 9 PM	1,066	1,053	1,088	1,263	1,332	990	1,225	946	950	993	1,144	1,263	967	1,095	957	1,039	1,089	1,068	1,168	892	1,024
	9 PM - 10 PM	825	848	867	1,010	1,053	816	952	808	790	822	938	1,002	770	845	818	893	890	910	990	761	787
	10 PM - 11 PM	696	678	711	815	886	679	650	686	673	676	726	865	611	637	712	747	771	744	807	617	556
	11 PM - Midnight	632	622	650	695	749	522	455	589	607	614	645	675	464	413	633	659	645	648	679	449	417

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

161 Strongsville - Cleveland

TO

173 Cleveland

Route	I-80
Direction	EB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	86	127	135	131	139	128	89	101	143	152	136	108	145	99	124	154	156	163	166	167	105
	1 AM - 2 AM	68	95	109	102	112	96	67	80	113	115	105	93	107	76	92	120	123	120	122	123	103
	2 AM - 3 AM	58	78	87	89	91	73	57	62	98	97	88	74	83	57	74	91	100	109	115	89	63
	3 AM - 4 AM	50	79	87	89	95	76	45	60	84	96	92	85	69	45	73	95	97	106	102	83	58
	4 AM - 5 AM	68	90	101	103	102	71	46	81	95	109	107	93	77	50	80	115	117	119	126	92	55
	5 AM - 6 AM	118	169	176	183	169	95	55	143	177	190	162	135	106	62	154	195	196	199	201	116	65
	6 AM - 7 AM	264	338	348	352	330	148	81	299	376	369	303	257	155	95	322	372	362	370	362	178	105
	7 AM - 8 AM	417	538	556	544	506	193	116	520	615	614	483	417	211	136	558	629	619	607	555	245	155
	8 AM - 9 AM	401	530	543	530	508	259	161	538	600	588	480	449	287	201	534	603	594	625	563	317	212
	9 AM - 10 AM	357	443	459	458	425	311	221	453	494	471	407	401	353	280	438	470	503	534	508	387	297
	10 AM - 11 AM	352	415	410	419	408	384	303	428	433	429	385	406	436	371	439	463	465	504	511	467	418
	11 AM - 12 PM	389	427	428	436	429	447	361	459	446	430	406	418	506	492	482	475	501	536	560	546	526
	12 PM - 1 PM	428	460	466	468	461	489	412	489	470	470	442	467	532	523	506	507	515	563	592	572	623
	1 PM - 2 PM	448	487	487	506	482	501	478	536	504	475	455	500	531	561	520	550	553	589	628	569	664
	2 PM - 3 PM	488	504	506	534	553	498	496	556	548	519	492	569	527	563	568	576	583	663	673	567	671
	3 PM - 4 PM	527	552	552	580	587	482	515	628	596	569	531	611	518	595	595	611	624	691	752	578	715
	4 PM - 5 PM	555	596	613	638	634	476	521	664	662	630	567	633	503	603	651	673	702	715	796	556	705
	5 PM - 6 PM	525	591	622	621	623	438	482	643	653	611	542	652	463	579	653	669	726	738	804	526	642
	6 PM - 7 PM	409	473	488	471	523	367	383	489	505	473	420	522	389	482	494	502	566	607	661	450	591
	7 PM - 8 PM	332	361	363	362	394	309	332	374	395	346	315	428	331	383	371	398	411	461	512	351	477
	8 PM - 9 PM	255	292	307	302	329	241	273	313	329	286	252	342	270	315	329	352	353	393	392	292	371
	9 PM - 10 PM	227	243	245	268	266	214	208	267	266	267	211	281	224	240	280	293	308	327	329	252	300
	10 PM - 11 PM	192	190	207	228	205	171	163	220	231	191	166	227	189	195	228	226	242	272	275	198	208
	11 PM - Midnight	160	160	173	183	172	127	120	183	179	156	138	172	151	153	192	191	191	215	218	132	171

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	172	253	271	263	278	256	178	202	286	304	272	216	289	199	248	308	313	325	333	334	210
	1 AM - 2 AM	136	190	218	204	225	193	135	160	226	231	209	185	215	151	184	240	245	239	244	246	205
	2 AM - 3 AM	115	156	174	178	182	147	114	124	197	194	176	148	166	114	147	183	200	218	229	179	126
	3 AM - 4 AM	100	158	174	179	189	151	90	120	168	192	183	170	137	90	145	189	194	212	204	165	115
	4 AM - 5 AM	135	180	202	206	204	143	92	161	190	219	213	186	153	100	161	230	234	238	251	184	110
	5 AM - 6 AM	235	337	353	366	338	189	110	286	353	380	324	269	211	123	307	391	392	398	402	232	130
	6 AM - 7 AM	528	675	696	704	661	297	162	599	751	738	606	514	310	190	644	743	725	741	723	357	209
	7 AM - 8 AM	835	1,075	1,112	1,089	1,012	386	232	1,041	1,230	1,229	966	834	422	272	1,116	1,259	1,238	1,213	1,111	489	310
	8 AM - 9 AM	802	1,060	1,086	1,060	1,015	519	322	1,076	1,199	1,176	960	897	573	401	1,068	1,206	1,188	1,249	1,125	634	423
	9 AM - 10 AM	713	887	917	915	851	623	442	905	988	942	814	802	707	560	876	941	1,005	1,069	1,016	774	594
	10 AM - 11 AM	704	829	819	837	815	767	607	856	865	857	770	812	871	741	878	927	929	1,008	1,023	933	837
	11 AM - 12 PM	778	854	856	872	858	895	721	918	891	860	812	836	1,012	983	965	950	1,001	1,072	1,119	1,092	1,052
	12 PM - 1 PM	857	919	931	935	923	977	825	978	940	941	883	935	1,063	1,045	1,012	1,013	1,031	1,126	1,185	1,144	1,246
	1 PM - 2 PM	896	973	973	1,012	964	1,002	956	1,073	1,009	951	910	1,000	1,063	1,122	1,040	1,101	1,105	1,178	1,256	1,138	1,329
	2 PM - 3 PM	975	1,008	1,013	1,068	1,106	997	993	1,106	1,096	1,037	983	1,138	1,054	1,125	1,135	1,152	1,165	1,327	1,345	1,135	1,342
	3 PM - 4 PM	1,054	1,104	1,105	1,160	1,174	964	1,030	1,256	1,192	1,138	1,061	1,222	1,036	1,191	1,191	1,221	1,248	1,381	1,504	1,155	1,429
	4 PM - 5 PM	1,109	1,193	1,226	1,277	1,267	952	1,041	1,328	1,325	1,260	1,133	1,267	1,007	1,206	1,303	1,345	1,403	1,430	1,591	1,112	1,409
	5 PM - 6 PM	1,049	1,183	1,245	1,243	1,246	877	963	1,286	1,307	1,223	1,084	1,304	926	1,158	1,307	1,339	1,452	1,476	1,609	1,051	1,285
	6 PM - 7 PM	818	947	975	941	1,046	734	765	979	1,010	947	840	1,043	779	964	989	1,004	1,132	1,214	1,323	899	1,183
	7 PM - 8 PM	664	722	726	723	788	619	663	748	791	691	630	856	663	766	741	795	821	922	1,025	702	955
	8 PM - 9 PM	511	583	615	604	658	483	545	625	658	572	505	683	541	630	659	704	706	785	783	584	742
	9 PM - 10 PM	454	485	491	536	532	427	416	534	532	533	423	562	448	480	559	586	615	655	657	504	600
	10 PM - 11 PM	384	381	415	455	411	342	325	440	462	381	332	454	379	390	457	451	484	543	549	397	416
	11 PM - Midnight	320	320	346	366	343	253	240	365	357	313	276	345	302	306	384	382	381	430	436	264	342

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

161 Strongsville - Cleveland

TO

173 Cleveland

Route	I-80
Direction	EB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

- Refer to SP 104 for lane closure restrictions.
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- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Close 1 Lane	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	113	162	166	182	198	171	116	131	157	168	179	195	182	124	169	188	201	185	219	235	172
	1 AM - 2 AM	100	120	124	140	139	136	83	93	130	127	134	141	133	88	112	145	140	156	166	146	113
	2 AM - 3 AM	73	97	102	117	115	99	65	75	104	105	115	125	103	67	91	117	116	136	134	108	82
	3 AM - 4 AM	68	95	91	107	110	95	61	72	87	99	112	118	104	54	79	107	109	125	139	105	65
	4 AM - 5 AM	83	110	119	125	134	93	58	94	109	116	131	135	100	60	98	121	123	145	131	120	73
	5 AM - 6 AM	166	204	208	207	206	129	67	165	188	216	210	213	123	77	167	207	217	232	224	141	86
	6 AM - 7 AM	335	374	390	388	361	172	115	347	343	398	385	387	201	113	372	396	408	410	405	214	136
	7 AM - 8 AM	570	642	637	639	566	251	158	584	579	667	652	611	276	169	595	659	658	659	599	299	207
	8 AM - 9 AM	556	608	656	645	565	339	221	558	557	649	642	617	367	243	615	675	641	655	633	390	285
	9 AM - 10 AM	466	535	534	555	535	426	346	486	505	544	576	546	452	361	549	577	585	600	607	483	414
	10 AM - 11 AM	456	498	498	544	568	509	455	483	510	530	557	587	521	509	559	558	571	607	620	574	568
	11 AM - 12 PM	487	524	530	576	611	587	584	553	569	561	629	643	625	677	618	591	612	687	731	718	726
	12 PM - 1 PM	506	521	547	626	641	605	632	564	599	591	658	689	656	764	654	624	636	731	749	752	821
	1 PM - 2 PM	532	563	591	642	674	610	702	619	636	617	674	720	651	786	701	639	678	751	796	751	896
	2 PM - 3 PM	593	606	614	711	728	616	739	652	690	688	727	778	635	817	736	676	728	786	842	757	890
	3 PM - 4 PM	626	658	670	751	776	612	765	700	724	733	802	850	643	816	778	720	758	839	929	711	926
	4 PM - 5 PM	681	721	743	802	799	590	739	726	752	787	864	880	630	828	831	795	826	918	936	691	885
	5 PM - 6 PM	660	696	744	800	795	566	735	730	761	760	843	830	573	775	812	762	815	905	920	653	865
	6 PM - 7 PM	501	533	593	642	642	478	644	573	610	576	679	695	505	714	638	633	626	745	759	569	792
	7 PM - 8 PM	398	429	463	509	500	409	552	453	485	467	530	539	425	628	530	481	512	570	587	494	666
	8 PM - 9 PM	328	351	355	430	400	351	424	393	422	420	466	460	384	537	459	412	411	496	489	455	592
	9 PM - 10 PM	286	325	304	368	345	287	314	351	356	372	398	406	336	420	408	378	358	445	435	400	461
	10 PM - 11 PM	226	243	228	291	271	220	235	250	273	274	313	304	276	286	321	292	299	374	371	339	351
	11 PM - Midnight	183	195	207	227	216	167	157	205	202	222	234	263	180	187	263	240	245	278	305	256	243

Close 2 Lanes	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	227	325	332	364	396	342	232	261	313	337	358	391	364	247	338	375	401	369	438	469	344
	1 AM - 2 AM	200	240	248	280	279	272	166	185	261	255	268	281	266	175	225	290	280	312	332	291	227
	2 AM - 3 AM	147	195	203	233	231	198	129	150	208	211	229	250	206	134	182	234	232	272	268	216	164
	3 AM - 4 AM	136	189	182	214	219	190	123	143	174	197	224	236	208	108	158	214	218	250	277	210	130
	4 AM - 5 AM	167	221	239	250	268	186	116	189	218	233	261	271	200	121	196	242	245	290	261	239	146
	5 AM - 6 AM	332	409	416	414	411	258	134	329	375	433	420	426	246	153	334	413	434	465	449	283	171
	6 AM - 7 AM	669	748	781	776	722	343	229	694	687	795	769	774	402	226	743	792	817	820	810	427	272
	7 AM - 8 AM	1,140	1,284	1,273	1,277	1,131	502	316	1,167	1,157	1,335	1,303	1,221	551	339	1,191	1,318	1,316	1,318	1,198	599	415
	8 AM - 9 AM	1,112	1,216	1,313	1,289	1,130	678	443	1,116	1,114	1,298	1,285	1,234	733	486	1,231	1,351	1,282	1,309	1,267	780	569
	9 AM - 10 AM	931	1,071	1,068	1,111	1,070	852	692	972	1,010	1,089	1,151	1,091	905	723	1,098	1,154	1,169	1,199	1,213	967	829
	10 AM - 11 AM	912	997	997	1,088	1,136	1,018	910	966	1,019	1,060	1,113	1,174	1,042	1,017	1,119	1,115	1,141	1,213	1,241	1,147	1,136
	11 AM - 12 PM	975	1,049	1,060	1,153	1,222	1,174	1,168	1,105	1,139	1,121	1,259	1,285	1,250	1,353	1,237	1,183	1,224	1,374	1,462	1,436	1,452
	12 PM - 1 PM	1,012	1,042	1,094	1,252	1,282	1,210	1,265	1,128	1,199	1,183	1,315	1,377	1,312	1,527	1,308	1,249	1,271	1,462	1,498	1,505	1,641
	1 PM - 2 PM	1,064	1,126	1,183	1,283	1,347	1,221	1,404	1,237	1,272	1,235	1,347	1,439	1,301	1,572	1,403	1,279	1,355	1,501	1,591	1,501	1,792
	2 PM - 3 PM	1,186	1,212	1,227	1,422	1,456	1,232	1,478	1,304	1,380	1,375	1,455	1,556	1,271	1,634	1,471	1,352	1,456	1,571	1,684	1,513	1,780
	3 PM - 4 PM	1,251	1,316	1,339	1,502	1,553	1,225	1,530	1,400	1,448	1,465	1,604	1,700	1,286	1,632	1,556	1,439	1,515	1,677	1,858	1,422	1,852
	4 PM - 5 PM	1,361	1,442	1,485	1,604	1,598	1,179	1,478	1,451	1,504	1,574	1,728	1,760	1,259	1,657	1,663	1,591	1,651	1,837	1,872	1,381	1,770
	5 PM - 6 PM	1,321	1,391	1,488	1,601	1,590	1,133	1,471	1,461	1,522	1,520	1,686	1,660	1,146	1,551	1,624	1,523	1,631	1,810	1,840	1,307	1,730
	6 PM - 7 PM	1,002	1,065	1,186	1,283	1,284	956	1,287	1,147	1,220	1,152	1,358	1,389	1,009	1,427	1,276	1,265	1,252	1,491	1,518	1,137	1,583
	7 PM - 8 PM	795	857	926	1,017	1,000	817	1,105	905	969	934	1,061	1,078	850	1,256	1,061	961	1,024	1,139	1,174	988	1,332
	8 PM - 9 PM	656	702	710	860	799	701	847	786	843	839	933	921	768	1,075	917	824	822	992	978	910	1,184
	9 PM - 10 PM	572	649	608	736	691	573	628	702	713	743	797	811	673	840	816	756	717	890	869	799	923
	10 PM - 11 PM	452	486	456	582	541	440	470	499	547	548	625	607	552	571	641	584	597	749	741	678	701
	11 PM - Midnight	367	391	414	454	432	335	314	409	404	444	467	525	360	375	525	481	491	555	611	512	487

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

161 Strongsville - Cleveland

TO

173 Cleveland

Route	I-80
Direction	EB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Close 1 Lane	Month	July							August							September						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	168	192	199	209	229	231	200	178	185	199	198	206	237	201	145	165	164	175	203	221	179
	1 AM - 2 AM	120	140	143	156	164	156	123	134	139	140	156	153	161	155	105	131	127	142	150	169	124
	2 AM - 3 AM	88	109	109	118	132	120	86	99	117	116	117	128	109	90	77	101	100	121	123	109	84
	3 AM - 4 AM	91	97	105	118	133	100	65	86	103	113	125	128	107	70	74	91	105	110	122	92	64
	4 AM - 5 AM	113	110	131	137	141	113	70	100	132	135	148	134	115	69	89	115	114	130	135	106	58
	5 AM - 6 AM	185	199	207	230	228	148	89	175	210	215	215	216	141	87	177	197	200	213	207	138	75
	6 AM - 7 AM	348	377	392	386	392	218	125	360	392	405	399	396	192	124	363	375	380	399	395	200	112
	7 AM - 8 AM	587	605	645	633	581	288	184	600	648	685	673	592	289	194	588	632	641	658	603	284	185
	8 AM - 9 AM	584	612	643	653	610	384	265	600	687	710	696	659	389	278	577	642	657	674	616	403	259
	9 AM - 10 AM	531	566	576	621	612	478	408	557	585	596	624	605	514	419	495	518	534	578	558	459	404
	10 AM - 11 AM	556	565	583	613	662	603	563	563	575	605	652	651	627	603	533	515	515	575	595	565	563
	11 AM - 12 PM	627	623	631	669	738	767	741	635	606	631	684	742	745	812	547	571	535	609	634	653	737
	12 PM - 1 PM	672	679	666	729	784	770	877	682	645	674	697	739	790	922	601	599	580	641	698	686	835
	1 PM - 2 PM	703	708	677	762	844	794	921	733	680	703	775	808	818	998	630	591	618	672	735	682	840
	2 PM - 3 PM	755	742	761	815	886	796	987	741	725	740	828	876	777	1,016	660	667	645	730	792	694	875
	3 PM - 4 PM	768	784	735	829	951	826	919	791	786	820	892	908	802	1,046	721	709	707	783	830	658	829
	4 PM - 5 PM	800	840	795	902	1,006	769	907	839	874	893	945	959	792	965	755	773	790	856	871	639	843
	5 PM - 6 PM	779	835	855	947	961	696	926	836	900	903	931	896	732	890	736	743	812	829	889	627	829
	6 PM - 7 PM	624	700	683	742	788	600	780	668	696	713	737	775	617	804	586	584	652	683	739	548	742
	7 PM - 8 PM	508	510	520	596	617	515	650	507	509	543	581	627	530	700	441	448	451	545	576	440	649
	8 PM - 9 PM	435	434	430	501	536	461	563	413	449	449	466	489	490	579	382	373	391	469	451	395	550
	9 PM - 10 PM	374	389	371	444	451	393	464	338	388	398	429	433	397	464	307	322	346	387	387	370	416
	10 PM - 11 PM	296	314	323	357	375	327	348	299	309	318	372	369	345	342	246	252	277	315	320	323	299
	11 PM - Midnight	258	265	263	310	300	262	262	248	269	243	284	310	268	256	200	184	220	259	246	261	196

Close 2 Lanes	Month	July							August							September						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	336	384	397	418	458	463	400	357	369	399	396	412	474	403	289	329	329	349	406	441	358
	1 AM - 2 AM	239	280	287	312	328	313	246	267	278	279	312	305	322	310	211	261	254	284	300	338	248
	2 AM - 3 AM	175	218	218	235	265	240	173	197	234	231	235	256	218	179	153	202	201	242	247	219	168
	3 AM - 4 AM	181	194	211	235	265	201	131	171	207	226	250	256	214	140	148	182	210	220	243	183	129
	4 AM - 5 AM	226	220	262	275	282	227	141	200	264	271	297	269	229	137	179	230	229	259	269	211	115
	5 AM - 6 AM	370	398	413	460	457	296	178	350	420	430	430	431	281	173	353	394	399	425	413	275	149
	6 AM - 7 AM	696	755	783	771	784	436	251	720	785	811	799	793	384	248	726	750	760	797	790	400	223
	7 AM - 8 AM	1,173	1,210	1,289	1,265	1,162	575	368	1,201	1,296	1,370	1,346	1,184	578	387	1,175	1,264	1,283	1,317	1,206	568	371
	8 AM - 9 AM	1,167	1,223	1,286	1,306	1,220	768	530	1,200	1,373	1,419	1,391	1,317	779	556	1,154	1,284	1,314	1,348	1,232	805	519
	9 AM - 10 AM	1,061	1,131	1,152	1,241	1,224	956	817	1,114	1,170	1,192	1,247	1,209	1,029	838	990	1,035	1,068	1,157	1,117	919	808
	10 AM - 11 AM	1,112	1,130	1,167	1,225	1,325	1,207	1,127	1,126	1,151	1,210	1,303	1,302	1,254	1,206	1,067	1,031	1,029	1,150	1,190	1,130	1,126
	11 AM - 12 PM	1,253	1,246	1,263	1,338	1,476	1,534	1,482	1,270	1,212	1,263	1,367	1,484	1,489	1,624	1,093	1,142	1,070	1,218	1,267	1,306	1,473
	12 PM - 1 PM	1,344	1,358	1,332	1,458	1,567	1,541	1,754	1,364	1,291	1,348	1,395	1,478	1,580	1,844	1,202	1,198	1,160	1,283	1,395	1,372	1,670
	1 PM - 2 PM	1,405	1,417	1,355	1,525	1,689	1,589	1,843	1,465	1,360	1,406	1,550	1,615	1,636	1,996	1,260	1,182	1,236	1,343	1,470	1,364	1,679
	2 PM - 3 PM	1,511	1,484	1,521	1,630	1,772	1,591	1,975	1,482	1,451	1,480	1,657	1,751	1,554	2,031	1,320	1,334	1,289	1,460	1,584	1,388	1,749
	3 PM - 4 PM	1,536	1,567	1,470	1,659	1,901	1,652	1,839	1,582	1,572	1,639	1,784	1,816	1,603	2,091	1,442	1,419	1,414	1,566	1,660	1,315	1,657
	4 PM - 5 PM	1,600	1,680	1,590	1,804	2,013	1,538	1,814	1,677	1,748	1,786	1,890	1,919	1,583	1,931	1,509	1,546	1,580	1,713	1,742	1,279	1,685
	5 PM - 6 PM	1,559	1,670	1,710	1,893	1,922	1,391	1,853	1,672	1,808	1,807	1,862	1,793	1,636	1,996	1,260	1,182	1,236	1,343	1,470	1,364	1,679
	6 PM - 7 PM	1,249	1,400	1,366	1,485	1,575	1,201	1,560	1,336	1,391	1,426	1,475	1,550	1,234	1,607	1,171	1,169	1,304	1,366	1,478	1,095	1,484
	7 PM - 8 PM	1,015	1,021	1,039	1,192	1,234	1,030	1,299	1,015	1,018	1,085	1,163	1,254	1,060	1,401	882	896	903	1,090	1,151	880	1,297
	8 PM - 9 PM	871	869	861	1,002	1,072	922	1,126	825	899	897	932	978	980	1,158	764	745	781	939	902	789	1,100
	9 PM - 10 PM	748	777	742	888	903	785	927	677	777	795	858	865	793	928	615	644	693	774	773	740	832
	10 PM - 11 PM	593	628	646	713	751	654	696	599	618	636	744	739	689	684	492	504	554	631	640	645	597
	11 PM - Midnight	516	530	525	621	600	524	525	496	537	487	569	620	536	512	400	367	440	518	492	522	393

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

161 Strongsville - Cleveland

TO

173 Cleveland

Route	I-80
Direction	EB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	173	175	167	172	207	206	194	124	145	155	168	162	171	139	120	154	160	159	162	159	109
	1 AM - 2 AM	108	129	122	129	162	158	150	100	127	125	115	141	130	115	78	126	129	114	140	120	79
	2 AM - 3 AM	75	115	99	110	129	109	107	71	103	109	109	121	101	66	66	102	103	111	110	97	63
	3 AM - 4 AM	71	101	99	111	125	92	75	67	94	109	105	108	91	52	67	99	107	106	116	82	52
	4 AM - 5 AM	86	117	128	120	132	101	67	92	114	120	129	138	101	60	86	128	129	132	132	93	58
	5 AM - 6 AM	178	198	217	213	212	123	76	180	205	216	219	205	136	76	158	194	209	211	212	117	70
	6 AM - 7 AM	355	402	381	406	376	167	109	358	407	409	394	395	187	117	324	385	373	392	366	166	107
	7 AM - 8 AM	574	636	653	633	570	243	162	580	634	630	633	599	264	171	523	582	580	606	565	226	149
	8 AM - 9 AM	577	663	661	661	591	339	236	579	620	640	648	586	352	252	512	553	593	586	532	306	216
	9 AM - 10 AM	507	545	556	548	568	457	358	487	502	510	566	518	445	401	444	499	511	514	498	378	321
	10 AM - 11 AM	531	511	536	561	570	533	532	490	474	509	530	542	539	499	430	482	514	502	499	474	456
	11 AM - 12 PM	582	543	545	590	635	627	694	522	504	536	581	591	625	653	474	521	538	517	549	559	600
	12 PM - 1 PM	610	576	569	644	685	663	809	558	532	547	606	627	671	715	500	551	573	564	580	578	662
	1 PM - 2 PM	622	592	615	670	709	683	840	587	571	569	627	667	674	742	521	582	601	583	602	589	698
	2 PM - 3 PM	693	636	662	733	754	667	841	624	614	620	686	744	655	769	548	609	637	632	664	578	718
	3 PM - 4 PM	749	684	692	774	813	654	871	698	651	669	727	783	652	771	612	691	684	694	740	579	703
	4 PM - 5 PM	758	768	785	809	871	622	822	733	739	742	771	827	631	743	661	741	744	766	781	574	661
	5 PM - 6 PM	731	722	787	819	875	575	773	679	703	717	792	826	599	716	636	694	699	722	748	518	605
	6 PM - 7 PM	557	586	610	681	717	509	708	529	541	571	622	670	508	604	489	541	548	594	634	448	538
	7 PM - 8 PM	432	440	466	519	538	447	588	407	411	441	477	508	423	481	394	426	418	476	466	365	439
	8 PM - 9 PM	368	359	402	438	467	369	519	343	329	330	404	426	339	391	317	362	356	386	386	292	359
	9 PM - 10 PM	314	298	335	365	385	334	408	302	273	296	335	353	280	295	282	308	341	323	329	261	272
	10 PM - 11 PM	251	260	272	322	315	286	293	255	229	280	278	328	226	217	225	240	273	246	256	204	198
	11 PM - Midnight	205	197	211	251	265	218	238	192	179	230	209	233	183	158	184	188	213	216	207	157	146

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	347	350	333	345	415	411	389	248	291	310	336	325	343	277	240	308	321	318	323	319	217
	1 AM - 2 AM	216	258	244	257	324	316	300	201	254	249	230	282	259	229	157	253	258	227	280	240	157
	2 AM - 3 AM	150	229	198	219	258	217	214	141	206	217	218	242	201	132	133	204	205	222	220	195	126
	3 AM - 4 AM	142	203	197	221	250	184	151	133	189	217	211	216	181	104	135	199	213	213	232	163	104
	4 AM - 5 AM	172	234	255	241	264	202	134	185	229	240	257	276	201	120	171	256	258	265	263	186	116
	5 AM - 6 AM	355	397	434	426	424	246	152	361	410	433	438	410	272	152	316	387	418	422	424	233	140
	6 AM - 7 AM	709	804	763	811	752	333	217	716	813	818	788	790	373	234	647	771	746	783	731	331	213
	7 AM - 8 AM	1,148	1,271	1,307	1,267	1,141	485	324	1,161	1,267	1,260	1,267	1,197	527	341	1,045	1,163	1,160	1,211	1,130	453	297
	8 AM - 9 AM	1,154	1,327	1,323	1,321	1,182	678	471	1,158	1,240	1,280	1,296	1,171	704	504	1,023	1,106	1,186	1,172	1,065	612	432
	9 AM - 10 AM	1,014	1,090	1,112	1,096	1,137	913	716	974	1,005	1,020	1,131	1,035	890	801	887	998	1,021	1,028	996	756	643
	10 AM - 11 AM	1,062	1,022	1,072	1,121	1,140	1,065	1,063	979	947	1,017	1,059	1,084	1,077	997	860	964	1,028	1,004	998	947	912
	11 AM - 12 PM	1,165	1,085	1,089	1,181	1,270	1,253	1,388	1,043	1,008	1,072	1,162	1,181	1,250	1,306	948	1,041	1,077	1,035	1,098	1,117	1,200
	12 PM - 1 PM	1,220	1,152	1,138	1,288	1,370	1,327	1,619	1,115	1,064	1,094	1,212	1,254	1,342	1,429	999	1,101	1,145	1,129	1,159	1,156	1,323
	1 PM - 2 PM	1,245	1,183	1,230	1,339	1,417	1,365	1,679	1,175	1,141	1,138	1,254	1,333	1,349	1,483	1,042	1,165	1,202	1,165	1,203	1,178	1,397
	2 PM - 3 PM	1,386	1,272	1,323	1,465	1,508	1,334	1,682	1,249	1,227	1,239	1,372	1,487	1,310	1,538	1,096	1,217	1,275	1,265	1,328	1,156	1,437
	3 PM - 4 PM	1,498	1,367	1,384	1,549	1,625	1,308	1,741	1,396	1,303	1,337	1,453	1,565	1,304	1,541	1,224	1,382	1,368	1,389	1,480	1,159	1,406
	4 PM - 5 PM	1,515	1,536	1,570	1,618	1,743	1,243	1,643	1,466	1,478	1,485	1,542	1,653	1,263	1,485	1,322	1,482	1,488	1,532	1,562	1,147	1,323
	5 PM - 6 PM	1,463	1,444	1,574	1,639	1,750	1,150	1,546	1,358	1,407	1,434	1,585	1,651	1,197	1,431	1,272	1,388	1,399	1,444	1,495	1,036	1,209
	6 PM - 7 PM	1,114	1,172	1,219	1,362	1,434	1,018	1,416	1,058	1,082	1,141	1,243	1,339	1,016	1,208	978	1,082	1,096	1,187	1,267	895	1,075
	7 PM - 8 PM	863	880	932	1,038	1,076	895	1,176	814	822	881	955	1,015	846	961	787	853	836	951	931	730	878
	8 PM - 9 PM	736	719	804	876	934	737	1,038	685	659	660	808	852	678	783	633	724	711	772	772	583	719
	9 PM - 10 PM	629	597	670	730	770	668	816	603	546	591	670	706	561	590	565	615	681	645	659	522	544
	10 PM - 11 PM	502	519	544	644	630	572	586	511	458	559	555	656	451	433	450	479	547	492	512	408	396
	11 PM - Midnight	409	393	422	502	530	435	476	384	358	459	417	467	365	316	367	375	426	432	414	314	293

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

173 Cleveland

TO

161 Strongsville - Cleveland

Route	I-80
Direction	WB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	82	151	166	170	164	149	87	97	174	177	171	134	150	106	121	186	182	185	178	155	106
	1 AM - 2 AM	62	115	126	138	126	106	59	73	140	139	128	97	113	67	82	151	139	143	145	116	70
	2 AM - 3 AM	51	115	106	113	115	90	46	65	126	122	110	100	84	49	63	120	123	123	118	88	56
	3 AM - 4 AM	55	104	106	108	109	83	47	62	108	114	100	98	81	54	68	118	111	115	108	90	55
	4 AM - 5 AM	76	114	129	135	140	96	51	87	141	138	126	108	100	59	113	141	144	142	151	105	67
	5 AM - 6 AM	113	171	179	179	170	111	56	136	195	194	164	145	118	62	149	203	193	195	190	120	67
	6 AM - 7 AM	197	278	304	293	279	136	67	252	319	308	268	230	145	83	255	330	313	334	302	156	81
	7 AM - 8 AM	287	390	415	417	402	163	85	387	469	459	400	344	205	101	401	472	483	480	445	204	114
	8 AM - 9 AM	303	463	475	486	446	241	118	421	523	517	435	404	264	151	414	538	525	528	476	284	154
	9 AM - 10 AM	313	449	454	454	432	307	183	401	511	487	414	427	350	228	408	511	502	519	493	350	229
	10 AM - 11 AM	305	436	429	424	439	381	241	399	473	448	411	440	438	324	396	468	477	489	506	459	332
	11 AM - 12 PM	325	443	425	441	451	462	307	414	465	456	412	449	504	398	426	490	496	525	553	519	441
	12 PM - 1 PM	343	477	447	469	491	477	380	427	494	471	428	500	551	465	445	519	510	559	597	585	521
	1 PM - 2 PM	379	487	452	489	525	508	422	452	488	473	425	525	550	511	473	538	539	563	648	601	587
	2 PM - 3 PM	411	532	484	530	549	505	474	475	531	499	464	562	531	526	497	565	555	610	684	575	617
	3 PM - 4 PM	490	611	596	618	653	520	486	587	590	589	531	626	531	552	590	641	669	705	787	565	647
	4 PM - 5 PM	571	686	675	726	718	499	486	678	705	720	605	691	520	561	695	755	771	849	861	557	665
	5 PM - 6 PM	613	757	720	733	753	478	458	768	784	765	634	751	483	561	757	792	834	861	908	496	653
	6 PM - 7 PM	450	530	535	556	581	382	418	525	562	522	461	580	416	484	566	604	612	647	693	434	605
	7 PM - 8 PM	362	401	392	416	432	298	333	404	430	390	336	434	326	389	414	453	451	497	515	351	524
	8 PM - 9 PM	301	337	335	337	336	242	271	355	352	307	279	344	261	315	374	377	375	397	414	287	405
	9 PM - 10 PM	251	285	276	269	286	207	208	291	302	280	235	276	230	250	303	299	315	343	327	243	319
	10 PM - 11 PM	212	243	248	236	221	158	149	254	259	224	194	235	178	182	257	270	279	276	281	193	229
	11 PM - Midnight	185	194	199	197	178	124	106	210	200	202	147	178	141	139	216	221	222	225	216	146	166

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	165	301	333	340	329	298	175	194	348	354	341	268	299	212	243	371	364	370	355	311	211
	1 AM - 2 AM	124	230	252	275	253	211	119	146	279	278	257	194	227	133	164	301	278	285	290	233	141
	2 AM - 3 AM	101	231	212	227	231	181	91	131	252	243	221	200	168	97	127	240	246	246	235	175	112
	3 AM - 4 AM	110	209	213	217	218	165	94	124	215	228	201	196	161	108	137	235	223	229	216	179	110
	4 AM - 5 AM	152	229	257	270	279	192	103	175	282	277	252	216	200	117	226	282	288	283	302	210	134
	5 AM - 6 AM	227	343	358	358	339	222	112	273	389	387	329	291	236	124	298	406	387	389	380	240	134
	6 AM - 7 AM	393	556	607	587	558	273	133	504	639	616	536	460	290	167	510	660	626	668	603	312	161
	7 AM - 8 AM	575	780	830	834	804	325	170	774	937	918	801	688	411	202	802	944	965	960	890	409	228
	8 AM - 9 AM	607	927	950	971	892	481	237	842	1,046	1,035	870	808	529	302	828	1,077	1,050	1,055	952	568	309
	9 AM - 10 AM	627	897	907	907	865	615	365	803	1,023	974	827	853	701	457	817	1,023	1,003	1,038	985	700	459
	10 AM - 11 AM	611	871	858	847	878	761	483	798	945	897	823	880	876	647	791	936	954	977	1,012	917	664
	11 AM - 12 PM	649	885	849	882	902	924	613	829	931	912	823	898	1,009	796	852	980	992	1,050	1,106	1,038	881
	12 PM - 1 PM	687	955	894	937	983	953	760	853	987	941	855	1,000	1,103	930	891	1,038	1,019	1,117	1,195	1,170	1,042
	1 PM - 2 PM	757	974	904	978	1,050	1,017	844	905	976	947	850	1,049	1,100	1,023	945	1,076	1,078	1,126	1,297	1,202	1,175
	2 PM - 3 PM	821	1,064	969	1,059	1,097	1,011	948	951	1,061	999	927	1,124	1,062	1,051	994	1,130	1,111	1,220	1,368	1,151	1,234
	3 PM - 4 PM	979	1,221	1,192	1,236	1,307	1,040	972	1,174	1,180	1,178	1,061	1,252	1,062	1,103	1,179	1,282	1,338	1,410	1,574	1,130	1,295
	4 PM - 5 PM	1,142	1,373	1,351	1,452	1,435	999	973	1,356	1,411	1,441	1,211	1,381	1,040	1,122	1,391	1,510	1,542	1,699	1,721	1,114	1,330
	5 PM - 6 PM	1,226	1,514	1,440	1,467	1,506	955	916	1,536	1,568	1,530	1,267	1,503	965	1,122	1,514	1,583	1,669	1,722	1,816	992	1,306
	6 PM - 7 PM	901	1,060	1,070	1,111	1,163	765	835	1,050	1,125	1,044	922	1,161	833	967	1,132	1,207	1,224	1,294	1,386	867	1,211
	7 PM - 8 PM	724	801	783	831	863	596	666	809	861	781	672	869	652	779	828	906	901	995	1,029	703	1,049
	8 PM - 9 PM	602	673	671	673	673	484	542	710	704	615	558	688	522	629	748	753	749	793	827	575	809
	9 PM - 10 PM	502	570	553	538	571	415	416	582	603	560	470	551	460	500	606	598	631	686	654	486	637
	10 PM - 11 PM	425	486	496	472	441	315	299	508	518	447	389	470	357	363	514	541	557	553	562	386	457
	11 PM - Midnight	369	387	398	393	356	248	212	420	399	403	293	357	282	278	432	442	444	450	431	293	331

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

173 Cleveland

TO

161 Strongsville - Cleveland

Route	I-80
Direction	WB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
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Revision Date: 9/1/2022

Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	119	207	199	205	202	186	127	126	178	186	191	217	203	133	139	214	213	223	253	247	172
	1 AM - 2 AM	84	151	155	148	155	133	76	87	146	151	154	170	141	82	98	164	162	170	187	172	108
	2 AM - 3 AM	60	136	124	132	138	104	67	70	119	131	128	135	107	66	77	133	135	147	153	133	80
	3 AM - 4 AM	92	126	119	122	129	103	58	79	107	124	127	145	99	66	82	129	136	148	144	117	68
	4 AM - 5 AM	108	166	156	153	158	119	67	113	139	166	159	164	126	75	113	153	168	170	170	135	80
	5 AM - 6 AM	149	198	205	201	191	143	67	162	185	209	200	199	139	75	161	218	228	222	218	155	81
	6 AM - 7 AM	287	333	335	335	321	192	95	286	307	358	368	348	189	97	291	352	380	366	361	216	126
	7 AM - 8 AM	429	509	510	499	455	257	138	451	474	546	540	480	278	140	443	537	539	531	498	299	162
	8 AM - 9 AM	460	560	564	576	492	344	194	479	522	574	590	550	388	212	505	615	611	629	591	427	269
	9 AM - 10 AM	428	523	540	543	519	456	282	497	517	560	622	616	505	321	555	624	641	653	650	591	397
	10 AM - 11 AM	419	512	520	541	536	552	383	476	516	554	576	620	589	433	525	573	583	631	678	652	509
	11 AM - 12 PM	443	540	512	556	601	596	505	476	525	562	590	677	644	523	569	602	599	685	736	733	644
	12 PM - 1 PM	474	537	542	589	668	665	617	539	590	596	647	722	682	653	585	634	647	722	817	790	721
	1 PM - 2 PM	494	547	562	619	703	667	673	563	634	601	681	771	699	691	638	643	654	745	858	807	801
	2 PM - 3 PM	527	587	591	664	766	665	711	611	678	657	725	807	707	732	662	693	706	797	900	804	851
	3 PM - 4 PM	664	689	702	772	844	684	729	702	749	776	825	945	702	761	781	761	825	913	1,006	779	839
	4 PM - 5 PM	764	796	815	867	923	677	774	816	851	896	924	1,046	635	751	882	869	932	1,005	1,067	774	842
	5 PM - 6 PM	793	876	861	933	920	606	745	868	897	951	967	1,012	587	728	916	945	971	1,100	1,047	702	811
	6 PM - 7 PM	578	637	649	699	732	534	677	615	684	699	705	825	530	650	682	682	718	792	842	612	728
	7 PM - 8 PM	438	484	495	527	569	432	579	476	517	498	544	641	451	579	506	509	521	624	662	508	617
	8 PM - 9 PM	367	397	382	436	453	359	451	401	427	415	451	519	348	477	419	433	434	509	559	437	510
	9 PM - 10 PM	305	325	328	376	379	290	358	325	338	322	379	401	292	377	340	343	348	422	467	368	402
	10 PM - 11 PM	249	272	272	304	308	248	276	281	276	272	306	322	255	255	274	294	297	334	362	293	306
	11 PM - Midnight	205	226	229	253	226	178	178	222	226	234	264	267	186	189	240	242	273	316	304	243	219

Close 2 Lanes	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	238	414	398	410	403	371	254	252	357	371	382	435	406	266	278	428	426	447	507	495	344
	1 AM - 2 AM	167	302	310	296	310	267	152	174	291	302	307	340	282	165	197	328	324	339	374	344	216
	2 AM - 3 AM	119	271	248	265	276	209	134	140	237	263	256	269	215	132	154	266	271	295	306	266	161
	3 AM - 4 AM	184	252	239	243	257	205	117	159	214	247	255	289	198	132	165	259	271	296	287	235	135
	4 AM - 5 AM	215	332	313	305	315	239	135	226	277	331	318	327	251	150	225	307	336	341	340	270	160
	5 AM - 6 AM	297	396	411	401	383	285	134	323	370	418	400	398	277	150	321	436	455	443	436	309	161
	6 AM - 7 AM	574	666	670	670	643	384	190	573	613	716	736	696	377	194	582	704	759	733	721	431	252
	7 AM - 8 AM	858	1,018	1,021	998	910	514	277	901	948	1,091	1,079	961	555	281	886	1,074	1,077	1,062	995	598	325
	8 AM - 9 AM	920	1,120	1,128	1,151	984	689	388	959	1,044	1,147	1,180	1,101	776	424	1,011	1,230	1,222	1,258	1,183	853	538
	9 AM - 10 AM	857	1,045	1,080	1,085	1,038	912	563	993	1,035	1,119	1,244	1,232	1,011	643	1,111	1,247	1,282	1,306	1,299	1,183	794
	10 AM - 11 AM	837	1,025	1,039	1,082	1,073	1,103	767	951	1,032	1,108	1,152	1,240	1,178	866	1,051	1,146	1,167	1,262	1,357	1,305	1,018
	11 AM - 12 PM	885	1,079	1,023	1,112	1,201	1,192	1,010	951	1,051	1,124	1,181	1,353	1,288	1,045	1,138	1,205	1,198	1,370	1,473	1,466	1,288
	12 PM - 1 PM	948	1,075	1,085	1,178	1,337	1,329	1,233	1,078	1,181	1,193	1,295	1,443	1,363	1,305	1,171	1,268	1,295	1,445	1,634	1,581	1,442
	1 PM - 2 PM	987	1,094	1,124	1,237	1,406	1,334	1,347	1,126	1,268	1,202	1,362	1,542	1,398	1,382	1,276	1,309	1,490	1,716	1,614	1,603	
	2 PM - 3 PM	1,053	1,173	1,182	1,329	1,531	1,330	1,421	1,222	1,355	1,314	1,450	1,614	1,414	1,464	1,324	1,386	1,412	1,594	1,801	1,608	1,703
	3 PM - 4 PM	1,329	1,378	1,404	1,545	1,688	1,368	1,458	1,403	1,498	1,551	1,649	1,890	1,405	1,522	1,562	1,522	1,651	1,826	2,012	1,558	1,677
	4 PM - 5 PM	1,528	1,592	1,630	1,734	1,846	1,353	1,547	1,633	1,703	1,792	1,847	2,091	1,270	1,502	1,765	1,738	1,864	2,010	2,133	1,548	1,684
	5 PM - 6 PM	1,586	1,753	1,721	1,866	1,840	1,213	1,491	1,736	1,794	1,903	1,934	2,023	1,174	1,455	1,833	1,890	1,941	2,199	2,093	1,404	1,623
	6 PM - 7 PM	1,155	1,274	1,297	1,399	1,465	1,068	1,353	1,231	1,367	1,398	1,410	1,649	1,061	1,301	1,365	1,364	1,436	1,585	1,684	1,223	1,455
	7 PM - 8 PM	875	968	990	1,054	1,138	865	1,158	953	1,034	996	1,088	1,283	902	1,157	1,012	1,018	1,042	1,249	1,325	1,017	1,235
	8 PM - 9 PM	733	795	765	872	907	718	903	801	853	830	902	1,038	696	955	837	867	868	1,018	1,117	873	1,021
	9 PM - 10 PM	609	650	655	751	758	580	716	650	676	643	758	801	583	753	679	686	697	844	935	737	805
	10 PM - 11 PM	499	545	543	609	615	495	552	562	553	544	611	643	509	510	548	588	594	669	723	587	613
	11 PM - Midnight	410	451	458	507	452	355	356	443	451	467	527	534	371	378	480	483	546	633	608	486	437

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

173 Cleveland

TO

161 Strongsville - Cleveland

Route	I-80
Direction	WB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	142	176	226	244	265	252	168	156	216	234	237	228	247	144	138	202	208	235	208	234	153
	1 AM - 2 AM	105	137	160	177	183	165	104	109	161	179	171	167	167	98	94	146	165	173	151	155	88
	2 AM - 3 AM	81	113	144	153	150	120	76	89	141	132	150	134	120	72	79	108	134	132	127	121	65
	3 AM - 4 AM	85	119	122	135	139	114	72	89	142	126	143	127	110	66	75	109	114	122	123	110	63
	4 AM - 5 AM	109	136	167	158	167	128	78	106	155	158	162	156	125	71	102	134	143	145	159	123	59
	5 AM - 6 AM	163	187	218	223	209	158	87	162	208	200	211	224	147	79	168	196	197	213	216	131	79
	6 AM - 7 AM	290	324	337	345	327	212	112	269	339	339	345	333	194	96	308	340	342	367	341	184	104
	7 AM - 8 AM	433	477	508	515	487	281	150	431	520	502	514	475	260	135	431	479	489	509	492	260	139
	8 AM - 9 AM	493	559	591	619	557	397	248	485	616	585	605	554	390	230	473	518	556	566	525	365	218
	9 AM - 10 AM	530	606	636	661	657	586	383	501	642	615	640	628	552	357	473	522	564	578	570	537	332
	10 AM - 11 AM	534	564	598	652	691	667	485	500	604	591	630	669	673	465	464	501	527	557	572	652	427
	11 AM - 12 PM	572	607	610	683	762	755	622	572	624	636	686	745	748	623	499	523	530	579	658	717	528
	12 PM - 1 PM	627	647	645	733	831	822	735	615	638	652	738	796	816	734	545	547	546	617	725	724	631
	1 PM - 2 PM	650	654	698	776	862	823	832	644	659	687	766	878	830	799	549	580	586	650	781	749	652
	2 PM - 3 PM	670	698	706	805	936	819	856	690	693	707	804	926	799	827	606	614	635	705	860	726	715
	3 PM - 4 PM	757	781	830	913	1,003	832	889	781	783	811	912	1,027	767	816	704	699	739	809	938	745	756
	4 PM - 5 PM	893	907	928	1,021	1,092	792	902	859	870	938	993	1,085	787	863	802	803	868	941	1,099	684	742
	5 PM - 6 PM	901	966	986	1,077	1,089	720	855	908	912	971	1,038	1,090	735	843	853	897	910	1,022	1,102	639	732
	6 PM - 7 PM	675	692	741	799	884	641	758	692	687	722	806	870	644	779	634	639	658	763	915	571	695
	7 PM - 8 PM	517	536	551	615	691	622	652	513	523	544	636	687	560	671	483	489	494	566	711	462	585
	8 PM - 9 PM	445	441	441	514	542	446	546	421	435	461	523	508	449	523	377	419	405	492	505	380	523
	9 PM - 10 PM	360	373	364	443	454	374	422	335	347	384	424	421	378	407	331	328	336	404	401	332	417
	10 PM - 11 PM	301	316	312	347	364	305	314	286	302	310	330	360	306	303	277	281	273	338	353	272	292
	11 PM - Midnight	246	290	269	322	343	244	227	241	275	270	270	295	223	221	262	235	256	273	291	231	213

Close 2 Lanes	Month	July							August							September						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	283	351	453	488	530	504	336	313	433	468	475	456	493	288	276	403	416	470	415	469	305
	1 AM - 2 AM	211	275	321	355	366	330	207	219	323	358	343	334	334	196	188	292	329	346	302	309	176
	2 AM - 3 AM	161	227	289	306	299	240	152	178	281	265	300	268	241	143	159	216	268	263	255	242	130
	3 AM - 4 AM	169	237	243	269	279	229	143	178	284	251	285	255	220	133	150	217	227	245	247	219	126
	4 AM - 5 AM	218	271	335	316	334	256	157	212	309	315	324	312	249	142	205	268	285	291	317	246	118
	5 AM - 6 AM	327	375	437	447	419	317	175	324	416	399	422	449	295	157	337	391	393	427	432	261	158
	6 AM - 7 AM	580	648	675	691	655	425	225	538	679	678	691	665	388	192	615	681	684	734	683	368	207
	7 AM - 8 AM	865	954	1,017	1,031	974	563	300	863	1,040	1,005	1,028	950	521	270	861	957	977	1,018	983	520	277
	8 AM - 9 AM	986	1,118	1,182	1,238	1,114	794	496	970	1,232	1,170	1,210	1,108	781	460	946	1,035	1,113	1,132	1,049	730	435
	9 AM - 10 AM	1,061	1,211	1,272	1,322	1,315	1,172	767	1,001	1,284	1,229	1,280	1,256	1,105	713	946	1,044	1,129	1,155	1,139	1,074	663
	10 AM - 11 AM	1,068	1,128	1,196	1,304	1,382	1,333	971	1,000	1,207	1,181	1,259	1,338	1,346	930	927	1,001	1,055	1,115	1,144	1,303	854
	11 AM - 12 PM	1,144	1,214	1,220	1,366	1,524	1,511	1,243	1,144	1,248	1,272	1,371	1,490	1,495	1,245	998	1,046	1,061	1,158	1,316	1,434	1,056
	12 PM - 1 PM	1,254	1,294	1,289	1,465	1,662	1,644	1,469	1,229	1,276	1,304	1,475	1,591	1,632	1,467	1,090	1,094	1,092	1,235	1,449	1,448	1,262
	1 PM - 2 PM	1,299	1,308	1,397	1,552	1,724	1,646	1,665	1,288	1,317	1,375	1,532	1,755	1,660	1,597	1,098	1,160	1,171	1,299	1,561	1,498	1,304
	2 PM - 3 PM	1,340	1,396	1,412	1,611	1,872	1,639	1,712	1,379	1,385	1,414	1,607	1,853	1,599	1,655	1,213	1,227	1,269	1,411	1,720	1,452	1,430
	3 PM - 4 PM	1,514	1,563	1,660	1,826	2,006	1,664	1,777	1,562	1,566	1,622	1,824	2,054	1,533	1,632	1,408	1,397	1,478	1,617	1,876	1,490	1,511
	4 PM - 5 PM	1,787	1,814	1,857	2,041	2,183	1,584	1,805	1,717	1,740	1,877	1,986	2,171	1,575	1,727	1,605	1,606	1,736	1,882	2,198	1,368	1,483
	5 PM - 6 PM	1,802	1,932	1,972	2,153	2,177	1,440	1,710	1,815	1,825	1,942	2,077	2,180	1,469	1,686	1,707	1,793	1,821	2,045	2,203	1,277	1,464
	6 PM - 7 PM	1,350	1,383	1,481	1,599	1,769	1,283	1,517	1,384	1,373	1,443	1,612	1,740	1,288	1,557	1,269	1,278	1,315	1,525	1,830	1,142	1,390
	7 PM - 8 PM	1,035	1,072	1,102	1,230	1,383	1,043	1,304	1,027	1,045	1,089	1,271	1,374	1,120	1,342	966	979	988	1,131	1,423	923	1,171
	8 PM - 9 PM	889	883	882	1,028	1,084	892	1,093	842	870	921	1,045	1,016	897	1,045	754	837	810	984	1,010	760	1,046
	9 PM - 10 PM	720	747	727	887	907	747	844	670	693	768	847	843	757	814	662	657	671	808	801	664	834
	10 PM - 11 PM	601	632	624	694	727	611	627	573	603	621	661	720	612	607	553	562	546	675	707	544	584
	11 PM - Midnight	491	579	538	644	687	487	454	482	549	539	540	590	445	442	523	471	512	545	582	462	425

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

173 Cleveland

TO

161 Strongsville - Cleveland

Route	I-80
Direction	WB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	127	194	187	193	213	222	137	114	185	183	177	184	185	113	104	191	184	184	182	176	101
	1 AM - 2 AM	90	156	151	156	154	146	98	76	148	150	146	149	132	104	75	149	159	144	148	132	73
	2 AM - 3 AM	75	127	139	136	139	113	75	64	127	123	126	125	112	57	63	130	119	117	120	102	49
	3 AM - 4 AM	75	125	126	127	128	103	61	71	124	120	124	113	96	54	64	122	120	123	128	110	56
	4 AM - 5 AM	111	151	151	153	161	118	63	104	156	149	159	153	122	61	96	146	149	144	150	99	64
	5 AM - 6 AM	154	211	200	206	194	131	77	153	206	215	220	191	134	70	143	200	203	202	191	127	74
	6 AM - 7 AM	280	338	347	344	329	174	97	282	348	334	360	335	182	94	252	335	343	337	322	166	88
	7 AM - 8 AM	405	503	505	492	467	240	123	426	491	502	486	455	250	125	385	462	461	475	451	210	103
	8 AM - 9 AM	459	563	535	553	511	364	216	469	548	544	535	517	332	188	408	535	509	526	478	277	156
	9 AM - 10 AM	453	555	564	571	576	519	332	451	547	537	557	542	455	278	407	527	530	539	507	398	243
	10 AM - 11 AM	444	510	520	522	590	641	452	439	497	506	527	530	527	376	395	497	507	502	510	448	339
	11 AM - 12 PM	499	544	521	576	649	679	549	463	537	505	536	604	594	466	436	518	522	514	562	561	443
	12 PM - 1 PM	539	567	565	616	720	703	643	520	560	534	593	673	659	584	458	552	559	554	614	582	563
	1 PM - 2 PM	566	581	575	646	793	700	682	527	590	567	598	685	628	603	477	572	597	595	629	626	628
	2 PM - 3 PM	592	622	618	707	846	681	708	565	627	576	653	754	665	580	517	615	614	605	685	623	645
	3 PM - 4 PM	714	728	748	843	935	685	764	663	705	707	776	873	655	661	613	696	730	700	788	644	670
	4 PM - 5 PM	797	813	854	988	1,037	660	754	797	784	818	909	959	640	708	704	822	830	795	800	634	663
	5 PM - 6 PM	895	881	941	1,106	1,056	606	735	837	859	873	933	977	570	651	728	828	859	841	803	578	637
	6 PM - 7 PM	643	650	691	784	845	545	644	603	611	625	659	780	495	565	511	609	643	602	644	483	533
	7 PM - 8 PM	483	481	497	560	619	451	555	435	452	453	501	570	383	499	389	446	477	451	486	387	471
	8 PM - 9 PM	405	406	405	473	479	381	454	352	361	374	421	449	330	424	331	374	396	372	396	299	381
	9 PM - 10 PM	319	329	331	378	383	319	359	302	300	308	360	365	280	347	294	335	329	339	342	254	297
	10 PM - 11 PM	262	259	277	312	323	261	248	250	255	247	274	318	228	250	252	275	280	271	274	213	213
	11 PM - Midnight	229	231	235	259	271	202	176	211	216	219	239	238	175	160	208	230	230	229	243	161	152

Close 2 Lanes	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	254	387	375	387	427	444	274	228	369	366	355	367	371	225	208	381	369	368	364	352	203
	1 AM - 2 AM	181	311	301	312	307	291	197	153	295	299	292	298	264	209	149	297	318	288	295	264	146
	2 AM - 3 AM	150	253	278	273	279	225	151	128	255	245	253	250	223	113	126	259	238	233	240	205	97
	3 AM - 4 AM	151	249	251	254	257	205	121	141	249	239	247	226	192	108	128	243	239	246	256	220	111
	4 AM - 5 AM	223	303	302	307	322	237	126	207	313	298	318	306	243	122	191	292	299	287	301	199	129
	5 AM - 6 AM	307	422	401	413	389	262	154	307	411	429	440	383	267	140	286	399	407	404	382	254	149
	6 AM - 7 AM	560	676	694	687	657	348	195	564	695	669	720	671	364	189	503	670	685	673	644	332	175
	7 AM - 8 AM	811	1,006	1,011	985	935	480	246	852	982	1,004	971	910	500	249	770	924	921	949	901	420	205
	8 AM - 9 AM	918	1,125	1,069	1,107	1,021	727	432	938	1,096	1,087	1,069	1,034	665	375	815	1,069	1,018	1,052	955	555	312
	9 AM - 10 AM	905	1,110	1,127	1,142	1,152	1,039	663	902	1,094	1,074	1,114	1,083	910	557	815	1,054	1,060	1,078	1,013	797	485
	10 AM - 11 AM	889	1,019	1,040	1,044	1,181	1,282	905	878	993	1,012	1,053	1,060	1,053	751	791	993	1,015	1,003	1,019	896	677
	11 AM - 12 PM	998	1,089	1,043	1,151	1,298	1,358	1,097	927	1,074	1,010	1,071	1,207	1,188	933	871	1,035	1,044	1,027	1,123	1,121	887
	12 PM - 1 PM	1,077	1,134	1,129	1,231	1,440	1,406	1,286	1,040	1,120	1,067	1,186	1,345	1,317	1,169	916	1,105	1,118	1,108	1,227	1,164	1,126
	1 PM - 2 PM	1,131	1,163	1,150	1,292	1,586	1,399	1,363	1,055	1,179	1,135	1,195	1,370	1,257	1,206	954	1,143	1,194	1,191	1,257	1,252	1,257
	2 PM - 3 PM	1,185	1,244	1,236	1,414	1,693	1,361	1,416	1,129	1,254	1,151	1,307	1,507	1,329	1,159	1,033	1,229	1,228	1,211	1,370	1,247	1,289
	3 PM - 4 PM	1,428	1,456	1,496	1,685	1,870	1,370	1,528	1,327	1,411	1,415	1,553	1,745	1,310	1,322	1,226	1,393	1,460	1,399	1,577	1,288	1,340
	4 PM - 5 PM	1,595	1,625	1,708	1,975	2,074	1,319	1,507	1,593	1,568	1,637	1,818	1,919	1,280	1,415	1,407	1,643	1,660	1,590	1,600	1,267	1,325
	5 PM - 6 PM	1,790	1,762	1,883	2,213	2,112	1,212	1,469	1,674	1,718	1,746	1,866	1,954	1,140	1,301	1,455	1,656	1,718	1,682	1,606	1,155	1,275
	6 PM - 7 PM	1,286	1,301	1,383	1,568	1,689	1,090	1,288	1,207	1,222	1,251	1,318	1,560	990	1,131	1,023	1,219	1,285	1,203	1,287	966	1,066
	7 PM - 8 PM	966	963	995	1,120	1,237	901	1,110	869	905	906	1,001	1,141	767	998	778	891	953	901	972	774	943
	8 PM - 9 PM	810	813	810	945	958	761	908	703	723	748	841	899	660	848	661	748	792	744	793	597	761
	9 PM - 10 PM	637	657	661	756	765	638	718	604	599	616	720	730	560	694	589	669	658	677	683	508	594
	10 PM - 11 PM	525	517	554	625	646	521	495	501	510	495	548	636	456	499	504	550	560	542	548	426	426
	11 PM - Midnight	458	462	470	518	543	403	352	421	432	438	478	476	349	319	415	460	461	457	487	322	304

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

173 Cleveland

TO

180 Akron

Route	I-80
Direction	EB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	85	125	133	133	141	130	100	105	142	150	134	108	149	111	127	150	151	161	172	173	113
	1 AM - 2 AM	65	89	103	99	106	94	71	74	105	113	101	91	105	80	92	115	115	117	119	120	104
	2 AM - 3 AM	57	73	81	82	85	69	56	63	91	89	84	71	78	59	74	84	95	100	109	85	64
	3 AM - 4 AM	48	77	84	87	92	76	45	59	87	96	91	82	71	49	74	96	95	108	102	83	58
	4 AM - 5 AM	69	93	99	105	105	72	47	82	95	107	107	96	75	53	82	115	114	121	127	91	54
	5 AM - 6 AM	119	166	179	184	172	92	56	148	178	191	168	141	106	64	161	194	198	200	205	111	67
	6 AM - 7 AM	268	341	354	358	334	145	84	318	380	378	310	272	155	100	332	373	374	387	371	177	110
	7 AM - 8 AM	444	567	582	579	549	194	117	565	657	660	525	454	214	141	598	654	633	631	594	244	162
	8 AM - 9 AM	437	560	569	558	546	253	155	577	623	621	513	496	286	196	577	656	641	662	607	318	217
	9 AM - 10 AM	374	469	490	486	461	323	226	484	526	496	427	432	368	282	477	501	540	560	538	409	315
	10 AM - 11 AM	362	441	445	451	436	391	310	466	476	461	408	437	448	384	475	494	505	538	548	490	450
	11 AM - 12 PM	408	450	464	468	458	467	377	510	481	472	426	443	535	507	508	509	535	572	601	576	565
	12 PM - 1 PM	463	482	497	503	487	499	433	531	509	519	458	503	552	534	545	538	549	613	629	603	652
	1 PM - 2 PM	474	510	517	543	512	512	496	565	537	521	476	528	545	573	550	575	581	631	669	589	684
	2 PM - 3 PM	520	546	549	571	587	508	514	597	592	568	531	616	551	571	614	615	625	738	734	587	680
	3 PM - 4 PM	585	582	607	630	628	505	519	694	654	658	594	663	533	608	658	684	698	783	824	595	718
	4 PM - 5 PM	639	680	699	752	721	500	524	765	780	753	670	731	519	606	749	796	818	839	918	575	721
	5 PM - 6 PM	609	694	734	763	722	455	496	780	797	754	664	739	485	583	770	827	897	871	931	543	646
	6 PM - 7 PM	452	523	540	532	569	384	393	539	575	548	471	567	406	494	549	572	630	664	715	462	594
	7 PM - 8 PM	352	378	390	375	411	311	337	392	422	379	341	447	341	400	394	427	442	487	530	364	480
	8 PM - 9 PM	268	307	322	319	341	264	272	333	348	312	269	345	285	329	352	376	370	416	408	305	374
	9 PM - 10 PM	236	253	262	287	285	231	207	278	276	275	231	286	241	257	301	307	335	351	344	266	308
	10 PM - 11 PM	204	202	219	237	224	191	163	228	237	206	175	251	205	208	259	239	279	280	304	227	217
	11 PM - Midnight	162	162	176	184	176	138	119	185	178	161	144	187	167	160	209	196	203	227	240	161	180

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	170	250	267	266	282	259	201	209	285	300	269	216	299	222	255	300	302	323	345	346	226
	1 AM - 2 AM	129	177	206	198	213	188	142	148	210	225	202	182	210	160	184	231	231	234	238	240	209
	2 AM - 3 AM	113	146	163	164	170	138	112	126	181	179	168	141	156	117	147	168	191	200	218	169	127
	3 AM - 4 AM	96	154	167	174	183	152	89	118	174	192	181	163	141	98	149	191	190	215	204	167	117
	4 AM - 5 AM	138	187	198	211	211	144	93	164	190	214	214	191	151	106	163	230	227	241	253	181	108
	5 AM - 6 AM	237	331	358	368	345	185	112	295	356	381	336	282	211	128	323	388	395	400	410	222	133
	6 AM - 7 AM	535	681	707	717	667	291	167	636	760	756	621	543	309	199	665	746	747	774	741	354	220
	7 AM - 8 AM	889	1,133	1,165	1,157	1,098	389	234	1,131	1,315	1,321	1,051	908	428	281	1,196	1,308	1,267	1,262	1,188	488	324
	8 AM - 9 AM	873	1,119	1,138	1,115	1,092	506	310	1,154	1,245	1,241	1,026	991	572	392	1,154	1,311	1,283	1,323	1,214	636	433
	9 AM - 10 AM	747	939	981	972	921	645	453	969	1,051	992	854	864	737	563	954	1,003	1,081	1,121	1,076	818	631
	10 AM - 11 AM	724	882	891	903	872	783	619	931	952	923	817	873	896	768	950	988	1,009	1,076	1,096	979	900
	11 AM - 12 PM	816	901	927	937	916	934	753	1,019	962	945	851	887	1,070	1,015	1,016	1,017	1,070	1,144	1,203	1,152	1,129
	12 PM - 1 PM	926	964	995	1,006	974	998	866	1,062	1,018	1,038	916	1,007	1,103	1,067	1,090	1,075	1,097	1,226	1,258	1,206	1,303
	1 PM - 2 PM	947	1,021	1,035	1,087	1,023	1,025	991	1,129	1,075	1,042	952	1,055	1,090	1,146	1,101	1,149	1,163	1,261	1,338	1,177	1,368
	2 PM - 3 PM	1,040	1,092	1,097	1,142	1,174	1,015	1,028	1,194	1,184	1,136	1,062	1,232	1,103	1,142	1,228	1,230	1,250	1,477	1,469	1,174	1,361
	3 PM - 4 PM	1,170	1,163	1,215	1,260	1,256	1,010	1,039	1,387	1,308	1,315	1,188	1,326	1,066	1,215	1,317	1,368	1,396	1,565	1,647	1,189	1,435
	4 PM - 5 PM	1,278	1,359	1,399	1,504	1,441	1,000	1,049	1,530	1,560	1,505	1,340	1,461	1,039	1,211	1,498	1,591	1,636	1,678	1,836	1,150	1,442
	5 PM - 6 PM	1,217	1,388	1,469	1,526	1,445	909	992	1,560	1,594	1,508	1,329	1,478	970	1,166	1,539	1,654	1,795	1,741	1,862	1,086	1,292
	6 PM - 7 PM	904	1,046	1,080	1,064	1,138	769	786	1,079	1,150	1,095	943	1,135	811	988	1,098	1,144	1,261	1,328	1,430	925	1,187
	7 PM - 8 PM	703	755	779	750	822	623	675	783	844	757	683	893	681	801	788	855	884	974	1,059	728	960
	8 PM - 9 PM	535	614	644	639	683	528	543	667	696	624	537	690	571	658	704	752	740	833	817	610	748
	9 PM - 10 PM	473	506	525	573	570	461	413	556	552	550	461	571	482	514	601	615	670	702	688	531	616
	10 PM - 11 PM	408	405	438	475	448	381	327	456	474	413	349	502	410	415	518	478	557	559	608	453	434
	11 PM - Midnight	324	323	353	367	352	276	239	370	356	322	288	374	334	320	419	392	406	454	480	321	360

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

173 Cleveland

TO

180 Akron

Route	I-80
Direction	EB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

1. Refer to SP 104 for lane closure restrictions.
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Revision Date: 9/1/2022

Close 1 Lane	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	108	154	161	178	187	176	122	129	148	164	173	196	185	138	164	179	194	178	212	239	172
	1 AM - 2 AM	98	117	121	133	135	132	86	93	124	124	129	137	129	90	109	141	136	150	160	145	111
	2 AM - 3 AM	69	90	94	111	108	95	64	74	97	98	108	119	99	71	90	109	110	130	127	104	81
	3 AM - 4 AM	68	93	87	105	109	92	64	70	85	97	113	118	104	56	78	104	105	122	135	103	68
	4 AM - 5 AM	84	111	116	124	130	94	58	93	110	113	130	134	98	62	95	120	121	144	130	114	74
	5 AM - 6 AM	176	199	208	210	209	123	66	166	185	217	213	219	123	79	167	204	216	230	224	142	87
	6 AM - 7 AM	350	384	401	404	373	170	123	376	357	420	413	404	201	122	387	402	421	424	425	218	142
	7 AM - 8 AM	615	672	668	667	597	258	158	626	602	699	686	641	284	178	596	639	654	641	615	304	215
	8 AM - 9 AM	593	656	712	681	608	351	222	603	608	702	697	649	375	245	624	700	677	687	651	407	287
	9 AM - 10 AM	506	578	572	591	560	447	356	541	546	590	615	589	477	374	584	605	607	631	630	505	416
	10 AM - 11 AM	480	549	532	571	610	539	473	524	538	561	590	621	545	531	587	575	608	633	650	588	572
	11 AM - 12 PM	530	544	565	608	654	618	605	596	595	585	667	685	657	695	634	611	635	699	757	722	725
	12 PM - 1 PM	550	554	585	664	686	641	649	607	630	621	687	733	690	777	677	649	665	744	771	765	826
	1 PM - 2 PM	566	592	624	682	716	636	711	650	659	655	706	755	684	800	719	668	694	774	815	767	876
	2 PM - 3 PM	638	642	647	757	774	638	752	705	727	725	775	833	651	833	760	708	744	805	860	766	868
	3 PM - 4 PM	693	730	748	825	838	631	760	767	777	797	892	960	663	830	813	782	818	886	976	706	896
	4 PM - 5 PM	793	842	861	928	909	611	741	889	841	925	1,037	1,036	634	836	917	896	932	1,013	1,012	683	872
	5 PM - 6 PM	810	846	907	953	909	573	741	893	877	914	1,025	963	584	785	901	875	942	1,030	1,000	624	819
	6 PM - 7 PM	555	589	663	714	684	495	663	647	649	632	742	768	515	702	667	691	683	791	768	551	762
	7 PM - 8 PM	411	453	495	538	516	415	553	459	492	492	542	567	441	614	524	487	519	574	584	483	621
	8 PM - 9 PM	346	367	377	453	411	357	427	408	434	440	483	473	395	521	463	421	418	499	489	445	560
	9 PM - 10 PM	302	338	328	388	359	294	325	353	364	387	419	408	348	413	400	380	361	448	425	383	435
	10 PM - 11 PM	232	247	238	297	288	244	248	254	282	279	328	322	290	288	316	298	301	375	375	336	338
	11 PM - Midnight	192	195	207	226	245	182	158	204	205	229	240	285	203	188	255	250	246	283	323	252	233

Close 2 Lanes	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	216	307	321	356	375	352	244	258	295	327	346	393	370	277	327	357	387	355	425	479	345
	1 AM - 2 AM	195	235	242	267	270	264	172	186	248	248	257	274	259	181	218	283	271	301	319	290	222
	2 AM - 3 AM	137	179	188	223	216	191	127	148	193	195	215	238	198	141	180	219	221	260	255	207	161
	3 AM - 4 AM	136	187	175	210	218	185	128	140	170	195	226	237	208	112	155	209	211	245	269	207	135
	4 AM - 5 AM	167	222	231	247	260	188	116	185	221	227	260	269	196	123	191	241	242	287	259	227	148
	5 AM - 6 AM	352	398	415	419	418	245	132	332	370	434	427	439	247	158	335	408	433	460	449	284	174
	6 AM - 7 AM	700	767	802	807	747	340	245	752	713	840	826	808	402	243	774	803	842	848	849	436	285
	7 AM - 8 AM	1,231	1,343	1,335	1,335	1,193	517	315	1,252	1,204	1,397	1,372	1,282	567	356	1,192	1,279	1,308	1,283	1,230	607	429
	8 AM - 9 AM	1,187	1,312	1,423	1,362	1,216	702	444	1,206	1,217	1,405	1,393	1,298	751	489	1,247	1,399	1,355	1,374	1,301	813	573
	9 AM - 10 AM	1,011	1,156	1,144	1,183	1,120	894	712	1,081	1,092	1,179	1,230	1,177	955	748	1,167	1,210	1,215	1,262	1,260	1,011	831
	10 AM - 11 AM	960	1,098	1,064	1,142	1,220	1,078	945	1,048	1,075	1,123	1,180	1,243	1,091	1,062	1,174	1,150	1,216	1,266	1,301	1,175	1,145
	11 AM - 12 PM	1,060	1,087	1,129	1,216	1,308	1,235	1,209	1,192	1,189	1,170	1,333	1,370	1,314	1,390	1,269	1,222	1,270	1,398	1,515	1,444	1,450
	12 PM - 1 PM	1,101	1,108	1,171	1,327	1,373	1,282	1,297	1,214	1,260	1,242	1,374	1,466	1,379	1,553	1,355	1,298	1,330	1,488	1,541	1,529	1,651
	1 PM - 2 PM	1,131	1,184	1,249	1,364	1,433	1,273	1,422	1,299	1,318	1,310	1,412	1,509	1,368	1,600	1,438	1,336	1,389	1,549	1,630	1,535	1,752
	2 PM - 3 PM	1,275	1,284	1,294	1,513	1,547	1,276	1,504	1,410	1,453	1,449	1,549	1,666	1,302	1,666	1,519	1,415	1,487	1,610	1,721	1,531	1,736
	3 PM - 4 PM	1,386	1,460	1,496	1,650	1,675	1,263	1,519	1,533	1,555	1,593	1,785	1,919	1,326	1,660	1,627	1,565	1,636	1,773	1,952	1,413	1,792
	4 PM - 5 PM	1,586	1,685	1,722	1,857	1,817	1,222	1,482	1,777	1,683	1,850	2,075	2,072	1,267	1,672	1,835	1,793	1,863	2,026	2,025	1,366	1,745
	5 PM - 6 PM	1,619	1,693	1,814	1,906	1,817	1,145	1,481	1,786	1,755	1,828	2,050	1,927	1,167	1,569	1,803	1,750	1,884	2,061	2,001	1,248	1,637
	6 PM - 7 PM	1,110	1,178	1,326	1,429	1,368	990	1,326	1,295	1,298	1,264	1,484	1,537	1,030	1,404	1,334	1,382	1,366	1,583	1,536	1,102	1,524
	7 PM - 8 PM	821	905	990	1,076	1,033	829	1,106	919	984	984	1,083	1,133	881	1,227	1,047	973	1,038	1,149	1,168	965	1,242
	8 PM - 9 PM	691	734	753	905	822	714	854	815	868	879	966	947	790	1,043	926	842	837	998	978	890	1,120
	9 PM - 10 PM	605	676	656	775	718	588	649	706	728	775	839	816	696	826	799	761	722	896	850	765	869
	10 PM - 11 PM	463	494	476	595	577	488	496	509	565	559	656	645	580	576	632	595	602	750	751	672	676
	11 PM - Midnight	384	389	414	452	489	364	315	408	409	457	480	569	406	375	510	500	492	565	646	504	465

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

173 Cleveland

TO

180 Akron

Route	I-80
Direction	EB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	156	181	188	202	220	222	194	166	175	179	188	198	256	184	158	163	167	177	202	226	190
	1 AM - 2 AM	117	131	134	149	160	148	121	129	132	130	146	144	156	151	105	126	124	140	148	167	120
	2 AM - 3 AM	86	102	103	114	122	111	84	95	112	106	110	126	105	91	80	101	100	120	124	112	87
	3 AM - 4 AM	90	88	103	115	132	98	64	84	99	107	121	125	107	68	77	95	105	112	119	93	66
	4 AM - 5 AM	109	113	127	137	138	107	66	98	129	127	147	130	108	67	94	116	117	131	138	104	61
	5 AM - 6 AM	186	191	204	219	228	145	87	172	197	203	205	213	136	87	183	198	202	219	218	140	75
	6 AM - 7 AM	360	376	395	391	400	213	130	370	390	398	394	395	194	122	385	388	406	421	423	202	119
	7 AM - 8 AM	584	598	641	629	579	283	191	601	626	643	651	592	285	197	644	668	678	700	646	295	197
	8 AM - 9 AM	613	645	665	680	633	390	270	604	704	699	699	663	390	278	642	678	707	731	654	435	277
	9 AM - 10 AM	555	585	594	653	623	496	415	569	611	596	621	607	521	420	568	577	591	643	616	499	421
	10 AM - 11 AM	580	587	600	636	685	606	561	585	602	594	655	648	636	586	586	562	574	639	649	612	584
	11 AM - 12 PM	633	634	652	677	748	771	734	647	618	623	680	745	745	803	597	607	579	664	718	697	758
	12 PM - 1 PM	691	686	690	749	806	769	850	687	647	667	707	726	792	888	647	630	629	693	776	748	859
	1 PM - 2 PM	712	712	700	766	847	799	891	737	683	696	772	814	810	963	680	633	654	734	794	718	863
	2 PM - 3 PM	770	751	778	839	894	790	955	767	715	729	834	870	782	975	720	712	700	793	841	752	886
	3 PM - 4 PM	800	823	790	858	959	805	880	820	785	825	892	909	796	1,015	809	784	789	869	916	690	834
	4 PM - 5 PM	870	910	873	970	1,070	750	870	904	895	944	998	1,013	768	935	911	887	910	993	1,012	678	857
	5 PM - 6 PM	877	919	951	1,040	1,022	672	870	906	933	977	1,006	954	705	850	883	866	930	975	1,027	666	898
	6 PM - 7 PM	650	714	708	757	778	576	734	683	688	720	754	781	588	754	668	655	718	746	828	569	785
	7 PM - 8 PM	511	514	529	592	600	506	609	499	500	529	570	609	506	653	469	487	496	573	625	461	646
	8 PM - 9 PM	434	431	429	498	519	440	520	410	439	434	453	476	463	546	410	402	427	499	478	405	553
	9 PM - 10 PM	366	383	370	429	435	381	433	333	376	388	413	432	387	430	323	351	375	419	414	393	405
	10 PM - 11 PM	291	311	321	361	367	312	331	296	300	318	373	377	340	317	257	268	291	334	355	346	289
	11 PM - Midnight	246	263	256	296	302	263	243	243	248	241	278	346	259	241	200	188	227	266	271	275	203

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	313	361	375	403	439	444	389	332	350	358	376	397	512	368	315	325	333	353	404	452	380
	1 AM - 2 AM	233	261	268	298	321	295	242	257	264	260	293	288	312	303	210	252	248	280	296	334	240
	2 AM - 3 AM	171	205	206	227	244	222	168	190	225	211	220	253	210	182	159	203	201	241	248	224	173
	3 AM - 4 AM	180	177	205	230	264	197	129	168	198	214	242	250	214	136	154	190	210	224	239	185	131
	4 AM - 5 AM	218	225	254	274	276	214	132	196	257	254	294	260	216	133	188	231	234	262	276	209	121
	5 AM - 6 AM	372	382	407	437	457	290	174	344	394	405	409	427	272	175	365	395	404	438	437	279	151
	6 AM - 7 AM	719	752	791	782	800	425	260	741	779	795	789	791	387	245	771	777	811	843	847	405	237
	7 AM - 8 AM	1,167	1,196	1,283	1,257	1,158	566	382	1,201	1,253	1,285	1,302	1,184	569	394	1,288	1,335	1,356	1,401	1,292	589	394
	8 AM - 9 AM	1,225	1,290	1,331	1,361	1,265	780	539	1,208	1,407	1,399	1,399	1,325	780	556	1,284	1,355	1,414	1,462	1,308	869	554
	9 AM - 10 AM	1,110	1,170	1,188	1,306	1,245	992	830	1,138	1,222	1,192	1,242	1,214	1,041	839	1,136	1,154	1,183	1,285	1,232	998	843
	10 AM - 11 AM	1,160	1,174	1,200	1,271	1,370	1,213	1,122	1,169	1,204	1,189	1,311	1,296	1,271	1,173	1,172	1,125	1,149	1,278	1,298	1,224	1,168
	11 AM - 12 PM	1,266	1,269	1,304	1,353	1,496	1,542	1,469	1,294	1,236	1,247	1,359	1,490	1,491	1,606	1,194	1,215	1,158	1,328	1,437	1,394	1,515
	12 PM - 1 PM	1,382	1,373	1,380	1,498	1,612	1,539	1,701	1,373	1,293	1,334	1,415	1,451	1,584	1,777	1,295	1,260	1,258	1,386	1,552	1,495	1,719
	1 PM - 2 PM	1,424	1,423	1,400	1,532	1,695	1,599	1,782	1,474	1,365	1,391	1,543	1,628	1,621	1,926	1,360	1,266	1,308	1,467	1,589	1,436	1,727
	2 PM - 3 PM	1,539	1,502	1,557	1,677	1,788	1,580	1,910	1,534	1,430	1,457	1,668	1,740	1,563	1,950	1,440	1,425	1,400	1,586	1,681	1,504	1,771
	3 PM - 4 PM	1,601	1,646	1,581	1,716	1,919	1,610	1,760	1,639	1,570	1,651	1,784	1,817	1,592	2,029	1,617	1,567	1,578	1,738	1,832	1,379	1,668
	4 PM - 5 PM	1,739	1,821	1,746	1,939	2,141	1,500	1,739	1,809	1,791	1,889	1,996	2,026	1,537	1,870	1,823	1,775	1,820	1,986	2,023	1,356	1,714
	5 PM - 6 PM	1,755	1,839	1,901	2,080	2,043	1,344	1,741	1,811	1,866	1,953	2,011	1,909	1,611	1,699	1,766	1,732	1,860	1,950	2,053	1,332	1,797
	6 PM - 7 PM	1,300	1,428	1,416	1,513	1,556	1,151	1,468	1,366	1,376	1,441	1,509	1,562	1,176	1,507	1,337	1,310	1,436	1,491	1,655	1,138	1,571
	7 PM - 8 PM	1,022	1,027	1,057	1,183	1,201	1,013	1,219	998	1,000	1,058	1,139	1,218	1,011	1,305	939	974	991	1,146	1,250	921	1,292
	8 PM - 9 PM	868	862	858	996	1,037	879	1,040	821	877	868	906	951	926	1,092	820	804	853	997	957	809	1,107
	9 PM - 10 PM	732	766	740	858	871	762	865	666	751	776	826	864	774	861	645	701	750	837	827	786	810
	10 PM - 11 PM	582	623	642	723	735	624	662	592	599	635	746	755	680	635	514	537	582	668	710	691	577
	11 PM - Midnight	491	525	511	592	604	526	486	486	496	481	556	692	517	482	400	376	454	531	542	550	406

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

173 Cleveland

TO

180 Akron

Route	I-80
Direction	EB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	163	179	168	173	223	204	189	126	145	156	172	171	173	149	112	155	165	158	163	162	114
	1 AM - 2 AM	107	132	122	131	168	157	148	101	122	123	115	139	128	122	78	121	124	113	137	118	82
	2 AM - 3 AM	77	110	97	108	128	109	104	73	98	104	105	119	98	67	66	97	100	106	109	95	65
	3 AM - 4 AM	73	104	100	112	125	94	75	69	97	109	107	110	93	55	63	98	104	107	108	82	53
	4 AM - 5 AM	91	118	127	123	135	101	66	92	114	120	134	138	100	61	90	131	125	133	132	89	55
	5 AM - 6 AM	181	205	219	217	214	125	76	190	206	219	223	214	138	73	162	195	212	212	212	117	69
	6 AM - 7 AM	382	414	407	435	399	168	110	384	423	428	416	416	181	117	330	392	380	396	381	162	109
	7 AM - 8 AM	636	694	695	688	620	256	168	649	679	675	684	643	273	176	551	599	604	634	588	224	144
	8 AM - 9 AM	641	723	732	709	634	366	248	650	671	697	704	633	378	261	546	589	630	639	565	305	217
	9 AM - 10 AM	570	618	612	609	623	497	374	558	556	571	622	569	482	419	484	522	542	554	531	406	335
	10 AM - 11 AM	592	567	591	620	638	576	558	546	516	578	575	603	587	538	463	521	552	538	541	498	476
	11 AM - 12 PM	636	604	592	642	700	680	718	573	552	584	628	641	669	679	507	564	571	565	584	583	626
	12 PM - 1 PM	659	616	625	701	748	704	842	605	572	601	661	680	699	765	533	602	601	598	629	598	680
	1 PM - 2 PM	651	633	658	720	760	714	864	621	610	619	678	719	702	784	536	617	629	615	633	605	724
	2 PM - 3 PM	746	693	713	792	828	723	857	685	660	689	756	802	690	781	592	675	682	688	703	602	727
	3 PM - 4 PM	841	785	786	881	908	692	868	790	747	752	829	853	688	787	671	767	750	760	784	606	710
	4 PM - 5 PM	886	909	930	959	999	645	833	865	842	879	905	933	668	767	752	858	827	859	861	585	664
	5 PM - 6 PM	876	894	961	991	981	607	797	840	857	886	939	949	627	754	748	845	816	857	830	533	630
	6 PM - 7 PM	621	672	692	773	790	535	733	607	625	663	686	737	534	634	542	622	611	655	659	462	564
	7 PM - 8 PM	454	478	501	556	558	458	617	434	448	464	503	533	441	489	405	454	445	499	473	378	458
	8 PM - 9 PM	386	386	429	469	483	386	549	365	363	361	432	446	356	401	337	388	375	406	393	310	376
	9 PM - 10 PM	330	319	356	393	405	356	410	320	282	319	361	378	302	304	324	319	358	342	345	277	285
	10 PM - 11 PM	259	270	288	341	340	307	288	276	242	312	302	366	276	222	253	242	294	274	282	224	208
	11 PM - Midnight	209	204	224	271	278	225	224	198	198	243	228	249	209	164	190	196	223	230	230	178	147

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	325	357	336	347	447	408	378	251	291	312	344	341	345	298	223	309	329	315	327	324	228
	1 AM - 2 AM	215	265	244	262	335	313	295	201	245	245	229	277	255	244	155	242	248	226	274	235	165
	2 AM - 3 AM	153	219	194	217	256	218	208	146	197	208	209	238	196	134	132	194	201	212	217	190	131
	3 AM - 4 AM	146	208	200	225	251	188	149	138	194	218	215	219	186	109	126	197	208	214	215	165	107
	4 AM - 5 AM	182	237	254	246	270	201	132	183	229	240	267	276	201	121	180	262	251	265	264	179	111
	5 AM - 6 AM	363	411	439	435	428	250	151	381	412	437	446	428	277	146	324	389	423	424	423	234	138
	6 AM - 7 AM	764	829	815	870	799	336	220	768	845	855	831	833	363	234	660	783	759	791	762	323	219
	7 AM - 8 AM	1,272	1,387	1,389	1,377	1,240	511	336	1,298	1,357	1,350	1,368	1,285	546	351	1,101	1,198	1,208	1,268	1,175	448	288
	8 AM - 9 AM	1,282	1,447	1,464	1,418	1,269	732	496	1,300	1,343	1,393	1,407	1,266	755	522	1,092	1,177	1,260	1,277	1,130	611	434
	9 AM - 10 AM	1,141	1,237	1,224	1,218	1,246	994	747	1,117	1,111	1,142	1,243	1,138	964	837	968	1,045	1,084	1,108	1,061	812	671
	10 AM - 11 AM	1,184	1,133	1,183	1,239	1,276	1,152	1,115	1,092	1,032	1,157	1,150	1,205	1,175	1,077	926	1,043	1,105	1,076	1,081	996	953
	11 AM - 12 PM	1,272	1,207	1,184	1,284	1,399	1,360	1,437	1,146	1,104	1,167	1,256	1,282	1,337	1,358	1,014	1,128	1,142	1,130	1,168	1,167	1,253
	12 PM - 1 PM	1,318	1,233	1,250	1,401	1,495	1,409	1,683	1,211	1,145	1,201	1,321	1,359	1,397	1,529	1,065	1,205	1,203	1,195	1,258	1,196	1,360
	1 PM - 2 PM	1,301	1,266	1,317	1,441	1,519	1,427	1,729	1,242	1,219	1,237	1,355	1,438	1,405	1,567	1,072	1,234	1,259	1,229	1,266	1,209	1,447
	2 PM - 3 PM	1,492	1,385	1,426	1,585	1,655	1,446	1,714	1,370	1,320	1,378	1,511	1,603	1,380	1,562	1,184	1,350	1,365	1,376	1,406	1,204	1,454
	3 PM - 4 PM	1,682	1,571	1,572	1,762	1,817	1,385	1,735	1,581	1,494	1,503	1,658	1,707	1,376	1,573	1,342	1,533	1,499	1,520	1,569	1,212	1,420
	4 PM - 5 PM	1,773	1,818	1,859	1,917	1,998	1,291	1,666	1,729	1,684	1,758	1,810	1,865	1,336	1,533	1,504	1,716	1,655	1,717	1,722	1,170	1,327
	5 PM - 6 PM	1,751	1,787	1,922	1,982	1,962	1,213	1,593	1,680	1,713	1,771	1,878	1,898	1,253	1,507	1,496	1,691	1,632	1,714	1,659	1,065	1,260
	6 PM - 7 PM	1,241	1,343	1,383	1,545	1,579	1,070	1,467	1,213	1,251	1,325	1,371	1,473	1,069	1,268	1,084	1,243	1,223	1,309	1,317	924	1,128
	7 PM - 8 PM	908	955	1,002	1,111	1,116	917	1,233	869	895	928	1,005	1,067	882	977	809	908	890	997	945	756	917
	8 PM - 9 PM	772	773	858	939	967	772	1,098	730	727	721	863	892	712	801	674	775	750	812	785	620	752
	9 PM - 10 PM	659	638	713	786	811	713	821	640	564	637	723	756	604	608	649	639	715	684	690	554	570
	10 PM - 11 PM	519	540	576	682	679	614	575	552	485	624	604	732	552	444	507	485	588	548	564	448	416
	11 PM - Midnight	418	408	447	542	555	450	448	397	396	486	456	499	417	328	381	392	446	459	459	356	294

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

180 Akron

TO

173 Cleveland

Route	I-80
Direction	WB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	80	143	158	161	153	141	90	98	165	168	162	129	143	107	119	177	175	177	172	148	104
	1 AM - 2 AM	61	115	123	130	122	102	61	72	136	136	123	96	109	67	85	147	134	135	134	114	72
	2 AM - 3 AM	50	112	101	108	110	88	45	65	122	118	107	95	79	47	64	116	118	117	115	88	57
	3 AM - 4 AM	60	110	112	115	115	92	46	65	111	117	105	105	83	53	71	120	118	120	114	92	57
	4 AM - 5 AM	77	117	128	134	140	98	51	94	143	143	128	111	99	60	116	145	142	143	153	105	65
	5 AM - 6 AM	143	211	212	217	206	118	56	171	232	227	201	176	127	63	185	241	230	235	224	126	68
	6 AM - 7 AM	267	358	393	378	356	142	72	346	426	412	352	304	153	90	352	434	425	433	394	168	85
	7 AM - 8 AM	392	529	551	556	532	176	91	537	633	612	530	461	223	104	553	641	643	642	586	220	117
	8 AM - 9 AM	384	553	570	582	546	248	126	542	632	625	520	482	280	159	537	654	630	644	585	297	159
	9 AM - 10 AM	330	466	475	478	453	306	181	428	535	526	460	454	352	224	441	539	545	553	530	342	219
	10 AM - 11 AM	316	450	441	444	456	390	255	421	482	464	435	456	451	334	411	489	494	521	527	472	334
	11 AM - 12 PM	335	457	433	454	467	475	324	427	490	471	427	477	532	421	436	509	512	549	569	539	457
	12 PM - 1 PM	357	486	462	494	508	499	395	446	505	488	444	528	562	476	455	521	529	582	622	605	546
	1 PM - 2 PM	388	508	472	505	542	524	439	467	510	486	449	553	571	523	487	549	558	594	659	617	596
	2 PM - 3 PM	434	566	525	557	577	524	482	508	561	534	492	589	555	545	528	598	596	651	733	599	632
	3 PM - 4 PM	512	651	634	665	689	547	494	631	646	642	576	680	585	562	640	686	709	759	868	594	653
	4 PM - 5 PM	628	749	727	788	781	517	495	733	787	769	676	759	563	580	758	812	854	917	947	589	687
	5 PM - 6 PM	659	814	790	802	822	481	459	835	865	823	702	809	518	576	848	869	935	945	996	538	678
	6 PM - 7 PM	481	547	563	580	611	415	434	557	592	536	488	612	444	503	600	634	646	686	736	464	628
	7 PM - 8 PM	364	400	399	423	435	314	335	420	436	410	347	442	337	398	427	458	463	517	515	369	535
	8 PM - 9 PM	303	337	338	343	329	251	275	358	353	318	292	345	272	324	379	378	388	400	423	302	412
	9 PM - 10 PM	249	285	275	274	291	211	209	290	303	280	233	280	239	248	308	300	319	345	328	252	323
	10 PM - 11 PM	212	232	245	228	213	168	149	255	254	220	195	225	187	187	262	268	274	278	281	203	229
	11 PM - Midnight	179	187	191	191	175	130	108	203	189	195	141	179	146	143	212	217	212	219	210	153	165

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	160	287	317	321	307	282	180	196	330	335	323	258	287	215	238	353	349	354	344	296	209
	1 AM - 2 AM	121	229	245	259	244	204	121	145	272	272	247	192	217	134	171	293	268	270	268	229	144
	2 AM - 3 AM	100	225	201	215	219	175	91	130	243	235	214	190	158	94	129	233	236	234	231	176	114
	3 AM - 4 AM	119	219	225	230	230	184	91	130	222	235	210	210	167	105	143	240	235	239	228	184	114
	4 AM - 5 AM	153	234	256	267	281	197	103	188	287	286	256	222	198	119	231	290	285	286	306	210	129
	5 AM - 6 AM	285	422	424	433	413	237	113	343	463	455	401	351	253	126	370	482	459	471	447	252	136
	6 AM - 7 AM	534	715	785	757	712	285	144	692	853	825	703	607	306	180	704	867	851	866	789	337	170
	7 AM - 8 AM	785	1,059	1,102	1,112	1,065	353	183	1,074	1,267	1,224	1,060	923	445	208	1,106	1,282	1,286	1,283	1,171	441	235
	8 AM - 9 AM	767	1,106	1,140	1,164	1,093	497	251	1,085	1,265	1,251	1,040	963	559	317	1,073	1,307	1,261	1,289	1,171	594	319
	9 AM - 10 AM	661	932	949	957	905	612	362	856	1,070	1,051	920	908	703	449	882	1,077	1,089	1,106	1,059	684	439
	10 AM - 11 AM	633	899	882	887	912	780	510	842	965	929	869	912	902	668	822	977	988	1,041	1,055	945	668
	11 AM - 12 PM	669	915	865	907	935	950	648	854	979	942	854	954	1,064	841	873	1,018	1,025	1,097	1,137	1,078	915
	12 PM - 1 PM	713	973	924	988	1,016	998	791	893	1,010	975	888	1,056	1,124	952	911	1,043	1,058	1,164	1,245	1,210	1,093
	1 PM - 2 PM	777	1,016	944	1,010	1,085	1,047	877	934	1,019	972	899	1,106	1,142	1,046	975	1,098	1,115	1,189	1,319	1,233	1,193
	2 PM - 3 PM	867	1,132	1,049	1,115	1,153	1,047	965	1,017	1,121	1,068	984	1,178	1,110	1,089	1,056	1,196	1,191	1,301	1,466	1,199	1,264
	3 PM - 4 PM	1,024	1,301	1,269	1,330	1,377	1,093	987	1,262	1,292	1,283	1,151	1,360	1,169	1,123	1,281	1,372	1,418	1,517	1,735	1,187	1,306
	4 PM - 5 PM	1,256	1,498	1,454	1,576	1,562	1,033	990	1,465	1,573	1,538	1,352	1,517	1,126	1,161	1,516	1,623	1,708	1,834	1,895	1,178	1,375
	5 PM - 6 PM	1,318	1,628	1,580	1,603	1,645	962	917	1,671	1,730	1,646	1,404	1,618	1,035	1,152	1,696	1,739	1,870	1,890	1,993	1,076	1,356
	6 PM - 7 PM	963	1,093	1,127	1,160	1,222	830	869	1,113	1,184	1,072	976	1,225	888	1,006	1,200	1,268	1,292	1,372	1,471	928	1,256
	7 PM - 8 PM	727	801	798	846	869	628	671	839	871	820	695	884	674	797	854	916	927	1,033	1,031	739	1,071
	8 PM - 9 PM	606	673	675	687	657	503	549	715	706	636	584	691	544	647	757	756	776	799	846	603	824
	9 PM - 10 PM	497	569	551	548	582	423	419	580	606	561	466	561	478	497	617	601	638	690	656	504	646
	10 PM - 11 PM	423	465	489	456	426	335	299	510	508	440	390	450	374	374	523	536	549	557	562	405	457
	11 PM - Midnight	357	374	382	381	349	259	217	406	378	390	282	358	293	285	423	434	425	437	420	306	330

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

180 Akron

TO

173 Cleveland

Route	I-80
Direction	WB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

1. Refer to SP 104 for lane closure restrictions.
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Revision Date: 9/1/2022

Close 1 Lane	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	119	192	190	192	193	178	131	124	175	176	191	202	193	136	138	198	206	210	239	227	161
	1 AM - 2 AM	85	147	149	145	148	132	78	88	142	143	150	165	136	85	100	158	157	165	178	169	102
	2 AM - 3 AM	61	128	123	128	134	103	68	71	115	132	124	133	108	66	75	129	134	146	149	133	79
	3 AM - 4 AM	96	130	122	123	133	106	58	83	110	124	130	144	101	66	82	131	135	148	142	115	67
	4 AM - 5 AM	108	168	156	156	156	116	68	119	139	165	159	165	126	76	117	157	168	170	167	133	80
	5 AM - 6 AM	187	234	241	236	223	150	69	199	218	242	237	227	146	78	197	251	254	256	241	158	78
	6 AM - 7 AM	386	449	445	439	409	196	100	396	401	473	477	451	200	98	371	444	466	457	438	213	117
	7 AM - 8 AM	624	706	698	676	594	263	136	619	633	740	710	613	281	142	597	705	720	689	625	295	154
	8 AM - 9 AM	621	703	694	731	605	342	188	626	646	726	728	666	383	207	618	727	725	732	674	410	255
	9 AM - 10 AM	460	562	572	579	536	449	279	521	551	593	637	628	492	312	545	643	651	642	652	553	367
	10 AM - 11 AM	439	530	531	565	550	551	395	484	521	566	577	628	596	433	509	579	584	617	667	616	495
	11 AM - 12 PM	471	538	530	586	625	610	511	490	534	587	596	671	653	539	567	619	602	685	751	718	631
	12 PM - 1 PM	494	560	553	613	685	679	616	545	599	615	668	741	710	676	588	647	660	719	810	776	717
	1 PM - 2 PM	511	565	587	648	740	683	702	575	653	624	694	791	725	707	637	650	677	755	848	819	797
	2 PM - 3 PM	558	630	632	709	805	685	733	633	707	694	748	847	733	746	684	712	743	819	901	815	852
	3 PM - 4 PM	730	746	759	841	929	707	750	761	804	835	891	1,024	734	771	809	804	869	930	1,030	809	849
	4 PM - 5 PM	853	887	915	958	1,022	707	804	891	924	989	1,019	1,153	669	783	912	945	974	1,040	1,109	803	865
	5 PM - 6 PM	880	966	952	1,034	1,024	638	775	928	969	1,033	1,051	1,110	609	759	969	1,015	1,023	1,147	1,108	716	830
	6 PM - 7 PM	615	663	680	735	766	563	685	654	708	734	743	852	572	678	711	705	743	812	869	629	744
	7 PM - 8 PM	455	490	514	540	585	444	581	493	535	512	558	645	468	589	512	516	530	624	663	530	641
	8 PM - 9 PM	376	400	394	450	458	370	465	419	439	422	461	525	363	481	427	431	443	508	550	450	526
	9 PM - 10 PM	307	332	338	380	382	299	359	331	346	326	390	405	311	382	347	344	350	425	476	369	405
	10 PM - 11 PM	250	272	271	305	310	260	275	276	280	272	311	326	257	256	278	286	297	325	356	295	312
	11 PM - Midnight	201	222	230	247	222	180	177	222	225	236	257	265	187	191	235	239	264	302	292	228	222

Close 2 Lanes	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	238	384	381	384	386	356	262	248	350	353	383	404	387	271	275	396	412	421	478	454	322
	1 AM - 2 AM	169	295	297	289	296	263	156	175	284	285	300	329	271	170	199	317	314	330	357	337	203
	2 AM - 3 AM	121	257	246	256	268	207	136	141	231	263	249	265	216	132	151	258	267	293	298	267	159
	3 AM - 4 AM	192	259	245	247	265	212	115	166	219	248	259	289	202	133	165	262	269	295	285	230	133
	4 AM - 5 AM	216	335	312	311	311	232	135	238	278	331	317	329	251	151	234	314	336	339	334	266	161
	5 AM - 6 AM	374	467	482	471	446	300	137	397	436	484	473	454	292	156	394	502	508	512	483	316	157
	6 AM - 7 AM	772	898	891	879	817	391	201	792	802	947	955	901	400	197	741	887	933	915	877	426	234
	7 AM - 8 AM	1,247	1,413	1,395	1,352	1,187	527	272	1,239	1,266	1,479	1,420	1,227	562	283	1,193	1,410	1,440	1,378	1,249	589	309
	8 AM - 9 AM	1,241	1,406	1,388	1,462	1,210	683	375	1,252	1,292	1,452	1,457	1,332	766	415	1,235	1,455	1,450	1,464	1,349	819	510
	9 AM - 10 AM	920	1,123	1,144	1,158	1,071	897	558	1,041	1,102	1,186	1,274	1,255	984	623	1,089	1,285	1,303	1,283	1,304	1,105	734
	10 AM - 11 AM	878	1,061	1,061	1,130	1,099	1,101	790	969	1,041	1,131	1,153	1,255	1,192	865	1,017	1,159	1,168	1,234	1,334	1,231	989
	11 AM - 12 PM	942	1,075	1,060	1,172	1,250	1,219	1,022	980	1,067	1,175	1,192	1,341	1,307	1,079	1,134	1,237	1,204	1,370	1,502	1,436	1,263
	12 PM - 1 PM	989	1,120	1,106	1,226	1,370	1,359	1,231	1,091	1,197	1,230	1,335	1,481	1,420	1,351	1,176	1,293	1,319	1,438	1,621	1,551	1,433
	1 PM - 2 PM	1,022	1,129	1,174	1,295	1,480	1,367	1,404	1,150	1,306	1,249	1,387	1,581	1,450	1,414	1,273	1,299	1,353	1,510	1,696	1,637	1,594
	2 PM - 3 PM	1,117	1,260	1,263	1,418	1,609	1,371	1,465	1,267	1,413	1,388	1,496	1,693	1,466	1,492	1,368	1,425	1,486	1,638	1,801	1,629	1,705
	3 PM - 4 PM	1,460	1,491	1,517	1,682	1,858	1,414	1,499	1,521	1,608	1,670	1,782	2,048	1,468	1,542	1,619	1,607	1,738	1,860	2,060	1,617	1,699
	4 PM - 5 PM	1,706	1,775	1,830	1,917	2,044	1,414	1,609	1,783	1,848	1,978	2,038	2,307	1,337	1,567	1,823	1,890	1,948	2,079	2,219	1,605	1,730
	5 PM - 6 PM	1,759	1,931	1,904	2,068	2,047	1,276	1,549	1,856	1,938	2,067	2,101	2,219	1,218	1,519	1,937	2,031	2,046	2,294	2,217	1,433	1,659
	6 PM - 7 PM	1,231	1,327	1,360	1,471	1,532	1,125	1,369	1,309	1,417	1,468	1,486	1,703	1,144	1,357	1,423	1,410	1,486	1,624	1,738	1,258	1,488
	7 PM - 8 PM	910	980	1,029	1,079	1,170	888	1,162	986	1,070	1,024	1,117	1,291	935	1,177	1,024	1,032	1,061	1,247	1,326	1,060	1,281
	8 PM - 9 PM	752	800	789	901	916	740	930	837	878	844	922	1,050	726	963	855	863	886	1,016	1,101	901	1,052
	9 PM - 10 PM	614	664	675	760	764	598	718	662	692	652	781	809	622	763	695	688	700	849	951	738	811
	10 PM - 11 PM	499	543	541	609	620	520	550	551	560	544	621	651	513	512	556	573	594	650	711	590	623
	11 PM - Midnight	403	443	461	495	443	360	353	443	449	471	514	529	375	382	469	477	527	604	585	456	444

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

180 Akron

TO

173 Cleveland

Route	I-80
Direction	WB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	136	167	210	219	234	228	168	158	207	212	212	217	226	148	135	195	195	212	203	226	148
	1 AM - 2 AM	104	134	156	170	167	158	102	112	161	167	159	161	157	98	92	143	154	160	147	151	92
	2 AM - 3 AM	75	109	140	144	142	120	72	89	137	128	142	132	118	72	80	108	132	129	128	124	67
	3 AM - 4 AM	83	117	123	131	138	112	71	87	140	124	142	127	108	64	79	111	115	128	130	112	63
	4 AM - 5 AM	113	138	166	157	164	126	72	110	157	160	165	156	126	72	113	144	151	152	166	129	62
	5 AM - 6 AM	199	216	247	255	232	159	84	188	238	226	237	239	144	78	196	236	233	246	246	134	81
	6 AM - 7 AM	371	404	426	427	399	215	111	360	438	430	430	409	194	96	409	451	451	475	431	192	109
	7 AM - 8 AM	567	640	665	665	607	275	148	582	699	688	680	605	255	136	593	642	659	675	638	279	152
	8 AM - 9 AM	593	680	715	736	638	387	231	587	751	721	724	646	375	219	610	663	694	713	640	397	235
	9 AM - 10 AM	519	599	635	642	629	524	351	512	650	621	643	630	510	344	500	568	605	627	603	550	361
	10 AM - 11 AM	536	545	588	629	670	620	463	506	607	596	624	652	635	459	484	526	552	588	600	663	484
	11 AM - 12 PM	564	601	615	681	732	719	612	557	630	643	680	723	728	650	524	553	566	607	695	766	590
	12 PM - 1 PM	612	646	648	741	810	803	716	609	639	657	729	792	823	746	572	577	573	644	736	791	683
	1 PM - 2 PM	642	657	706	785	842	812	817	647	672	693	774	885	839	792	582	611	624	687	816	794	667
	2 PM - 3 PM	675	709	739	841	920	825	848	715	726	739	825	939	832	839	655	668	690	751	909	778	719
	3 PM - 4 PM	786	813	873	973	1,016	842	880	812	832	885	965	1,095	813	836	757	761	807	895	1,044	816	771
	4 PM - 5 PM	926	956	981	1,049	1,106	796	905	929	959	1,040	1,078	1,144	849	866	879	903	969	1,052	1,204	753	766
	5 PM - 6 PM	945	1,001	1,037	1,138	1,094	734	872	981	1,041	1,079	1,126	1,149	793	867	943	992	1,001	1,143	1,253	704	744
	6 PM - 7 PM	700	709	760	811	857	658	768	725	719	772	834	915	667	798	673	704	712	828	1,035	614	697
	7 PM - 8 PM	531	534	556	617	683	530	659	526	541	573	642	693	571	677	509	515	518	591	731	481	614
	8 PM - 9 PM	455	433	443	513	535	457	549	434	438	479	534	504	458	535	399	434	418	506	517	411	548
	9 PM - 10 PM	358	370	363	448	458	373	419	341	349	395	433	427	385	405	337	341	341	413	437	350	433
	10 PM - 11 PM	299	307	307	339	363	309	311	286	293	308	331	367	302	306	284	283	281	343	382	282	297
	11 PM - Midnight	241	262	254	299	312	234	223	237	250	259	270	280	220	219	253	229	244	267	292	221	209

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	271	335	419	439	467	455	335	316	414	423	423	434	452	296	269	391	389	424	405	452	296
	1 AM - 2 AM	207	268	312	339	334	316	205	224	322	333	317	321	313	197	184	285	307	320	293	302	184
	2 AM - 3 AM	150	218	279	288	284	240	145	178	274	257	284	263	236	143	159	216	264	258	255	247	133
	3 AM - 4 AM	165	234	246	262	276	223	143	174	280	248	283	253	215	129	158	223	231	255	260	225	126
	4 AM - 5 AM	226	277	331	314	327	251	144	220	314	320	330	312	252	144	227	288	302	304	333	259	124
	5 AM - 6 AM	398	432	494	511	463	318	168	376	476	453	475	478	289	155	391	472	467	492	492	268	162
	6 AM - 7 AM	741	809	851	854	799	429	222	719	876	861	860	817	388	193	817	902	901	949	862	383	218
	7 AM - 8 AM	1,134	1,280	1,329	1,330	1,215	551	296	1,164	1,398	1,376	1,360	1,210	511	272	1,185	1,284	1,318	1,350	1,276	557	304
	8 AM - 9 AM	1,186	1,359	1,431	1,473	1,277	773	462	1,173	1,503	1,441	1,448	1,291	751	438	1,219	1,327	1,389	1,426	1,280	794	470
	9 AM - 10 AM	1,037	1,198	1,270	1,284	1,258	1,049	703	1,024	1,300	1,242	1,285	1,261	1,020	687	999	1,137	1,209	1,254	1,206	1,099	721
	10 AM - 11 AM	1,072	1,090	1,175	1,257	1,339	1,239	926	1,013	1,213	1,193	1,249	1,305	1,271	917	967	1,052	1,104	1,176	1,200	1,325	968
	11 AM - 12 PM	1,128	1,201	1,230	1,363	1,463	1,438	1,224	1,113	1,259	1,287	1,359	1,445	1,455	1,300	1,049	1,105	1,132	1,213	1,390	1,533	1,179
	12 PM - 1 PM	1,223	1,292	1,297	1,482	1,620	1,606	1,433	1,219	1,277	1,315	1,459	1,584	1,646	1,493	1,144	1,154	1,146	1,288	1,471	1,582	1,365
	1 PM - 2 PM	1,283	1,315	1,412	1,570	1,684	1,624	1,635	1,294	1,344	1,385	1,548	1,770	1,678	1,584	1,164	1,223	1,248	1,374	1,632	1,587	1,334
	2 PM - 3 PM	1,350	1,418	1,478	1,681	1,840	1,650	1,696	1,430	1,453	1,478	1,649	1,879	1,664	1,678	1,309	1,335	1,379	1,502	1,817	1,557	1,438
	3 PM - 4 PM	1,573	1,625	1,747	1,945	2,031	1,683	1,760	1,624	1,664	1,769	1,930	2,190	1,626	1,672	1,514	1,523	1,615	1,790	2,087	1,632	1,541
	4 PM - 5 PM	1,851	1,913	1,962	2,098	2,212	1,593	1,810	1,858	1,919	2,080	2,156	2,287	1,698	1,732	1,758	1,806	1,938	2,104	2,408	1,505	1,532
	5 PM - 6 PM	1,889	2,002	2,074	2,277	2,187	1,468	1,743	1,962	2,082	2,158	2,252	2,299	1,698	1,735	1,885	1,983	2,002	2,286	2,507	1,407	1,488
	6 PM - 7 PM	1,399	1,418	1,519	1,623	1,713	1,315	1,536	1,450	1,439	1,544	1,669	1,831	1,335	1,596	1,346	1,409	1,424	1,656	2,070	1,227	1,393
	7 PM - 8 PM	1,062	1,069	1,111	1,235	1,367	1,059	1,318	1,053	1,082	1,147	1,285	1,385	1,142	1,353	1,019	1,030	1,036	1,182	1,462	962	1,229
	8 PM - 9 PM	911	865	885	1,026	1,069	914	1,098	868	877	957	1,067	1,009	916	1,069	799	869	837	1,013	1,034	822	1,096
	9 PM - 10 PM	716	741	725	896	915	746	838	683	697	791	867	853	769	810	675	682	682	827	873	700	866
	10 PM - 11 PM	599	614	614	677	726	618	622	573	586	616	662	734	604	611	568	565	563	686	765	563	594
	11 PM - Midnight	482	524	509	598	624	468	447	474	500	519	540	560	441	439	505	459	488	535	584	443	418

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

180 Akron

TO

173 Cleveland

Route	I-80
Direction	WB

Terrain	Rolling
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	124	191	183	185	208	210	145	114	178	176	175	181	181	116	104	182	175	170	167	163	102
	1 AM - 2 AM	92	156	148	150	152	144	100	79	145	148	142	148	131	105	77	138	155	137	139	124	75
	2 AM - 3 AM	76	129	140	135	140	113	76	64	127	121	125	124	107	56	63	124	114	115	117	100	48
	3 AM - 4 AM	81	128	134	134	134	105	60	78	130	124	133	123	104	55	69	126	122	124	128	110	54
	4 AM - 5 AM	117	159	155	163	167	124	65	114	163	156	164	162	123	60	104	155	153	149	154	103	65
	5 AM - 6 AM	184	249	235	243	228	138	78	191	245	253	253	230	140	73	171	239	238	243	225	135	75
	6 AM - 7 AM	387	451	463	450	426	185	102	389	461	449	472	432	195	104	345	431	442	440	413	174	95
	7 AM - 8 AM	570	680	665	668	605	252	133	602	684	681	657	615	267	133	523	606	603	619	577	230	111
	8 AM - 9 AM	588	714	674	691	643	371	222	606	690	710	690	643	352	190	504	649	626	660	596	300	167
	9 AM - 10 AM	488	616	618	616	612	510	335	506	600	599	598	582	453	295	428	554	561	568	531	382	244
	10 AM - 11 AM	470	544	561	550	614	626	466	474	543	543	567	562	539	405	416	517	536	531	535	458	361
	11 AM - 12 PM	522	578	559	611	675	684	577	490	574	548	567	651	632	507	455	536	543	542	585	585	472
	12 PM - 1 PM	570	597	589	659	748	727	681	542	599	567	623	710	701	611	469	572	576	598	630	606	579
	1 PM - 2 PM	598	622	612	692	815	727	710	562	630	599	647	728	670	622	500	591	619	634	651	648	621
	2 PM - 3 PM	636	664	667	775	887	721	739	604	676	636	719	821	716	598	557	659	651	656	723	652	655
	3 PM - 4 PM	773	792	821	939	1,006	733	792	720	763	771	858	965	698	684	678	747	772	759	848	665	682
	4 PM - 5 PM	880	896	954	1,097	1,099	699	782	870	866	919	1,023	1,050	703	729	787	888	894	865	881	662	690
	5 PM - 6 PM	996	1,014	1,049	1,217	1,137	662	754	927	952	995	1,055	1,105	625	692	813	883	921	862	918	621	652
	6 PM - 7 PM	686	705	738	855	892	596	670	647	665	680	734	859	551	585	551	646	668	615	705	515	546
	7 PM - 8 PM	506	504	518	580	630	476	578	449	474	492	522	603	409	520	405	463	491	450	495	396	475
	8 PM - 9 PM	422	419	417	493	488	408	465	369	367	395	439	468	342	438	337	376	406	385	405	300	382
	9 PM - 10 PM	328	338	341	394	392	345	371	307	309	318	373	380	294	352	298	325	330	336	346	254	298
	10 PM - 11 PM	271	267	281	322	337	276	253	256	264	247	287	327	250	250	256	277	279	273	281	217	210
	11 PM - Midnight	231	231	236	264	272	217	181	210	217	218	234	244	179	160	203	226	223	223	240	161	153

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	249	383	365	371	416	420	291	228	355	352	349	363	363	231	208	363	350	340	334	326	205
	1 AM - 2 AM	185	312	296	301	305	287	200	158	291	296	284	295	263	209	153	276	310	274	277	248	151
	2 AM - 3 AM	151	258	280	269	279	225	153	129	255	241	249	248	215	112	125	248	228	229	233	199	96
	3 AM - 4 AM	161	256	269	267	267	211	120	157	260	247	266	245	208	111	138	251	243	249	257	220	109
	4 AM - 5 AM	234	317	310	326	335	247	129	229	326	312	329	324	246	121	208	311	306	298	307	206	129
	5 AM - 6 AM	368	498	471	486	455	276	156	382	491	505	506	460	280	147	341	477	476	485	449	271	149
	6 AM - 7 AM	774	902	926	900	852	369	204	778	923	898	943	864	390	208	690	862	884	879	827	348	189
	7 AM - 8 AM	1,140	1,360	1,330	1,335	1,209	504	266	1,203	1,368	1,363	1,313	1,231	535	265	1,045	1,212	1,207	1,238	1,153	460	221
	8 AM - 9 AM	1,176	1,428	1,347	1,382	1,287	741	443	1,212	1,380	1,420	1,379	1,286	703	381	1,008	1,298	1,251	1,320	1,192	600	334
	9 AM - 10 AM	976	1,231	1,236	1,231	1,224	1,020	669	1,012	1,199	1,198	1,196	1,164	906	591	856	1,107	1,122	1,135	1,062	764	488
	10 AM - 11 AM	940	1,088	1,122	1,099	1,228	1,251	932	947	1,086	1,086	1,134	1,124	1,078	810	832	1,035	1,071	1,061	1,070	916	722
	11 AM - 12 PM	1,045	1,157	1,118	1,222	1,350	1,369	1,154	981	1,147	1,096	1,134	1,301	1,264	1,015	910	1,073	1,086	1,083	1,169	1,170	944
	12 PM - 1 PM	1,139	1,195	1,179	1,317	1,496	1,454	1,361	1,084	1,199	1,133	1,246	1,419	1,402	1,221	938	1,143	1,152	1,197	1,260	1,211	1,159
	1 PM - 2 PM	1,197	1,244	1,224	1,383	1,629	1,453	1,420	1,123	1,260	1,198	1,293	1,457	1,340	1,244	1,001	1,182	1,237	1,267	1,302	1,296	1,243
	2 PM - 3 PM	1,271	1,328	1,335	1,551	1,775	1,441	1,477	1,208	1,353	1,272	1,438	1,642	1,431	1,196	1,114	1,317	1,302	1,311	1,446	1,305	1,310
	3 PM - 4 PM	1,545	1,584	1,643	1,878	2,013	1,466	1,583	1,440	1,527	1,542	1,715	1,929	1,395	1,368	1,355	1,493	1,543	1,519	1,695	1,329	1,365
	4 PM - 5 PM	1,760	1,791	1,909	2,194	2,197	1,399	1,565	1,740	1,733	1,838	2,046	2,100	1,405	1,458	1,574	1,777	1,788	1,729	1,763	1,323	1,380
	5 PM - 6 PM	1,991	2,029	2,097	2,434	2,273	1,324	1,509	1,854	1,905	1,989	2,110	2,209	1,251	1,384	1,626	1,766	1,843	1,725	1,836	1,242	1,303
	6 PM - 7 PM	1,373	1,410	1,477	1,709	1,783	1,191	1,339	1,294	1,329	1,361	1,467	1,719	1,102	1,170	1,102	1,292	1,337	1,229	1,410	1,030	1,093
	7 PM - 8 PM	1,013	1,009	1,036	1,160	1,261	952	1,156	899	948	985	1,044	1,206	817	1,041	809	926	983	901	989	792	950
	8 PM - 9 PM	843	838	835	986	976	816	930	738	735	790	878	936	685	875	675	751	812	770	811	600	764
	9 PM - 10 PM	656	676	681	789	784	691	742	614	618	636	746	760	587	704	597	650	661	673	692	508	597
	10 PM - 11 PM	543	534	563	644	675	553	506	511	527	494	575	654	500	500	512	555	557	547	561	434	419
	11 PM - Midnight	462	463	471	527	544	434	362	421	434	437	469	487	359	319	407	451	447	445	480	321	306

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

187 Streetsboro

TO

193 Ravenna

Route	I-80
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	83	128	142	150	145	133	104	108	147	159	143	114	146	118	135	158	159	173	175	175	125
	1 AM - 2 AM	63	87	104	105	107	97	71	77	110	120	109	92	106	79	91	116	119	121	124	127	102
	2 AM - 3 AM	55	75	85	88	89	72	55	68	93	100	87	73	82	63	77	92	102	106	117	91	66
	3 AM - 4 AM	48	76	86	92	94	76	51	64	90	101	92	78	71	56	80	95	100	109	101	85	58
	4 AM - 5 AM	68	98	104	107	108	72	51	83	96	105	108	93	80	55	83	111	111	119	122	88	57
	5 AM - 6 AM	105	151	165	166	154	94	58	133	156	170	147	122	103	65	137	170	170	172	177	112	67
	6 AM - 7 AM	206	264	272	277	253	157	95	243	293	287	236	198	160	103	260	284	282	295	289	173	105
	7 AM - 8 AM	273	359	392	378	359	172	117	358	411	420	345	303	191	139	384	413	423	423	419	227	161
	8 AM - 9 AM	303	402	418	405	403	237	162	401	439	446	378	341	266	202	418	460	479	482	473	309	227
	9 AM - 10 AM	339	421	441	440	424	324	230	434	465	454	379	363	353	280	435	458	478	513	522	414	329
	10 AM - 11 AM	365	444	442	436	443	395	322	469	462	455	408	424	436	395	487	490	498	536	574	497	490
	11 AM - 12 PM	403	460	467	475	458	472	400	506	468	469	432	446	522	512	505	498	527	564	599	581	610
	12 PM - 1 PM	452	473	493	500	496	491	463	527	498	513	470	482	534	547	558	542	535	595	633	583	679
	1 PM - 2 PM	463	502	517	551	509	500	511	562	531	514	466	520	516	569	546	569	570	625	671	576	698
	2 PM - 3 PM	505	541	538	577	575	480	533	578	591	569	528	589	503	564	615	612	602	707	733	562	679
	3 PM - 4 PM	580	601	622	640	643	502	500	702	672	661	603	656	501	578	687	704	695	788	829	567	711
	4 PM - 5 PM	644	660	693	742	721	468	491	746	780	757	664	721	475	569	750	782	778	845	908	526	682
	5 PM - 6 PM	576	650	690	715	680	435	463	733	739	700	637	714	452	544	716	765	796	840	893	512	604
	6 PM - 7 PM	427	495	507	513	542	387	359	514	549	510	437	540	384	459	533	537	585	642	696	439	556
	7 PM - 8 PM	334	358	367	363	393	293	310	382	401	367	330	415	335	371	372	402	416	457	510	349	445
	8 PM - 9 PM	252	286	303	305	318	262	247	317	338	302	260	320	277	298	332	351	347	397	392	287	346
	9 PM - 10 PM	218	234	251	263	252	224	183	266	252	261	214	265	222	227	273	280	302	314	307	241	280
	10 PM - 11 PM	193	198	221	223	208	171	145	225	224	204	166	230	189	190	265	232	267	263	269	196	200
	11 PM - Midnight	167	178	187	180	176	139	107	191	185	173	146	175	158	141	220	196	210	217	227	145	165

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	167	255	284	300	290	265	208	216	294	317	286	228	291	237	270	316	318	346	350	350	250
	1 AM - 2 AM	126	174	209	211	214	195	142	154	220	241	218	185	213	157	181	232	237	242	247	255	204
	2 AM - 3 AM	109	150	170	176	179	143	111	135	186	200	173	147	164	126	154	184	203	213	235	182	132
	3 AM - 4 AM	96	152	171	184	189	152	103	128	179	202	184	155	142	111	160	191	200	218	202	171	115
	4 AM - 5 AM	136	196	208	214	217	143	102	166	192	209	216	186	160	110	165	221	221	238	244	177	114
	5 AM - 6 AM	210	302	330	331	308	187	116	266	312	340	293	244	207	130	273	339	339	345	354	225	135
	6 AM - 7 AM	413	528	544	553	506	314	190	487	587	574	472	395	321	206	519	568	563	589	577	345	209
	7 AM - 8 AM	546	718	784	755	718	344	234	716	822	840	691	606	382	279	768	825	846	846	838	453	322
	8 AM - 9 AM	607	803	836	810	806	474	325	801	879	893	755	681	532	403	835	921	958	964	947	618	454
	9 AM - 10 AM	677	842	882	880	847	647	460	868	930	908	758	726	706	559	871	917	956	1,025	1,044	828	658
	10 AM - 11 AM	729	889	884	872	886	790	645	939	924	911	815	848	872	791	975	979	996	1,072	1,147	995	979
	11 AM - 12 PM	805	919	934	950	917	944	801	1,011	936	939	865	891	1,043	1,024	1,009	996	1,054	1,128	1,197	1,162	1,220
	12 PM - 1 PM	905	946	985	1,000	992	982	926	1,054	996	1,026	940	964	1,068	1,094	1,116	1,083	1,071	1,189	1,265	1,165	1,359
	1 PM - 2 PM	926	1,004	1,035	1,101	1,019	1,001	1,021	1,124	1,061	1,027	933	1,040	1,033	1,137	1,093	1,138	1,140	1,251	1,342	1,152	1,397
	2 PM - 3 PM	1,010	1,082	1,076	1,153	1,151	959	1,066	1,156	1,182	1,138	1,056	1,178	1,006	1,129	1,230	1,224	1,203	1,414	1,466	1,125	1,358
	3 PM - 4 PM	1,160	1,202	1,244	1,279	1,285	1,003	999	1,405	1,344	1,323	1,207	1,312	1,002	1,157	1,373	1,408	1,390	1,576	1,658	1,133	1,421
	4 PM - 5 PM	1,289	1,319	1,386	1,484	1,441	937	981	1,492	1,560	1,513	1,328	1,442	951	1,138	1,499	1,565	1,556	1,690	1,816	1,052	1,364
	5 PM - 6 PM	1,152	1,301	1,379	1,431	1,360	870	925	1,466	1,478	1,399	1,274	1,428	904	1,088	1,432	1,529	1,591	1,679	1,787	1,024	1,208
	6 PM - 7 PM	854	991	1,014	1,025	1,083	774	718	1,028	1,097	1,019	875	1,079	768	919	1,066	1,075	1,170	1,284	1,393	878	1,111
	7 PM - 8 PM	667	717	734	725	787	586	620	764	802	734	660	830	670	742	745	803	831	915	1,021	699	889
	8 PM - 9 PM	503	573	607	609	637	524	493	633	675	603	519	640	553	596	665	702	694	793	783	573	692
	9 PM - 10 PM	436	469	502	526	505	448	365	533	505	522	428	530	445	455	546	560	603	627	614	483	559
	10 PM - 11 PM	387	396	442	445	416	342	290	449	448	409	331	461	377	379	530	463	535	525	539	392	399
	11 PM - Midnight	333	356	374	359	353	277	213	383	371	347	292	350	316	282	441	392	420	434	455	290	330

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

187 Streetsboro

TO

193 Ravenna

Route	I-80
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	110	155	167	183	186	185	125	127	148	174	184	196	186	141	154	196	197	188	222	256	177
	1 AM - 2 AM	86	117	116	138	134	129	75	91	127	121	134	140	132	89	107	135	138	144	164	153	108
	2 AM - 3 AM	70	96	101	117	111	93	62	81	101	106	113	123	100	72	88	110	117	132	133	107	81
	3 AM - 4 AM	72	97	95	110	110	92	66	75	87	100	115	120	105	62	78	104	109	126	137	103	69
	4 AM - 5 AM	83	108	115	122	128	93	56	90	110	111	130	129	99	61	97	117	118	142	134	115	73
	5 AM - 6 AM	143	160	170	172	180	122	69	140	156	177	174	196	123	83	142	165	174	194	199	134	92
	6 AM - 7 AM	261	270	286	307	289	175	124	264	263	298	304	303	194	121	264	284	296	313	321	221	154
	7 AM - 8 AM	390	430	442	449	445	240	166	403	404	468	461	465	260	177	413	441	460	471	482	326	228
	8 AM - 9 AM	428	451	509	504	500	349	235	444	455	509	528	539	360	260	462	506	518	529	572	419	309
	9 AM - 10 AM	451	506	512	543	543	447	353	512	501	542	591	580	473	394	556	546	568	605	647	545	449
	10 AM - 11 AM	475	519	538	585	637	547	487	540	544	562	592	645	556	549	614	579	604	650	684	628	622
	11 AM - 12 PM	528	536	574	613	660	617	621	608	609	598	664	698	655	702	655	616	641	720	791	725	763
	12 PM - 1 PM	562	569	583	656	694	633	660	616	622	628	689	731	674	776	686	647	668	752	795	755	845
	1 PM - 2 PM	563	592	620	672	725	634	719	652	661	660	717	752	646	779	732	671	706	783	857	749	867
	2 PM - 3 PM	612	651	646	761	772	612	742	685	710	716	760	831	628	789	762	710	754	817	882	736	844
	3 PM - 4 PM	706	744	749	832	838	591	722	773	777	816	850	911	632	797	830	792	840	913	1,014	676	863
	4 PM - 5 PM	795	819	845	918	894	576	703	857	821	901	966	996	590	791	904	890	928	1,023	1,026	630	809
	5 PM - 6 PM	752	805	832	900	864	527	677	793	812	850	920	886	546	723	831	821	855	929	951	576	745
	6 PM - 7 PM	537	581	597	683	683	477	614	625	606	604	703	702	477	684	640	673	624	741	746	540	702
	7 PM - 8 PM	397	424	469	503	501	387	494	434	458	463	511	537	416	575	494	464	499	535	560	454	568
	8 PM - 9 PM	331	342	364	419	393	330	402	384	395	415	437	433	374	470	422	394	387	468	460	420	494
	9 PM - 10 PM	288	302	296	352	324	264	301	318	333	355	370	363	313	365	362	335	328	389	375	331	371
	10 PM - 11 PM	228	241	241	285	262	212	249	244	262	274	312	295	263	258	293	281	286	343	333	291	296
	11 PM - Midnight	185	193	209	217	236	177	145	198	201	226	232	253	187	176	243	229	243	272	293	236	206

Close 2 Lanes	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	220	311	335	367	371	370	249	255	297	347	368	392	373	282	309	392	393	376	444	511	354
	1 AM - 2 AM	172	234	232	276	269	258	150	182	254	242	268	279	265	177	215	271	275	288	328	307	216
	2 AM - 3 AM	141	193	202	234	222	186	123	162	202	211	226	245	200	143	177	221	233	264	266	214	161
	3 AM - 4 AM	144	194	189	221	220	183	132	150	175	200	229	240	210	123	156	208	218	252	275	206	139
	4 AM - 5 AM	166	217	230	244	256	186	112	180	219	221	259	258	198	121	194	234	235	284	268	230	146
	5 AM - 6 AM	287	320	341	345	359	243	138	280	311	353	347	391	245	167	284	329	347	388	397	268	183
	6 AM - 7 AM	523	540	572	614	578	349	248	528	527	595	609	605	388	242	529	568	592	627	641	443	309
	7 AM - 8 AM	779	861	884	898	890	480	332	805	809	936	923	931	520	354	826	882	921	941	964	651	457
	8 AM - 9 AM	856	901	1,018	1,008	999	698	470	888	909	1,019	1,056	1,077	721	521	925	1,012	1,035	1,059	1,145	839	618
	9 AM - 10 AM	902	1,011	1,025	1,086	1,087	894	705	1,023	1,002	1,084	1,181	1,161	945	788	1,112	1,093	1,135	1,211	1,294	1,090	897
	10 AM - 11 AM	949	1,037	1,075	1,170	1,274	1,094	975	1,080	1,088	1,124	1,185	1,290	1,112	1,099	1,228	1,158	1,209	1,299	1,367	1,255	1,244
	11 AM - 12 PM	1,056	1,073	1,148	1,227	1,320	1,234	1,242	1,216	1,217	1,196	1,328	1,397	1,311	1,404	1,310	1,232	1,282	1,441	1,582	1,450	1,526
	12 PM - 1 PM	1,125	1,139	1,167	1,313	1,388	1,266	1,320	1,231	1,243	1,256	1,378	1,461	1,348	1,553	1,372	1,294	1,336	1,504	1,590	1,510	1,689
	1 PM - 2 PM	1,126	1,184	1,240	1,344	1,449	1,268	1,437	1,304	1,322	1,319	1,434	1,505	1,292	1,557	1,464	1,343	1,411	1,565	1,714	1,497	1,734
	2 PM - 3 PM	1,224	1,302	1,293	1,522	1,543	1,224	1,484	1,369	1,419	1,433	1,520	1,661	1,256	1,578	1,524	1,421	1,508	1,635	1,763	1,471	1,688
	3 PM - 4 PM	1,412	1,487	1,497	1,664	1,676	1,182	1,443	1,545	1,553	1,633	1,701	1,823	1,264	1,595	1,660	1,584	1,680	1,825	2,029	1,352	1,726
	4 PM - 5 PM	1,590	1,638	1,690	1,836	1,788	1,152	1,405	1,714	1,642	1,803	1,933	1,991	1,180	1,581	1,808	1,781	1,856	2,046	2,052	1,260	1,618
	5 PM - 6 PM	1,503	1,611	1,664	1,799	1,729	1,055	1,353	1,586	1,623	1,700	1,840	1,771	1,091	1,447	1,661	1,641	1,710	1,859	1,903	1,152	1,490
	6 PM - 7 PM	1,074	1,162	1,194	1,366	1,365	954	1,228	1,249	1,212	1,208	1,407	1,405	954	1,367	1,279	1,347	1,248	1,482	1,493	1,081	1,404
	7 PM - 8 PM	794	848	939	1,007	1,002	774	989	868	915	925	1,022	1,074	831	1,149	988	928	997	1,069	1,119	908	1,137
	8 PM - 9 PM	662	685	728	838	787	660	803	768	790	831	875	867	748	939	844	789	773	935	921	840	988
	9 PM - 10 PM	575	604	592	704	648	529	602	636	666	710	739	726	625	729	725	670	656	778	749	662	743
	10 PM - 11 PM	456	481	481	570	523	425	498	488	525	549	624	590	526	517	587	562	573	685	667	581	592
	11 PM - Midnight	369	387	417	434	473	353	289	396	402	452	464	506	375	351	486	459	487	544	586	472	412

NOTES:

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Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

187 Streetsboro

TO

193 Ravenna

Route	I-80
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

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Revision Date: 9/1/2022

Close 1 Lane	Month	July							August							September						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	153	167	187	217	241	224	180	156	179	202	210	196	235	177	153	162	185	213	204	227	166
	1 AM - 2 AM	110	120	131	146	170	143	113	120	128	142	155	141	160	160	105	130	142	152	151	162	110
	2 AM - 3 AM	86	104	108	116	123	116	86	94	114	110	118	123	109	104	80	105	107	122	125	114	87
	3 AM - 4 AM	90	86	108	118	132	100	71	82	100	108	125	129	104	73	84	96	111	118	120	104	67
	4 AM - 5 AM	108	109	124	135	140	104	67	97	124	123	136	133	107	71	97	117	122	135	136	98	63
	5 AM - 6 AM	154	164	169	190	205	145	88	145	164	164	176	193	132	87	150	167	170	181	186	139	79
	6 AM - 7 AM	253	272	283	294	307	218	135	267	275	300	295	303	183	127	301	295	307	319	335	204	122
	7 AM - 8 AM	412	420	464	463	465	303	204	415	432	449	475	459	289	208	418	427	447	464	455	285	199
	8 AM - 9 AM	482	484	507	554	551	409	293	488	490	520	530	555	396	306	466	482	500	527	544	429	278
	9 AM - 10 AM	534	543	558	605	630	535	446	542	544	559	611	619	559	462	529	513	537	576	586	509	448
	10 AM - 11 AM	599	600	608	663	702	666	606	617	582	622	680	691	660	625	578	541	561	628	663	613	608
	11 AM - 12 PM	674	654	675	694	779	783	757	669	628	653	708	773	774	838	598	598	570	655	711	685	750
	12 PM - 1 PM	706	687	682	756	816	776	867	700	660	675	725	758	783	894	624	618	611	685	735	694	817
	1 PM - 2 PM	733	735	707	786	878	776	886	742	688	700	782	859	789	958	647	631	636	725	785	652	791
	2 PM - 3 PM	778	761	797	858	899	768	934	754	718	746	843	914	738	953	683	682	678	774	834	701	827
	3 PM - 4 PM	838	862	831	901	1,019	794	840	859	822	849	956	963	759	997	784	769	765	876	916	634	769
	4 PM - 5 PM	885	916	889	992	1,085	704	823	911	899	950	1,023	1,032	724	893	877	874	892	987	994	591	761
	5 PM - 6 PM	832	873	861	960	962	625	805	849	876	907	975	948	644	799	804	823	840	946	1,006	570	811
	6 PM - 7 PM	621	690	669	733	767	552	679	649	659	687	742	773	545	706	604	616	636	705	786	507	767
	7 PM - 8 PM	477	482	506	574	588	468	554	478	479	499	552	598	474	599	438	445	452	533	598	427	599
	8 PM - 9 PM	394	401	404	475	484	409	471	402	412	422	447	470	418	491	377	368	388	457	450	369	486
	9 PM - 10 PM	340	345	338	387	388	344	381	303	346	362	397	405	358	374	301	324	347	383	361	328	359
	10 PM - 11 PM	277	294	301	328	334	280	301	293	279	303	360	336	299	287	244	259	286	326	315	293	250
	11 PM - Midnight	225	250	240	282	278	231	224	234	238	237	271	309	241	216	202	204	241	268	266	266	205

Close 2 Lanes	Month	July							August							September						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	305	334	374	434	482	447	359	313	357	405	419	392	470	353	306	324	369	425	408	454	333
	1 AM - 2 AM	219	240	263	292	340	285	225	240	255	285	309	282	321	321	209	260	284	304	302	323	220
	2 AM - 3 AM	173	208	215	231	247	232	172	187	228	220	236	246	219	208	159	209	214	244	249	228	173
	3 AM - 4 AM	179	173	216	237	264	200	142	163	201	215	250	258	208	147	168	193	222	236	240	207	134
	4 AM - 5 AM	215	218	248	269	281	208	133	194	248	246	273	265	214	141	194	234	243	269	271	196	125
	5 AM - 6 AM	307	327	339	380	411	291	176	289	328	327	352	385	263	174	299	334	340	362	373	278	157
	6 AM - 7 AM	506	543	566	588	614	437	270	534	550	600	590	605	367	255	602	591	614	637	669	408	243
	7 AM - 8 AM	825	839	929	926	931	606	408	829	865	898	951	918	578	416	837	855	894	929	910	570	398
	8 AM - 9 AM	965	968	1,013	1,108	1,102	817	585	975	979	1,041	1,060	1,109	791	612	931	963	1,000	1,053	1,088	858	556
	9 AM - 10 AM	1,067	1,087	1,115	1,210	1,259	1,071	892	1,084	1,087	1,119	1,221	1,237	1,118	924	1,057	1,026	1,073	1,151	1,171	1,017	896
	10 AM - 11 AM	1,198	1,200	1,216	1,326	1,404	1,332	1,213	1,234	1,164	1,244	1,360	1,383	1,321	1,250	1,157	1,082	1,122	1,256	1,326	1,225	1,217
	11 AM - 12 PM	1,348	1,308	1,350	1,387	1,558	1,565	1,515	1,338	1,256	1,306	1,417	1,546	1,548	1,676	1,197	1,196	1,140	1,309	1,422	1,370	1,500
	12 PM - 1 PM	1,413	1,373	1,364	1,512	1,632	1,553	1,733	1,400	1,319	1,349	1,450	1,517	1,566	1,789	1,248	1,237	1,222	1,370	1,469	1,388	1,634
	1 PM - 2 PM	1,465	1,469	1,414	1,573	1,756	1,551	1,773	1,483	1,376	1,400	1,565	1,718	1,578	1,915	1,293	1,261	1,272	1,451	1,570	1,303	1,581
	2 PM - 3 PM	1,555	1,523	1,594	1,717	1,797	1,536	1,869	1,507	1,437	1,491	1,687	1,827	1,475	1,907	1,366	1,363	1,355	1,548	1,668	1,402	1,655
	3 PM - 4 PM	1,677	1,723	1,662	1,802	2,038	1,589	1,681	1,719	1,643	1,698	1,911	1,925	1,518	1,994	1,568	1,538	1,529	1,753	1,832	1,268	1,538
	4 PM - 5 PM	1,770	1,831	1,778	1,983	2,170	1,407	1,647	1,822	1,799	1,900	2,046	2,064	1,448	1,786	1,755	1,748	1,783	1,974	1,988	1,182	1,521
	5 PM - 6 PM	1,665	1,746	1,721	1,921	1,923	1,249	1,611	1,697	1,752	1,815	1,950	1,897	1,288	1,598	1,607	1,646	1,681	1,892	2,011	1,139	1,622
	6 PM - 7 PM	1,241	1,381	1,338	1,467	1,534	1,104	1,359	1,297	1,318	1,374	1,484	1,546	1,091	1,412	1,207	1,231	1,271	1,410	1,571	1,013	1,533
	7 PM - 8 PM	954	965	1,013	1,149	1,176	935	1,108	956	957	999	1,104	1,196	948	1,197	876	889	904	1,067	1,195	854	1,197
	8 PM - 9 PM	788	802	808	949	968	818	942	805	824	845	895	940	835	981	755	736	776	914	899	738	973
	9 PM - 10 PM	680	689	675	773	776	688	761	606	692	724	794	811	716	748	603	648	694	765	723	656	717
	10 PM - 11 PM	554	589	601	656	667	580	601	586	559	606	720	672	599	574	488	517	571	651	630	585	499
	11 PM - Midnight	450	499	479	564	556	463	448	469	476	475	542	617	483	432	404	409	481	537	531	532	410

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

187 Streetsboro

TO

193 Ravenna

Route	I-80
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	148	182	172	176	202	192	150	129	149	160	179	176	167	153	115	168	170	164	164	154	115
	1 AM - 2 AM	102	133	126	133	167	144	109	101	118	125	116	138	126	119	82	128	128	116	137	125	87
	2 AM - 3 AM	82	113	101	121	135	110	89	75	100	106	109	125	102	67	70	105	103	114	110	98	71
	3 AM - 4 AM	77	112	106	115	130	100	77	72	100	111	112	105	95	57	71	100	107	107	111	86	56
	4 AM - 5 AM	95	120	126	123	137	103	66	92	118	116	131	137	96	60	87	129	123	131	134	91	58
	5 AM - 6 AM	152	172	182	182	188	124	79	165	172	181	185	186	137	72	140	177	186	188	192	112	70
	6 AM - 7 AM	294	317	304	328	313	175	122	302	332	330	322	333	195	131	270	309	308	315	315	172	119
	7 AM - 8 AM	399	444	455	450	441	243	171	416	427	436	436	449	260	184	375	405	419	430	433	216	150
	8 AM - 9 AM	460	482	512	518	509	344	263	446	478	497	487	511	353	271	414	453	481	486	470	292	228
	9 AM - 10 AM	510	528	548	545	598	479	384	516	499	516	542	545	463	435	449	485	507	518	500	404	370
	10 AM - 11 AM	578	553	576	599	648	577	570	544	494	551	563	601	585	566	467	518	555	541	553	498	521
	11 AM - 12 PM	631	602	590	623	705	676	727	580	534	562	623	655	656	699	517	560	577	564	580	571	667
	12 PM - 1 PM	653	607	605	697	737	670	792	601	563	592	650	686	658	757	529	581	595	590	631	586	709
	1 PM - 2 PM	635	615	634	698	765	656	813	620	598	607	667	718	655	748	549	603	634	607	641	586	745
	2 PM - 3 PM	712	678	691	761	822	662	806	673	624	650	736	767	648	745	589	646	662	696	693	571	721
	3 PM - 4 PM	839	772	757	853	877	637	804	786	736	739	829	849	622	774	691	769	746	771	785	563	697
	4 PM - 5 PM	865	886	874	953	979	572	751	825	839	848	873	952	611	703	755	823	820	853	845	548	648
	5 PM - 6 PM	801	817	853	906	928	540	731	764	783	799	890	900	570	690	690	776	755	797	776	496	595
	6 PM - 7 PM	563	611	624	708	745	470	692	553	582	606	634	697	488	607	514	574	566	586	625	433	546
	7 PM - 8 PM	419	439	450	509	528	404	557	405	417	427	474	515	411	456	390	431	414	462	455	352	451
	8 PM - 9 PM	341	352	393	432	443	336	485	345	335	326	399	404	335	361	318	362	353	377	371	293	350
	9 PM - 10 PM	312	296	324	364	365	300	374	291	265	290	327	345	278	266	315	302	334	318	316	247	267
	10 PM - 11 PM	246	256	270	328	299	247	239	265	225	288	279	316	246	195	275	241	288	259	261	212	195
	11 PM - Midnight	203	208	227	255	251	179	181	204	194	247	247	259	196	157	195	197	231	216	219	178	140

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	295	364	345	353	404	383	299	259	298	321	359	352	334	305	230	336	340	329	328	309	229
	1 AM - 2 AM	203	265	251	266	334	287	218	203	235	249	232	276	252	237	163	255	256	232	274	250	175
	2 AM - 3 AM	164	227	201	241	270	219	178	149	200	212	217	250	203	134	139	210	205	228	219	196	142
	3 AM - 4 AM	154	225	211	231	259	200	154	145	200	221	223	209	190	113	142	200	214	213	223	173	112
	4 AM - 5 AM	190	239	251	247	275	206	132	184	236	231	263	273	192	121	174	258	247	263	268	182	116
	5 AM - 6 AM	304	345	363	364	375	248	158	330	344	362	370	373	274	144	281	353	372	375	383	224	140
	6 AM - 7 AM	588	634	609	657	626	351	244	603	665	660	643	667	389	262	539	618	615	629	630	344	237
	7 AM - 8 AM	798	887	911	901	883	485	341	833	855	872	872	897	520	367	750	810	838	860	866	432	299
	8 AM - 9 AM	919	964	1,023	1,035	1,017	687	527	892	956	993	973	1,022	707	541	829	906	963	972	940	584	455
	9 AM - 10 AM	1,019	1,057	1,095	1,090	1,197	958	767	1,031	999	1,032	1,084	1,091	926	870	898	971	1,015	1,037	1,001	807	741
	10 AM - 11 AM	1,156	1,106	1,152	1,198	1,297	1,153	1,141	1,089	987	1,102	1,126	1,201	1,171	1,132	934	1,035	1,110	1,081	1,106	996	1,042
	11 AM - 12 PM	1,261	1,203	1,180	1,246	1,411	1,352	1,454	1,161	1,069	1,124	1,246	1,309	1,313	1,397	1,034	1,119	1,154	1,129	1,160	1,142	1,334
	12 PM - 1 PM	1,306	1,213	1,211	1,395	1,474	1,341	1,583	1,202	1,125	1,184	1,300	1,371	1,315	1,513	1,058	1,161	1,190	1,179	1,261	1,172	1,419
	1 PM - 2 PM	1,270	1,231	1,268	1,396	1,531	1,312	1,625	1,240	1,195	1,213	1,334	1,436	1,309	1,496	1,097	1,205	1,268	1,214	1,281	1,172	1,490
	2 PM - 3 PM	1,425	1,355	1,383	1,522	1,643	1,324	1,611	1,346	1,249	1,299	1,473	1,535	1,296	1,489	1,178	1,292	1,323	1,393	1,386	1,143	1,443
	3 PM - 4 PM	1,678	1,544	1,514	1,706	1,753	1,274	1,609	1,572	1,472	1,477	1,658	1,698	1,244	1,548	1,382	1,538	1,492	1,541	1,569	1,126	1,394
	4 PM - 5 PM	1,730	1,772	1,747	1,906	1,957	1,145	1,501	1,650	1,678	1,696	1,746	1,904	1,222	1,406	1,509	1,646	1,641	1,706	1,690	1,096	1,295
	5 PM - 6 PM	1,602	1,635	1,705	1,812	1,856	1,081	1,461	1,528	1,567	1,598	1,780	1,799	1,141	1,379	1,379	1,552	1,510	1,593	1,552	992	1,189
	6 PM - 7 PM	1,126	1,221	1,248	1,415	1,490	940	1,385	1,106	1,163	1,212	1,268	1,394	976	1,215	1,027	1,147	1,133	1,172	1,251	866	1,092
	7 PM - 8 PM	838	879	901	1,019	1,055	809	1,114	809	834	855	948	1,029	821	912	781	861	827	924	910	704	902
	8 PM - 9 PM	682	705	786	864	885	672	971	690	670	651	798	807	670	722	636	723	706	753	742	585	701
	9 PM - 10 PM	625	592	648	729	730	601	747	583	530	579	654	690	556	532	629	603	667	635	632	495	533
	10 PM - 11 PM	492	511	540	656	598	493	479	530	451	577	557	631	491	390	549	481	576	518	523	424	391
	11 PM - Midnight	405	416	453	510	502	358	362	409	389	494	494	519	391	314	390	393	462	431	438	356	279

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

193 Ravenna

TO

187 Streetsboro

Route	I-80
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	83	154	162	168	168	140	87	107	174	174	163	138	145	109	130	181	179	177	177	149	97
	1 AM - 2 AM	62	132	123	133	126	103	65	77	139	141	130	103	110	73	92	150	142	137	136	118	79
	2 AM - 3 AM	54	126	106	117	119	90	49	68	130	125	116	104	83	53	74	125	122	125	125	92	61
	3 AM - 4 AM	68	127	127	130	127	98	49	76	128	131	119	113	88	53	83	137	129	131	124	90	57
	4 AM - 5 AM	87	138	152	157	159	100	50	113	166	169	154	138	100	55	124	162	171	172	174	99	55
	5 AM - 6 AM	172	247	264	270	248	121	57	224	284	283	248	214	132	66	232	292	284	289	280	137	65
6 AM - 7 AM	294	409	442	438	411	151	68	393	482	465	406	341	153	84	383	493	476	485	447	177	85	
7 AM - 8 AM	395	532	561	561	527	173	92	539	634	609	532	448	202	105	553	643	635	636	607	213	115	
8 AM - 9 AM	347	514	523	536	494	239	123	479	588	581	499	439	255	160	477	597	579	592	542	270	146	
9 AM - 10 AM	309	459	470	480	440	319	176	415	522	513	453	417	336	220	418	529	531	533	515	287	205	
10 AM - 11 AM	325	453	453	447	448	384	253	429	492	480	442	430	438	306	422	491	508	507	524	442	308	
11 AM - 12 PM	337	471	455	461	471	473	323	429	488	485	431	445	491	399	434	494	503	538	556	495	435	
12 PM - 1 PM	339	488	458	494	496	476	380	441	501	481	442	492	516	457	453	515	523	563	596	551	499	
1 PM - 2 PM	368	503	469	499	523	499	428	462	497	488	440	529	526	486	480	533	553	571	642	566	574	
2 PM - 3 PM	397	538	503	525	548	502	456	494	534	516	470	546	514	528	510	564	572	603	671	567	614	
3 PM - 4 PM	430	567	540	564	590	528	492	544	554	550	483	585	518	553	555	584	611	643	723	565	661	
4 PM - 5 PM	482	589	570	587	634	501	501	560	570	589	515	603	504	584	595	607	651	699	754	561	713	
5 PM - 6 PM	477	590	583	574	637	476	455	599	589	577	499	616	487	579	617	602	664	678	777	531	716	
6 PM - 7 PM	380	468	461	465	528	399	429	467	466	447	396	514	416	511	511	519	540	567	657	452	660	
7 PM - 8 PM	334	359	356	374	403	319	340	382	379	364	310	403	334	426	402	422	422	460	499	383	567	
8 PM - 9 PM	294	320	319	324	337	260	277	354	340	305	280	334	266	338	367	356	371	384	405	305	432	
9 PM - 10 PM	244	271	266	263	285	221	207	281	283	271	230	270	239	268	301	289	307	330	322	243	351	
10 PM - 11 PM	221	236	243	232	211	170	152	259	248	226	203	225	185	204	272	268	279	285	281	198	249	
11 PM - Midnight	179	186	186	194	174	122	111	211	187	191	147	171	148	156	217	219	213	217	201	150	173	

Close 2 Lanes	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	166	308	323	337	336	281	173	213	348	348	325	276	291	218	260	361	358	354	355	298	194
1 AM - 2 AM	124	264	245	267	253	206	131	154	279	282	260	207	220	145	183	300	283	274	272	236	159	
2 AM - 3 AM	108	253	213	234	238	180	97	137	260	250	231	208	166	105	149	249	245	250	250	184	121	
3 AM - 4 AM	136	254	254	261	254	196	98	151	255	261	238	227	175	107	166	274	258	262	248	179	114	
4 AM - 5 AM	174	275	305	314	318	200	100	226	333	337	309	276	199	110	248	324	342	344	347	198	111	
5 AM - 6 AM	343	493	529	539	496	242	114	447	568	566	497	428	263	131	464	583	568	578	561	273	129	
6 AM - 7 AM	588	817	884	877	823	302	137	786	964	930	812	681	307	168	765	986	951	970	893	353	170	
7 AM - 8 AM	790	1,065	1,122	1,122	1,054	346	183	1,078	1,268	1,218	1,063	897	404	209	1,106	1,285	1,270	1,272	1,214	426	230	
8 AM - 9 AM	693	1,028	1,046	1,072	989	478	247	958	1,175	1,161	999	879	511	320	954	1,195	1,158	1,184	1,084	539	292	
9 AM - 10 AM	618	918	939	961	880	639	353	831	1,044	1,026	905	834	672	439	836	1,058	1,062	1,066	1,030	573	411	
10 AM - 11 AM	649	906	905	894	897	767	506	859	984	960	884	860	877	613	843	982	1,015	1,014	1,048	884	616	
11 AM - 12 PM	674	943	910	923	942	946	645	857	975	970	862	889	982	797	868	989	1,005	1,076	1,112	991	870	
12 PM - 1 PM	678	976	916	988	992	951	760	882	1,002	961	883	984	1,031	914	907	1,030	1,047	1,125	1,192	1,101	999	
1 PM - 2 PM	737	1,007	939	998	1,045	999	857	924	994	975	881	1,058	1,051	972	960	1,066	1,107	1,142	1,284	1,132	1,147	
2 PM - 3 PM	795	1,077	1,006	1,051	1,096	1,005	913	987	1,067	1,031	939	1,092	1,027	1,056	1,021	1,127	1,145	1,205	1,342	1,135	1,229	
3 PM - 4 PM	859	1,134	1,080	1,127	1,179	1,057	984	1,088	1,108	1,099	966	1,171	1,036	1,105	1,110	1,168	1,221	1,285	1,446	1,129	1,321	
4 PM - 5 PM	964	1,178	1,141	1,175	1,267	1,002	1,002	1,119	1,139	1,177	1,031	1,207	1,008	1,168	1,189	1,214	1,302	1,397	1,507	1,121	1,425	
5 PM - 6 PM	954	1,179	1,165	1,147	1,274	951	911	1,199	1,178	1,155	998	1,232	975	1,158	1,233	1,203	1,327	1,356	1,553	1,062	1,432	
6 PM - 7 PM	759	937	922	930	1,056	798	858	934	932	893	793	1,028	832	1,023	1,022	1,037	1,079	1,133	1,315	904	1,320	
7 PM - 8 PM	668	718	713	748	806	639	680	763	758	728	620	806	668	853	803	845	844	920	998	765	1,133	
8 PM - 9 PM	589	641	639	647	674	519	554	707	680	610	560	667	532	676	733	711	743	768	810	610	864	
9 PM - 10 PM	487	542	533	526	570	442	414	563	567	542	460	539	478	536	602	579	614	661	643	485	701	
10 PM - 11 PM	442	472	486	464	422	340	305	518	497	452	407	450	371	408	544	536	558	570	562	396	498	
11 PM - Midnight	357	372	372	388	347	244	222	422	374	383	293	341	295	311	433	438	426	434	401	300	347	

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

193 Ravenna

TO

187 Streetsboro

Route	I-80
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	131	203	198	196	205	178	131	135	179	184	200	208	199	163	150	202	215	211	238	219	154
	1 AM - 2 AM	86	151	151	146	151	128	79	102	150	148	157	168	138	92	112	162	163	177	182	162	104
	2 AM - 3 AM	67	137	131	135	143	111	67	80	122	140	131	142	108	66	86	137	147	153	161	142	81
	3 AM - 4 AM	106	143	131	131	141	106	55	90	123	137	140	154	109	66	96	143	148	159	150	117	65
	4 AM - 5 AM	127	182	178	178	165	116	64	128	157	186	180	179	131	69	132	178	188	193	184	138	70
	5 AM - 6 AM	243	288	313	305	287	163	73	260	270	311	310	293	161	84	252	315	327	323	312	168	83
	6 AM - 7 AM	443	505	506	509	462	199	98	462	461	537	538	515	206	106	453	531	547	538	504	223	114
	7 AM - 8 AM	580	689	671	657	613	238	123	592	601	711	679	619	268	128	580	678	696	677	628	274	139
	8 AM - 9 AM	535	614	614	628	543	317	163	552	550	644	644	572	338	185	534	661	641	659	610	354	204
	9 AM - 10 AM	437	535	539	553	522	421	256	479	510	561	578	577	451	293	500	592	604	607	593	474	316
	10 AM - 11 AM	413	530	521	554	534	522	361	461	506	556	552	607	528	401	484	564	561	588	620	552	439
	11 AM - 12 PM	442	529	514	565	601	576	487	478	527	566	579	638	607	510	543	597	589	658	683	666	585
	12 PM - 1 PM	480	553	538	596	653	618	573	536	569	593	645	708	648	635	581	632	649	687	765	727	691
	1 PM - 2 PM	499	544	569	628	706	630	660	558	634	607	662	756	672	681	625	630	661	731	801	760	769
	2 PM - 3 PM	537	591	605	654	766	652	719	605	675	675	703	786	714	722	662	670	695	777	863	789	830
	3 PM - 4 PM	592	605	623	692	785	673	750	640	706	712	743	854	703	770	721	679	738	808	908	782	847
	4 PM - 5 PM	626	652	685	724	836	685	822	671	741	762	778	894	651	795	742	706	765	827	922	777	885
	5 PM - 6 PM	615	656	689	743	817	624	811	664	726	735	743	845	617	774	740	713	759	863	932	716	872
	6 PM - 7 PM	526	563	580	624	697	542	720	561	631	610	627	748	556	716	627	605	625	714	800	623	796
	7 PM - 8 PM	423	440	456	493	553	443	626	464	515	463	511	603	454	625	499	482	498	582	657	514	710
	8 PM - 9 PM	360	376	376	414	451	368	500	399	432	402	449	504	356	528	424	417	426	488	540	446	599
	9 PM - 10 PM	303	316	336	371	378	304	388	333	341	329	387	391	310	415	361	339	352	424	472	371	462
	10 PM - 11 PM	259	276	274	315	307	250	290	285	295	279	329	319	244	291	285	297	309	351	366	288	341
	11 PM - Midnight	207	221	229	257	214	172	192	230	231	230	253	263	187	204	238	239	255	308	285	223	240

Close 2 Lanes	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	262	406	395	393	410	356	262	271	358	368	400	415	398	325	299	404	429	423	476	438	309
	1 AM - 2 AM	172	302	302	291	302	256	157	203	300	295	313	336	275	185	225	324	327	353	365	323	208
	2 AM - 3 AM	134	273	263	270	286	222	133	161	244	280	262	284	217	133	171	274	293	307	321	284	163
	3 AM - 4 AM	213	285	262	262	282	212	111	180	247	275	280	307	219	133	192	286	296	318	299	234	130
	4 AM - 5 AM	254	364	356	357	330	231	128	257	314	372	359	357	261	138	263	356	375	386	368	275	141
	5 AM - 6 AM	485	575	625	611	574	325	146	519	540	621	620	586	323	168	503	630	654	646	624	337	166
	6 AM - 7 AM	886	1,011	1,012	1,018	923	398	196	923	922	1,074	1,076	1,029	412	212	906	1,062	1,094	1,076	1,009	447	228
	7 AM - 8 AM	1,161	1,379	1,343	1,314	1,225	476	245	1,183	1,203	1,422	1,359	1,238	535	256	1,160	1,356	1,392	1,353	1,256	548	277
	8 AM - 9 AM	1,069	1,227	1,227	1,256	1,085	634	325	1,105	1,099	1,288	1,288	1,145	677	371	1,068	1,323	1,281	1,318	1,219	709	408
	9 AM - 10 AM	874	1,071	1,078	1,106	1,043	842	511	959	1,019	1,122	1,157	1,153	902	586	1,000	1,184	1,207	1,214	1,185	947	631
	10 AM - 11 AM	826	1,060	1,042	1,108	1,067	1,044	721	923	1,011	1,112	1,104	1,214	1,055	803	969	1,127	1,122	1,177	1,239	1,104	878
	11 AM - 12 PM	883	1,059	1,028	1,129	1,202	1,151	974	956	1,054	1,132	1,157	1,276	1,214	1,020	1,087	1,195	1,178	1,315	1,367	1,332	1,171
	12 PM - 1 PM	959	1,106	1,076	1,192	1,306	1,236	1,146	1,073	1,139	1,187	1,289	1,417	1,297	1,269	1,161	1,264	1,298	1,373	1,530	1,454	1,382
	1 PM - 2 PM	998	1,087	1,138	1,256	1,411	1,259	1,319	1,116	1,268	1,214	1,325	1,512	1,345	1,362	1,250	1,260	1,321	1,463	1,601	1,520	1,537
	2 PM - 3 PM	1,074	1,182	1,210	1,309	1,532	1,303	1,438	1,210	1,350	1,351	1,406	1,571	1,427	1,444	1,325	1,340	1,391	1,555	1,727	1,578	1,659
	3 PM - 4 PM	1,184	1,210	1,246	1,385	1,570	1,345	1,500	1,279	1,412	1,423	1,485	1,708	1,405	1,541	1,441	1,358	1,476	1,615	1,817	1,564	1,693
	4 PM - 5 PM	1,252	1,305	1,369	1,448	1,671	1,370	1,644	1,341	1,482	1,525	1,556	1,788	1,301	1,590	1,485	1,411	1,530	1,655	1,845	1,554	1,770
	5 PM - 6 PM	1,231	1,311	1,378	1,487	1,633	1,247	1,621	1,328	1,452	1,469	1,486	1,690	1,345	1,549	1,480	1,425	1,517	1,727	1,864	1,432	1,744
	6 PM - 7 PM	1,051	1,125	1,159	1,247	1,394	1,084	1,440	1,122	1,263	1,219	1,253	1,496	1,112	1,432	1,254	1,210	1,250	1,428	1,600	1,246	1,593
	7 PM - 8 PM	847	881	913	985	1,106	886	1,252	929	1,029	927	1,021	1,206	908	1,250	998	963	997	1,164	1,314	1,029	1,419
	8 PM - 9 PM	721	751	753	828	902	736	999	797	863	805	897	1,007	711	1,055	848	834	851	975	1,080	892	1,198
	9 PM - 10 PM	606	632	671	743	755	609	776	666	682	658	775	781	619	830	723	678	704	848	944	742	923
	10 PM - 11 PM	517	551	549	631	613	501	580	571	589	558	658	638	488	581	569	594	617	702	733	576	682
	11 PM - Midnight	415	443	457	515	428	344	383	460	461	461	506	526	374	408	476	478	510	616	571	445	480

- NOTES:**
- Refer to SP 104 for lane closure restrictions.
 - If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
 - If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

193 Ravenna

TO

187 Streetsboro

Route	I-80
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	155	183	221	215	231	212	177	173	219	210	220	232	223	145	135	199	200	192	207	228	143
	1 AM - 2 AM	115	146	170	176	170	159	110	123	170	167	161	172	164	103	99	153	153	160	157	163	92
	2 AM - 3 AM	84	120	149	152	157	128	78	98	147	136	156	147	129	77	89	120	140	131	139	124	70
	3 AM - 4 AM	96	126	138	142	151	117	74	97	155	136	158	140	116	65	92	128	130	142	142	117	66
	4 AM - 5 AM	134	154	184	187	181	125	72	130	179	184	186	179	130	69	128	159	167	167	175	133	60
	5 AM - 6 AM	248	274	314	325	298	168	84	247	316	299	301	305	159	79	241	281	285	300	298	153	80
6 AM - 7 AM	444	496	510	500	475	217	111	440	519	512	515	480	209	97	447	498	489	528	486	211	103	
7 AM - 8 AM	576	619	649	660	611	255	132	583	695	665	666	625	253	125	565	635	638	664	627	256	142	
8 AM - 9 AM	530	611	638	654	589	345	188	545	657	658	664	601	357	202	522	593	610	623	580	332	214	
9 AM - 10 AM	471	557	609	597	586	444	305	499	605	600	614	601	467	318	461	542	553	561	562	439	342	
10 AM - 11 AM	507	553	586	620	631	563	427	499	590	596	623	632	573	439	459	521	528	555	567	545	459	
11 AM - 12 PM	544	585	605	653	705	665	572	558	613	634	659	722	693	605	482	539	538	576	631	648	561	
12 PM - 1 PM	612	628	649	713	775	761	706	606	616	640	715	783	771	712	524	557	550	605	698	677	646	
1 PM - 2 PM	629	650	678	753	826	771	798	653	661	684	778	856	795	741	564	590	595	642	745	700	643	
2 PM - 3 PM	644	691	705	798	876	818	822	703	703	708	798	905	807	818	618	639	654	685	838	678	690	
3 PM - 4 PM	692	709	750	859	908	825	891	731	727	753	851	954	803	850	655	644	668	727	859	720	757	
4 PM - 5 PM	743	749	771	861	936	809	947	750	763	819	874	987	853	903	698	694	735	800	925	682	767	
5 PM - 6 PM	727	761	769	875	932	751	935	753	750	792	876	960	793	938	683	708	721	812	945	663	758	
6 PM - 7 PM	609	623	643	711	803	682	824	641	617	664	745	827	697	854	567	586	585	676	818	580	744	
7 PM - 8 PM	503	508	532	595	683	561	740	510	503	546	619	675	581	738	446	459	451	525	644	473	674	
8 PM - 9 PM	441	426	433	508	548	463	603	440	428	473	521	511	478	590	377	394	381	465	480	399	572	
9 PM - 10 PM	367	375	376	444	457	380	467	354	357	397	437	430	390	448	325	327	319	394	393	351	455	
10 PM - 11 PM	310	315	312	353	385	308	330	297	302	319	355	392	312	328	278	277	282	342	348	271	306	
11 PM - Midnight	250	252	246	294	291	242	239	246	248	262	282	285	230	241	252	231	221	271	291	204	212	

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	309	367	441	430	463	425	355	346	437	420	440	463	447	290	270	398	400	384	415	455	285
	1 AM - 2 AM	230	292	340	352	341	318	220	246	341	333	323	343	327	206	199	305	306	319	314	325	183
	2 AM - 3 AM	168	239	298	303	314	256	155	196	293	272	312	293	257	154	178	239	279	261	278	249	141
	3 AM - 4 AM	192	252	276	283	302	235	148	193	310	273	316	280	232	130	184	257	259	284	283	234	133
	4 AM - 5 AM	269	308	369	374	362	250	145	260	357	367	372	358	261	137	257	318	334	334	350	265	120
	5 AM - 6 AM	495	548	629	650	596	336	167	493	632	598	602	610	318	159	481	561	571	601	596	305	161
6 AM - 7 AM	887	992	1,019	999	950	433	221	880	1,037	1,024	1,030	961	417	195	895	997	978	1,055	971	422	205	
7 AM - 8 AM	1,152	1,237	1,299	1,321	1,222	510	263	1,166	1,390	1,330	1,332	1,251	506	249	1,130	1,270	1,276	1,327	1,254	512	283	
8 AM - 9 AM	1,060	1,222	1,277	1,308	1,178	691	376	1,091	1,314	1,316	1,327	1,201	714	404	1,043	1,187	1,220	1,246	1,159	663	427	
9 AM - 10 AM	942	1,114	1,218	1,193	1,172	888	610	999	1,210	1,200	1,229	1,202	935	637	922	1,084	1,106	1,123	1,123	877	683	
10 AM - 11 AM	1,014	1,106	1,171	1,239	1,261	1,126	854	999	1,179	1,192	1,245	1,263	1,146	878	919	1,042	1,056	1,110	1,134	1,089	918	
11 AM - 12 PM	1,088	1,170	1,211	1,305	1,411	1,330	1,144	1,116	1,225	1,268	1,318	1,444	1,386	1,211	963	1,079	1,077	1,151	1,262	1,295	1,122	
12 PM - 1 PM	1,223	1,256	1,298	1,426	1,551	1,522	1,413	1,212	1,231	1,281	1,431	1,566	1,543	1,423	1,047	1,114	1,099	1,210	1,397	1,355	1,292	
1 PM - 2 PM	1,257	1,299	1,357	1,505	1,653	1,542	1,595	1,305	1,321	1,367	1,556	1,713	1,591	1,482	1,128	1,179	1,190	1,284	1,489	1,401	1,285	
2 PM - 3 PM	1,287	1,383	1,410	1,597	1,751	1,636	1,644	1,405	1,406	1,416	1,595	1,810	1,613	1,636	1,235	1,278	1,308	1,370	1,675	1,355	1,380	
3 PM - 4 PM	1,384	1,418	1,500	1,719	1,816	1,650	1,783	1,462	1,454	1,505	1,703	1,908	1,607	1,700	1,310	1,288	1,336	1,453	1,718	1,440	1,513	
4 PM - 5 PM	1,485	1,498	1,542	1,723	1,871	1,618	1,893	1,499	1,525	1,637	1,748	1,974	1,706	1,807	1,396	1,387	1,470	1,600	1,851	1,365	1,535	
5 PM - 6 PM	1,454	1,522	1,539	1,750	1,863	1,502	1,870	1,505	1,499	1,584	1,752	1,921	1,587	1,876	1,367	1,415	1,441	1,624	1,890	1,326	1,516	
6 PM - 7 PM	1,217	1,246	1,287	1,422	1,606	1,364	1,649	1,281	1,234	1,328	1,491	1,653	1,395	1,707	1,134	1,172	1,170	1,353	1,636	1,159	1,488	
7 PM - 8 PM	1,006	1,016	1,064	1,190	1,366	1,123	1,479	1,020	1,006	1,093	1,238	1,350	1,161	1,476	891	918	901	1,051	1,287	945	1,348	
8 PM - 9 PM	882	851	866	1,015	1,097	926	1,207	879	857	945	1,043	1,022	957	1,179	753	787	761	929	960	798	1,144	
9 PM - 10 PM	735	750	752	889	915	761	935	708	713	795	873	860	781	896	650	654	637	789	786	702	910	
10 PM - 11 PM	620	630	624	706	770	617	660	594	603	638	710	784	624	656	556	553	563	685	696	541	612	
11 PM - Midnight	499	504	492	588	582	483	479	491	495	524	564	571	461	482	504	461	443	541	582	409	425	

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

193 Ravenna

TO

187 Streetsboro

Route	I-80
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	138	202	187	194	216	204	139	125	190	183	171	182	178	117	109	191	185	173	182	158	103
	1 AM - 2 AM	102	168	148	156	161	146	98	86	151	152	149	153	130	105	83	145	155	142	144	123	80
	2 AM - 3 AM	86	137	144	140	142	111	75	70	139	125	137	129	113	62	67	130	118	121	122	106	53
	3 AM - 4 AM	94	146	145	148	143	111	60	89	143	135	148	133	109	60	80	139	129	131	135	112	59
	4 AM - 5 AM	132	174	171	179	176	117	65	123	177	174	181	173	124	56	116	173	170	168	166	102	58
	5 AM - 6 AM	227	306	290	302	276	151	76	233	286	297	313	280	149	68	213	293	284	288	275	144	74
	6 AM - 7 AM	438	502	500	509	481	193	92	413	500	494	503	465	205	94	379	483	481	488	457	180	87
	7 AM - 8 AM	558	657	643	640	594	228	119	566	657	651	643	607	249	118	514	603	600	604	585	228	102
	8 AM - 9 AM	540	644	627	624	588	316	188	525	628	609	596	577	316	181	448	611	572	598	547	290	152
	9 AM - 10 AM	446	563	549	568	547	432	287	459	552	549	564	533	415	274	410	546	525	545	521	358	244
	10 AM - 11 AM	449	549	538	539	568	523	415	468	523	532	553	564	501	379	433	523	532	529	524	442	362
	11 AM - 12 PM	497	566	547	567	631	607	535	471	547	537	543	614	587	477	449	540	541	543	577	546	467
	12 PM - 1 PM	536	569	568	617	682	652	644	526	565	538	585	674	616	570	459	558	564	553	618	577	552
	1 PM - 2 PM	574	598	586	659	759	648	683	535	587	565	614	699	607	611	504	582	614	600	627	596	610
	2 PM - 3 PM	595	633	625	711	807	664	729	574	628	597	662	749	637	614	546	626	636	596	695	607	651
	3 PM - 4 PM	653	653	676	764	845	684	772	603	641	644	714	797	651	681	570	649	681	632	741	647	695
	4 PM - 5 PM	688	683	715	809	891	652	768	668	652	692	768	835	684	750	602	694	719	713	751	645	716
	5 PM - 6 PM	706	690	705	814	883	644	761	678	655	681	757	823	620	737	592	659	710	663	769	613	686
	6 PM - 7 PM	581	571	598	675	775	559	692	537	525	556	622	700	534	619	470	550	566	521	607	492	597
	7 PM - 8 PM	458	448	444	505	578	458	600	421	420	417	471	536	397	562	376	424	452	427	473	384	511
	8 PM - 9 PM	395	379	379	460	476	382	489	346	351	363	412	452	345	471	340	370	393	375	396	296	414
	9 PM - 10 PM	331	317	323	385	377	331	388	291	291	302	353	366	291	366	291	318	317	321	321	258	320
	10 PM - 11 PM	270	267	278	313	328	263	269	265	257	250	278	299	246	266	253	276	284	275	275	211	230
	11 PM - Midnight	231	225	229	258	257	201	198	209	209	209	232	232	165	170	211	224	217	220	225	160	159

Close 2 Lanes	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	275	403	375	388	432	408	278	250	380	367	342	364	356	234	218	382	369	346	364	316	207
	1 AM - 2 AM	203	337	297	311	322	292	196	173	302	304	299	305	260	211	166	289	309	283	287	247	160
	2 AM - 3 AM	173	274	288	280	283	221	150	140	279	249	274	257	225	125	134	260	236	242	244	211	105
	3 AM - 4 AM	187	291	290	295	286	222	120	178	286	271	295	266	217	119	159	277	257	263	270	223	119
	4 AM - 5 AM	264	348	342	358	353	233	130	245	354	348	362	347	248	111	231	347	339	336	331	205	116
	5 AM - 6 AM	455	611	581	604	551	302	152	466	572	595	626	560	298	136	426	586	569	576	549	289	148
	6 AM - 7 AM	875	1,004	1,001	1,018	962	386	183	826	1,001	988	1,006	930	409	188	757	966	962	975	915	360	174
	7 AM - 8 AM	1,116	1,314	1,285	1,281	1,189	456	237	1,132	1,314	1,302	1,286	1,215	497	236	1,028	1,205	1,200	1,208	1,171	456	204
	8 AM - 9 AM	1,079	1,289	1,254	1,247	1,175	632	376	1,050	1,256	1,217	1,193	1,153	631	362	895	1,221	1,144	1,197	1,093	579	303
	9 AM - 10 AM	893	1,125	1,098	1,136	1,094	865	575	918	1,104	1,098	1,127	1,067	829	548	820	1,092	1,050	1,089	1,042	717	487
	10 AM - 11 AM	898	1,098	1,076	1,077	1,136	1,045	830	937	1,046	1,063	1,106	1,127	1,001	759	866	1,046	1,063	1,058	1,048	885	724
	11 AM - 12 PM	993	1,132	1,095	1,133	1,262	1,214	1,070	941	1,095	1,074	1,085	1,228	1,175	954	897	1,079	1,082	1,085	1,153	1,091	934
	12 PM - 1 PM	1,071	1,138	1,136	1,234	1,364	1,305	1,289	1,052	1,130	1,076	1,169	1,348	1,233	1,140	918	1,115	1,128	1,107	1,236	1,154	1,104
	1 PM - 2 PM	1,147	1,196	1,172	1,318	1,518	1,297	1,367	1,069	1,174	1,129	1,227	1,399	1,214	1,221	1,007	1,163	1,229	1,200	1,254	1,193	1,221
	2 PM - 3 PM	1,191	1,266	1,251	1,422	1,613	1,328	1,457	1,148	1,256	1,193	1,325	1,497	1,273	1,228	1,091	1,252	1,272	1,192	1,390	1,215	1,301
	3 PM - 4 PM	1,306	1,306	1,352	1,528	1,690	1,368	1,544	1,207	1,282	1,287	1,427	1,595	1,301	1,361	1,140	1,297	1,361	1,264	1,481	1,293	1,389
	4 PM - 5 PM	1,376	1,367	1,430	1,619	1,782	1,303	1,537	1,336	1,304	1,385	1,537	1,669	1,368	1,500	1,204	1,387	1,437	1,425	1,502	1,291	1,431
	5 PM - 6 PM	1,413	1,381	1,411	1,628	1,765	1,287	1,522	1,355	1,304	1,363	1,515	1,646	1,368	1,475	1,184	1,317	1,419	1,326	1,537	1,225	1,372
	6 PM - 7 PM	1,163	1,142	1,196	1,350	1,549	1,118	1,384	1,073	1,051	1,112	1,244	1,401	1,068	1,239	940	1,100	1,132	1,042	1,214	985	1,194
	7 PM - 8 PM	916	897	889	1,011	1,157	917	1,200	842	840	833	943	1,071	793	1,124	751	848	905	855	946	769	1,023
	8 PM - 9 PM	791	758	758	919	952	763	978	692	703	726	825	903	690	941	680	740	786	750	792	591	827
	9 PM - 10 PM	662	634	647	771	755	662	775	582	583	603	706	731	581	732	582	635	635	641	643	515	640
	10 PM - 11 PM	540	535	556	626	655	526	538	530	514	499	556	599	492	532	506	552	568	550	550	421	460
	11 PM - Midnight	461	450	458	516	513	401	396	418	419	417	465	464	329	340	423	448	434	439	451	320	318

- NOTES:**
1. Refer to SP 104 for lane closure restrictions.
 2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
 3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

193 Ravenna

TO

209 Warren

Route	I-80
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	82	124	138	146	141	124	99	106	145	154	138	110	138	111	131	155	155	167	168	169	115
	1 AM - 2 AM	61	84	102	103	104	94	68	76	107	117	106	90	104	75	87	113	116	118	120	124	98
	2 AM - 3 AM	53	72	84	86	87	69	53	66	91	97	85	71	80	60	76	91	100	105	116	89	63
	3 AM - 4 AM	47	75	84	90	92	75	50	63	89	99	91	75	69	54	79	94	99	108	99	84	57
	4 AM - 5 AM	67	96	103	106	106	70	50	81	94	104	107	92	79	54	82	109	111	118	122	88	55
	5 AM - 6 AM	105	149	161	161	150	90	57	131	154	165	142	119	102	65	132	166	163	167	171	110	66
6 AM - 7 AM	193	248	258	261	241	154	92	233	281	273	225	186	157	100	248	270	266	279	277	170	101	
7 AM - 8 AM	252	330	359	350	333	168	113	325	380	382	319	279	188	137	349	377	388	387	382	220	158	
8 AM - 9 AM	287	383	390	385	380	233	155	378	419	423	356	318	261	197	389	428	447	455	447	300	225	
9 AM - 10 AM	322	403	421	420	407	313	223	420	437	433	361	347	347	274	413	436	455	490	497	401	319	
10 AM - 11 AM	346	424	419	417	420	379	308	441	440	433	389	402	420	378	464	465	474	514	551	479	480	
11 AM - 12 PM	383	442	445	454	434	453	386	475	445	448	410	427	499	496	478	474	505	532	577	557	600	
12 PM - 1 PM	427	445	465	472	468	461	440	498	473	483	440	462	501	519	527	510	507	566	599	546	653	
1 PM - 2 PM	439	464	487	520	476	466	485	528	497	475	440	489	481	538	516	530	536	590	629	542	675	
2 PM - 3 PM	464	490	484	527	518	444	507	530	531	518	479	549	468	533	563	556	551	642	666	528	648	
3 PM - 4 PM	509	524	538	560	562	460	479	612	584	575	528	588	467	547	592	607	611	690	728	529	676	
4 PM - 5 PM	564	561	586	629	629	432	463	640	661	640	567	632	438	540	634	669	667	729	791	494	649	
5 PM - 6 PM	496	549	586	614	590	397	434	625	624	590	544	633	416	511	608	650	683	725	796	472	574	
6 PM - 7 PM	387	446	460	458	488	356	334	461	497	453	396	494	356	426	484	474	530	586	649	408	525	
7 PM - 8 PM	312	333	339	334	363	275	291	356	373	339	309	387	311	348	345	358	383	428	470	328	421	
8 PM - 9 PM	235	269	280	282	289	245	233	293	313	277	239	296	257	285	310	321	318	366	366	265	326	
9 PM - 10 PM	208	219	235	247	231	205	172	251	237	244	202	245	207	214	258	264	280	295	283	227	266	
10 PM - 11 PM	186	188	213	211	194	158	140	217	212	195	159	216	173	181	256	221	257	252	252	181	191	
11 PM - Midnight	162	169	178	170	165	127	101	183	178	165	139	163	147	135	213	189	202	206	216	128	160	

Close 2 Lanes	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	164	248	276	292	282	249	198	211	290	308	275	220	275	223	261	310	310	334	336	338	230
	1 AM - 2 AM	122	169	205	206	208	188	136	152	214	234	212	179	207	149	174	226	232	236	240	248	196
2 AM - 3 AM	106	145	167	173	174	138	106	131	181	194	171	141	160	121	152	182	201	210	232	179	126	
3 AM - 4 AM	94	151	168	181	185	150	99	126	178	199	182	151	139	107	158	189	198	216	199	169	113	
4 AM - 5 AM	134	192	205	212	212	140	100	162	188	208	214	184	158	109	164	218	221	235	244	175	110	
5 AM - 6 AM	210	299	323	323	300	181	114	262	309	331	285	238	203	130	264	332	327	333	343	220	133	
6 AM - 7 AM	385	496	517	523	482	307	185	465	562	547	450	372	313	199	495	541	533	558	553	339	201	
7 AM - 8 AM	504	660	718	701	666	336	227	650	760	764	639	558	375	273	699	754	776	774	764	439	316	
8 AM - 9 AM	573	765	781	769	760	466	310	756	837	846	711	637	522	394	778	855	895	909	893	600	450	
9 AM - 10 AM	644	806	842	840	814	626	446	839	873	867	722	694	695	549	826	872	909	979	995	801	639	
10 AM - 11 AM	692	848	839	833	841	759	616	883	879	867	778	804	840	756	927	930	947	1,028	1,102	957	960	
11 AM - 12 PM	765	883	889	909	868	906	771	949	889	896	820	853	998	992	955	948	1,009	1,065	1,154	1,114	1,200	
12 PM - 1 PM	854	890	930	943	936	922	880	996	946	966	880	924	1,002	1,038	1,053	1,020	1,013	1,132	1,198	1,091	1,306	
1 PM - 2 PM	878	928	974	1,040	952	932	970	1,056	995	949	880	979	962	1,075	1,032	1,060	1,072	1,179	1,258	1,085	1,350	
2 PM - 3 PM	927	980	968	1,055	1,035	889	1,014	1,060	1,063	1,036	957	1,097	935	1,067	1,126	1,111	1,102	1,284	1,333	1,055	1,296	
3 PM - 4 PM	1,019	1,048	1,077	1,121	1,123	921	957	1,224	1,169	1,149	1,057	1,177	935	1,094	1,185	1,214	1,221	1,380	1,456	1,059	1,351	
4 PM - 5 PM	1,128	1,121	1,172	1,258	1,258	864	925	1,281	1,322	1,280	1,133	1,264	877	1,080	1,268	1,337	1,333	1,457	1,582	988	1,299	
5 PM - 6 PM	992	1,097	1,172	1,229	1,181	794	868	1,249	1,248	1,181	1,088	1,267	832	1,023	1,216	1,300	1,367	1,449	1,592	944	1,147	
6 PM - 7 PM	774	892	919	916	976	711	668	921	993	905	791	988	713	852	968	949	1,060	1,172	1,299	817	1,050	
7 PM - 8 PM	624	667	677	669	725	549	582	713	745	677	617	775	623	695	690	717	766	855	940	657	843	
8 PM - 9 PM	469	539	561	563	579	490	466	587	626	554	477	592	514	569	619	642	636	732	733	529	652	
9 PM - 10 PM	416	439	470	495	463	410	344	501	474	489	403	490	415	429	517	528	560	589	565	454	532	
10 PM - 11 PM	371	377	426	422	389	315	280	433	425	389	318	431	345	361	513	442	513	503	505	362	382	
11 PM - Midnight	324	338	356	340	330	254	202	367	356	330	278	326	295	271	426	377	404	412	432	256	319	

NOTES:

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3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

193 Ravenna

TO

209 Warren

Route	I-80
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	107	151	162	177	179	177	119	123	142	168	177	188	177	132	150	190	191	181	212	242	165
	1 AM - 2 AM	84	114	114	135	131	123	71	87	124	118	130	134	126	84	102	132	134	141	159	150	101
	2 AM - 3 AM	68	95	99	115	109	90	61	79	99	104	111	119	98	69	86	108	115	130	130	103	77
	3 AM - 4 AM	71	95	93	107	107	90	65	73	86	99	113	117	103	60	77	102	106	123	135	100	67
	4 AM - 5 AM	82	107	113	119	126	91	54	89	107	108	127	129	97	60	95	114	116	139	131	113	71
	5 AM - 6 AM	138	155	166	167	173	118	67	136	151	170	168	188	118	80	137	159	167	185	189	132	91
	6 AM - 7 AM	243	253	268	291	275	168	121	253	251	280	284	289	184	116	248	266	281	296	305	209	148
	7 AM - 8 AM	355	397	410	409	416	228	161	364	369	425	416	426	246	168	385	410	424	435	448	309	216
	8 AM - 9 AM	405	430	477	480	473	335	231	415	427	475	497	503	346	251	442	477	492	505	548	396	299
	9 AM - 10 AM	432	480	490	520	523	426	340	487	477	514	563	553	449	383	533	518	541	579	621	517	432
	10 AM - 11 AM	455	495	513	566	609	518	470	516	518	535	563	621	533	532	590	557	577	625	651	588	603
	11 AM - 12 PM	506	512	545	589	626	585	600	574	580	565	633	657	616	674	628	587	605	688	753	682	728
	12 PM - 1 PM	533	539	548	616	652	593	624	578	587	589	651	684	624	738	650	612	627	714	746	710	800
	1 PM - 2 PM	530	555	585	635	681	594	684	614	619	612	673	707	592	735	697	629	665	735	800	698	823
	2 PM - 3 PM	556	597	591	696	704	566	704	623	651	650	696	756	585	755	706	650	687	751	806	687	802
	3 PM - 4 PM	602	650	652	734	743	547	688	671	682	711	748	797	589	755	733	688	740	807	901	629	826
	4 PM - 5 PM	685	695	724	793	784	538	675	721	717	776	836	862	544	750	787	770	797	883	904	591	771
	5 PM - 6 PM	635	684	710	779	767	487	636	672	702	730	798	780	513	686	726	695	740	811	842	542	712
	6 PM - 7 PM	489	524	540	629	628	446	582	565	555	550	646	650	446	649	582	610	562	680	689	509	669
	7 PM - 8 PM	367	390	439	467	467	362	467	405	422	426	472	499	386	549	462	436	464	505	520	428	548
	8 PM - 9 PM	304	315	335	388	365	304	382	356	367	384	410	400	347	445	398	368	359	432	426	396	471
	9 PM - 10 PM	268	285	275	331	300	243	283	300	310	334	344	329	288	347	344	315	304	358	348	311	355
	10 PM - 11 PM	219	229	230	271	243	198	240	233	250	263	300	276	243	246	283	266	273	324	309	274	281
	11 PM - Midnight	178	185	198	206	222	162	140	190	192	216	222	241	175	171	233	220	232	258	276	219	198

Close 2 Lanes	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	214	303	324	353	358	355	238	247	284	335	354	375	354	263	299	380	381	363	424	485	330
	1 AM - 2 AM	167	228	229	271	262	246	143	175	248	236	260	269	251	168	204	264	269	282	319	299	203
	2 AM - 3 AM	136	190	198	231	219	180	121	157	198	209	222	239	195	137	172	216	230	259	261	206	154
	3 AM - 4 AM	142	190	186	215	214	180	130	146	172	197	225	233	205	121	154	205	212	246	269	199	135
	4 AM - 5 AM	163	215	225	238	251	181	109	178	213	216	254	258	193	119	190	228	232	279	262	226	143
	5 AM - 6 AM	276	310	333	335	346	235	134	272	303	340	336	377	236	160	274	318	333	369	377	264	181
	6 AM - 7 AM	487	507	536	582	551	337	241	506	502	561	568	578	368	232	497	532	562	591	609	418	295
	7 AM - 8 AM	710	794	819	818	833	457	322	728	739	850	831	852	492	335	771	819	848	871	897	619	433
	8 AM - 9 AM	809	860	954	960	945	671	461	830	855	951	995	1,005	692	501	883	955	984	1,010	1,095	791	597
	9 AM - 10 AM	864	960	979	1,041	1,046	851	680	974	954	1,028	1,127	1,105	898	765	1,066	1,037	1,083	1,157	1,242	1,034	864
	10 AM - 11 AM	910	989	1,025	1,131	1,219	1,036	939	1,031	1,037	1,070	1,125	1,243	1,066	1,064	1,180	1,113	1,153	1,249	1,302	1,176	1,206
	11 AM - 12 PM	1,011	1,025	1,090	1,178	1,252	1,169	1,199	1,148	1,160	1,129	1,266	1,315	1,233	1,347	1,256	1,174	1,210	1,376	1,505	1,363	1,457
	12 PM - 1 PM	1,065	1,077	1,096	1,231	1,305	1,187	1,249	1,155	1,174	1,179	1,302	1,368	1,247	1,475	1,300	1,224	1,254	1,428	1,492	1,421	1,600
	1 PM - 2 PM	1,060	1,110	1,169	1,269	1,362	1,189	1,369	1,229	1,239	1,224	1,347	1,414	1,183	1,470	1,393	1,258	1,331	1,469	1,600	1,396	1,646
	2 PM - 3 PM	1,111	1,195	1,183	1,391	1,407	1,133	1,408	1,246	1,303	1,299	1,392	1,511	1,169	1,510	1,411	1,299	1,375	1,502	1,612	1,374	1,604
	3 PM - 4 PM	1,205	1,299	1,304	1,468	1,486	1,093	1,376	1,343	1,364	1,422	1,496	1,594	1,177	1,509	1,467	1,376	1,480	1,615	1,801	1,259	1,652
	4 PM - 5 PM	1,369	1,391	1,449	1,587	1,568	1,077	1,350	1,442	1,435	1,552	1,673	1,724	1,089	1,500	1,573	1,540	1,595	1,765	1,808	1,182	1,543
	5 PM - 6 PM	1,270	1,368	1,420	1,559	1,533	975	1,271	1,345	1,405	1,459	1,597	1,559	1,026	1,371	1,452	1,390	1,479	1,622	1,684	1,084	1,424
	6 PM - 7 PM	978	1,048	1,079	1,258	1,256	892	1,165	1,130	1,111	1,099	1,292	1,299	891	1,298	1,165	1,220	1,124	1,361	1,379	1,018	1,338
	7 PM - 8 PM	735	780	878	934	934	723	934	810	844	851	944	999	773	1,097	923	872	928	1,009	1,040	856	1,097
	8 PM - 9 PM	608	630	670	776	729	608	763	713	734	768	820	800	694	890	795	736	719	864	851	793	943
	9 PM - 10 PM	536	570	550	661	599	486	565	599	621	668	689	658	575	694	687	630	608	716	695	622	710
	10 PM - 11 PM	437	457	460	541	486	397	479	466	500	526	600	552	486	491	565	532	545	647	618	547	562
	11 PM - Midnight	355	369	397	411	443	324	280	380	383	431	444	482	350	342	467	441	464	516	551	438	396

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

193 Ravenna

TO

209 Warren

Route	I-80
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	148	161	180	207	228	212	169	153	174	195	200	190	221	167	150	158	179	207	200	218	157
	1 AM - 2 AM	106	117	129	142	164	137	108	120	124	140	150	137	152	153	103	128	138	150	149	156	105
	2 AM - 3 AM	85	102	106	113	121	112	81	94	112	108	115	121	108	99	79	103	104	120	123	111	84
	3 AM - 4 AM	88	86	107	117	130	98	69	82	99	107	123	128	102	73	82	96	110	117	118	101	66
	4 AM - 5 AM	106	106	122	131	138	104	65	96	122	122	134	130	104	69	97	116	122	134	136	97	63
	5 AM - 6 AM	148	157	161	183	200	141	83	141	159	157	170	187	128	85	146	165	168	178	185	138	77
	6 AM - 7 AM	241	260	271	276	292	208	130	248	254	278	274	282	173	123	281	273	287	299	313	196	117
	7 AM - 8 AM	383	388	427	431	438	285	196	379	395	407	433	422	276	199	373	391	406	423	410	275	192
	8 AM - 9 AM	461	459	478	523	523	388	286	461	463	493	497	522	383	297	436	451	465	497	521	422	269
	9 AM - 10 AM	512	515	524	578	603	508	430	520	515	533	584	593	539	445	496	489	510	549	564	496	437
	10 AM - 11 AM	573	571	581	627	670	626	587	592	555	589	650	663	633	608	550	516	533	600	638	579	586
	11 AM - 12 PM	640	622	636	658	745	738	729	639	594	620	672	740	737	809	564	568	540	624	678	652	712
	12 PM - 1 PM	672	653	640	707	762	724	835	660	616	633	679	712	734	853	586	584	580	649	689	646	774
	1 PM - 2 PM	691	689	660	742	823	725	849	701	649	657	735	806	747	924	603	597	599	682	729	611	751
	2 PM - 3 PM	710	702	732	792	824	723	894	692	654	676	781	837	683	915	621	625	616	712	752	650	792
	3 PM - 4 PM	741	766	727	801	902	745	799	760	708	741	848	855	712	956	687	662	657	764	798	583	735
	4 PM - 5 PM	754	787	760	855	967	660	787	788	772	804	897	913	682	860	745	743	750	855	862	540	726
	5 PM - 6 PM	721	759	742	836	853	586	774	736	750	776	856	838	603	768	680	700	719	815	880	527	773
	6 PM - 7 PM	564	631	613	672	711	517	644	585	596	630	682	705	513	672	551	556	576	642	717	467	734
	7 PM - 8 PM	440	452	471	539	547	442	526	446	444	466	519	560	449	571	404	415	419	497	555	396	573
	8 PM - 9 PM	371	372	383	447	452	386	452	376	385	394	416	441	399	469	350	335	360	427	418	349	461
	9 PM - 10 PM	320	323	317	363	363	321	367	285	326	342	374	383	334	355	283	304	326	358	329	302	339
	10 PM - 11 PM	264	283	287	311	312	263	290	283	263	289	344	316	277	274	232	245	272	309	295	269	238
	11 PM - Midnight	215	238	230	265	260	215	221	225	226	227	259	287	225	209	194	197	230	257	248	249	196

Close 2 Lanes	Month	July							August							September						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	296	322	361	414	457	423	338	305	348	390	400	379	441	335	300	315	358	415	400	435	315
	1 AM - 2 AM	213	233	258	284	329	273	217	239	248	280	301	275	305	307	206	255	277	300	298	312	210
	2 AM - 3 AM	169	205	213	226	242	224	163	188	224	216	230	242	215	199	158	206	208	240	245	222	167
	3 AM - 4 AM	176	173	214	233	260	196	137	165	197	213	246	257	204	146	165	192	220	235	237	201	132
	4 AM - 5 AM	211	212	244	262	275	207	130	192	244	244	268	259	208	138	195	233	244	268	271	194	127
	5 AM - 6 AM	296	314	323	366	400	282	165	283	318	313	340	374	255	171	292	329	335	357	370	277	153
	6 AM - 7 AM	482	521	543	552	585	416	259	496	508	556	547	563	346	246	562	546	574	599	626	391	233
	7 AM - 8 AM	767	776	855	863	876	570	391	757	790	815	867	845	552	399	746	781	813	846	820	550	384
	8 AM - 9 AM	923	918	956	1,046	1,047	776	572	922	925	985	994	1,045	767	595	871	902	929	993	1,043	843	539
	9 AM - 10 AM	1,023	1,031	1,048	1,155	1,205	1,015	860	1,041	1,029	1,066	1,167	1,186	1,078	890	993	978	1,019	1,098	1,128	992	873
	10 AM - 11 AM	1,145	1,142	1,161	1,254	1,340	1,252	1,173	1,183	1,109	1,178	1,300	1,327	1,266	1,215	1,101	1,033	1,066	1,201	1,276	1,158	1,171
	11 AM - 12 PM	1,279	1,245	1,272	1,317	1,490	1,476	1,459	1,277	1,187	1,240	1,343	1,479	1,473	1,617	1,127	1,135	1,080	1,248	1,357	1,304	1,424
	12 PM - 1 PM	1,343	1,306	1,280	1,414	1,524	1,448	1,671	1,321	1,232	1,265	1,359	1,423	1,468	1,706	1,172	1,168	1,160	1,297	1,377	1,293	1,549
	1 PM - 2 PM	1,381	1,379	1,320	1,483	1,646	1,450	1,699	1,401	1,299	1,314	1,471	1,612	1,495	1,849	1,207	1,193	1,197	1,364	1,458	1,221	1,502
	2 PM - 3 PM	1,419	1,403	1,465	1,584	1,647	1,446	1,789	1,383	1,308	1,353	1,561	1,675	1,367	1,831	1,242	1,250	1,231	1,424	1,503	1,300	1,584
	3 PM - 4 PM	1,481	1,533	1,455	1,601	1,804	1,489	1,597	1,521	1,417	1,482	1,697	1,710	1,424	1,912	1,374	1,324	1,314	1,528	1,595	1,166	1,470
	4 PM - 5 PM	1,508	1,574	1,519	1,710	1,935	1,320	1,574	1,576	1,543	1,608	1,794	1,826	1,363	1,719	1,490	1,486	1,501	1,709	1,724	1,079	1,452
	5 PM - 6 PM	1,441	1,518	1,485	1,672	1,706	1,173	1,548	1,472	1,501	1,553	1,712	1,676	1,495	1,536	1,359	1,401	1,439	1,630	1,759	1,055	1,545
	6 PM - 7 PM	1,128	1,262	1,225	1,343	1,422	1,034	1,287	1,170	1,192	1,260	1,364	1,411	1,026	1,345	1,103	1,111	1,152	1,283	1,434	934	1,468
	7 PM - 8 PM	881	904	941	1,078	1,093	884	1,052	892	888	933	1,038	1,119	898	1,142	808	831	838	994	1,109	793	1,145
	8 PM - 9 PM	742	745	765	894	904	772	904	752	769	788	831	882	798	939	700	671	720	853	836	698	922
	9 PM - 10 PM	640	647	634	727	726	642	734	569	651	684	749	766	668	710	567	608	652	715	658	604	679
	10 PM - 11 PM	528	567	575	622	624	525	579	565	525	578	687	632	555	548	464	490	545	619	590	538	476
	11 PM - Midnight	430	476	459	531	521	429	441	451	451	453	518	574	450	418	388	394	459	514	497	498	392

NOTES:

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Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

193 Ravenna

TO

209 Warren

Route	I-80
Direction	EB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	144	177	168	170	194	182	140	125	144	154	173	170	158	145	113	163	166	160	162	146	108
	1 AM - 2 AM	98	130	124	130	163	137	104	99	115	122	113	135	122	114	80	126	126	115	133	119	83
	2 AM - 3 AM	80	110	99	117	132	106	85	73	98	105	106	123	99	65	69	104	99	111	108	96	67
	3 AM - 4 AM	76	112	104	114	128	98	76	71	100	108	110	104	94	56	70	97	105	105	109	84	56
	4 AM - 5 AM	95	119	124	122	136	100	64	92	116	115	129	134	94	59	87	127	122	130	132	91	57
	5 AM - 6 AM	150	168	176	176	185	122	77	163	170	180	183	183	135	72	140	174	184	186	187	109	70
	6 AM - 7 AM	279	297	287	310	298	168	118	289	316	314	306	319	187	128	256	297	294	298	299	168	115
	7 AM - 8 AM	359	404	406	404	403	237	166	381	393	397	406	411	250	176	343	372	383	395	400	211	146
	8 AM - 9 AM	431	451	476	487	485	333	257	420	454	463	462	487	343	262	390	433	455	454	446	284	224
	9 AM - 10 AM	491	500	523	520	576	466	373	489	479	487	517	510	442	422	425	459	490	494	473	385	361
	10 AM - 11 AM	546	520	548	570	624	548	552	515	468	517	542	566	551	546	448	496	530	515	529	471	511
	11 AM - 12 PM	598	569	556	592	681	640	696	552	511	535	588	626	622	669	486	535	561	534	552	549	654
	12 PM - 1 PM	624	570	566	663	700	623	753	571	534	554	619	645	616	721	503	549	567	556	595	547	682
	1 PM - 2 PM	599	580	594	654	718	613	775	588	556	572	619	669	617	709	515	563	591	575	594	552	716
	2 PM - 3 PM	651	609	624	697	753	611	770	604	565	584	667	704	604	713	529	589	602	632	622	533	697
	3 PM - 4 PM	739	670	652	745	773	583	775	685	633	631	718	737	572	746	598	675	656	668	686	525	669
	4 PM - 5 PM	744	758	738	818	856	528	720	704	713	714	746	821	566	676	640	702	707	724	722	509	615
	5 PM - 6 PM	687	688	723	778	817	500	699	647	657	665	754	780	531	661	587	666	650	686	683	462	566
	6 PM - 7 PM	505	555	567	648	683	431	659	503	516	544	576	619	457	580	461	522	512	532	572	404	522
	7 PM - 8 PM	383	405	415	476	492	377	526	374	384	393	441	479	384	434	364	401	385	432	419	328	430
	8 PM - 9 PM	316	327	367	404	416	308	458	320	310	302	370	374	312	343	296	331	328	347	346	269	334
	9 PM - 10 PM	296	277	305	342	338	275	357	274	247	270	309	321	256	252	294	287	314	302	292	223	254
	10 PM - 11 PM	237	242	254	310	279	226	227	251	214	276	262	300	230	187	262	228	278	246	242	193	187
	11 PM - Midnight	196	197	220	246	236	166	172	197	185	237	235	261	182	152	187	187	221	203	205	166	136

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	288	355	337	341	388	364	281	249	288	308	346	341	316	290	225	326	332	320	324	291	216
	1 AM - 2 AM	197	261	248	260	326	274	208	198	230	244	226	271	243	229	160	251	252	229	267	238	165
	2 AM - 3 AM	161	221	198	235	263	211	169	145	195	210	212	246	197	130	137	208	199	222	217	192	134
	3 AM - 4 AM	152	224	208	228	255	196	152	142	200	217	220	207	187	111	140	194	210	210	218	168	111
	4 AM - 5 AM	191	239	248	243	271	200	129	184	232	230	258	268	187	118	174	254	244	260	263	181	114
	5 AM - 6 AM	300	336	351	352	369	244	154	326	340	359	365	365	270	144	280	347	368	371	374	218	140
	6 AM - 7 AM	558	594	573	621	596	337	236	577	633	628	611	637	374	257	512	594	588	595	597	336	231
	7 AM - 8 AM	718	808	812	808	806	474	332	761	785	793	811	821	500	352	685	745	765	790	800	422	292
	8 AM - 9 AM	862	902	953	973	970	666	514	839	907	925	924	973	685	525	781	865	910	907	892	568	449
	9 AM - 10 AM	982	999	1,046	1,040	1,152	932	747	978	958	973	1,034	1,020	883	844	850	919	981	987	946	771	723
	10 AM - 11 AM	1,091	1,040	1,096	1,141	1,248	1,096	1,104	1,029	936	1,035	1,084	1,131	1,102	1,091	895	992	1,059	1,031	1,058	943	1,022
	11 AM - 12 PM	1,196	1,138	1,112	1,185	1,362	1,280	1,392	1,103	1,021	1,071	1,176	1,251	1,243	1,338	972	1,069	1,121	1,068	1,104	1,098	1,307
	12 PM - 1 PM	1,247	1,140	1,131	1,327	1,400	1,246	1,505	1,141	1,068	1,108	1,238	1,290	1,232	1,441	1,007	1,098	1,134	1,113	1,191	1,093	1,364
	1 PM - 2 PM	1,198	1,160	1,187	1,309	1,437	1,227	1,550	1,176	1,111	1,143	1,239	1,339	1,233	1,417	1,029	1,125	1,182	1,151	1,187	1,103	1,432
	2 PM - 3 PM	1,302	1,218	1,247	1,394	1,505	1,222	1,539	1,208	1,131	1,167	1,333	1,408	1,209	1,427	1,058	1,177	1,204	1,263	1,244	1,065	1,393
	3 PM - 4 PM	1,478	1,340	1,305	1,491	1,546	1,165	1,549	1,369	1,267	1,262	1,436	1,475	1,144	1,492	1,196	1,350	1,313	1,335	1,373	1,051	1,339
	4 PM - 5 PM	1,487	1,516	1,476	1,636	1,713	1,055	1,439	1,408	1,425	1,427	1,491	1,643	1,132	1,351	1,279	1,403	1,415	1,447	1,445	1,017	1,230
	5 PM - 6 PM	1,375	1,376	1,447	1,556	1,634	999	1,398	1,293	1,315	1,329	1,508	1,560	1,062	1,321	1,174	1,332	1,299	1,372	1,365	924	1,132
	6 PM - 7 PM	1,011	1,110	1,135	1,295	1,366	861	1,317	1,006	1,032	1,088	1,151	1,238	914	1,161	922	1,044	1,023	1,065	1,145	807	1,044
	7 PM - 8 PM	765	809	829	952	984	753	1,052	748	768	785	883	957	768	869	728	803	769	864	837	655	859
	8 PM - 9 PM	631	654	735	807	831	616	917	640	619	603	739	749	623	687	592	662	656	693	692	538	669
	9 PM - 10 PM	592	555	610	684	676	550	714	547	494	540	617	641	512	504	589	574	628	603	584	446	508
	10 PM - 11 PM	473	484	508	620	558	451	454	502	428	551	524	601	460	374	524	456	555	491	484	387	373
	11 PM - Midnight	392	394	440	493	471	333	343	394	370	475	470	521	364	303	374	374	442	407	409	332	271

NOTES:

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Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

209 Warren

TO

193 Ravenna

Route	I-80
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

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Revision Date: 9/1/2022

Close 1 Lane	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	81	153	160	167	166	139	84	105	173	172	160	137	144	108	129	179	178	177	176	148	95
	1 AM - 2 AM	62	133	123	133	125	103	64	77	138	141	129	102	108	71	92	149	142	137	136	117	77
	2 AM - 3 AM	52	126	105	115	117	88	48	67	128	122	114	103	82	52	72	123	120	123	123	91	60
	3 AM - 4 AM	61	119	119	123	117	92	46	69	120	123	113	108	83	51	77	128	122	123	116	86	55
	4 AM - 5 AM	74	121	136	139	143	95	46	94	147	149	137	123	95	52	104	142	152	151	154	93	53
	5 AM - 6 AM	138	206	221	227	207	108	53	181	234	237	208	181	117	60	187	247	241	243	238	123	59
	6 AM - 7 AM	239	341	370	367	344	136	63	323	406	387	344	289	139	76	312	416	399	405	379	161	79
	7 AM - 8 AM	299	419	445	446	418	157	81	416	505	478	421	362	182	96	421	509	504	513	484	191	102
	8 AM - 9 AM	289	445	447	460	427	208	107	398	512	499	432	380	224	145	395	520	492	509	471	239	131
	9 AM - 10 AM	274	418	425	439	400	291	156	364	476	472	414	382	306	197	379	484	478	486	473	278	184
	10 AM - 11 AM	296	423	421	414	421	355	232	389	460	445	416	397	397	279	384	456	469	471	485	424	282
	11 AM - 12 PM	311	446	425	430	440	438	297	400	461	457	405	422	453	371	403	467	473	505	524	464	408
	12 PM - 1 PM	319	466	430	465	472	439	351	413	470	457	420	466	485	428	426	487	495	528	565	514	474
	1 PM - 2 PM	349	485	449	474	496	467	404	435	472	468	419	505	497	463	451	507	520	542	607	531	555
	2 PM - 3 PM	374	505	476	497	519	483	440	467	501	483	445	515	495	500	483	530	541	571	641	536	594
	3 PM - 4 PM	402	540	505	523	552	502	474	514	518	519	455	552	493	532	521	553	577	596	687	536	643
	4 PM - 5 PM	454	553	533	550	591	478	477	526	526	544	478	564	477	561	556	562	609	655	707	529	688
	5 PM - 6 PM	444	546	538	536	589	451	437	556	550	537	468	571	458	555	579	558	622	639	718	498	700
	6 PM - 7 PM	360	444	438	440	501	381	416	442	439	421	377	488	399	498	491	490	513	541	623	433	648
	7 PM - 8 PM	323	350	345	356	386	306	326	368	369	350	298	386	323	415	389	411	407	447	484	369	556
	8 PM - 9 PM	285	310	309	314	324	253	265	341	330	293	272	324	257	333	355	343	360	373	397	297	424
	9 PM - 10 PM	240	263	263	256	274	215	203	276	277	263	224	262	233	261	295	281	298	321	316	235	344
	10 PM - 11 PM	217	233	238	228	206	166	148	254	243	221	199	223	182	194	267	264	275	280	276	193	241
	11 PM - Midnight	177	183	183	192	171	119	108	209	184	188	146	168	145	152	214	215	208	214	196	148	170

Close 2 Lanes	Month	January							February							March						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	162	305	319	333	332	279	167	211	346	344	321	274	287	216	257	357	357	354	352	297	189
	1 AM - 2 AM	124	266	246	267	249	206	128	154	277	282	257	204	216	143	183	297	284	273	271	234	155
	2 AM - 3 AM	104	251	209	229	233	176	97	133	255	244	228	205	163	103	145	245	241	245	246	181	120
	3 AM - 4 AM	123	239	238	246	234	184	92	137	240	245	226	215	166	103	153	256	243	247	231	172	111
	4 AM - 5 AM	149	242	272	279	286	189	91	188	294	298	274	246	191	105	207	283	305	303	307	185	106
	5 AM - 6 AM	275	411	442	454	414	216	105	362	467	475	416	362	235	120	375	494	482	486	476	245	117
	6 AM - 7 AM	478	683	740	733	688	272	126	646	812	774	689	578	278	152	623	832	797	810	758	322	157
	7 AM - 8 AM	598	839	890	892	837	314	162	831	1,010	956	842	724	363	191	842	1,019	1,008	1,025	969	381	204
	8 AM - 9 AM	577	890	895	920	854	416	215	796	1,024	997	865	760	447	289	790	1,039	983	1,017	941	478	261
	9 AM - 10 AM	547	835	850	879	801	583	311	728	951	943	828	765	611	395	757	969	956	971	947	556	367
	10 AM - 11 AM	592	846	842	828	841	710	465	779	921	890	832	794	794	559	768	912	938	942	970	848	565
	11 AM - 12 PM	622	893	850	861	881	875	593	801	922	915	811	845	907	743	806	933	946	1,010	1,048	928	815
	12 PM - 1 PM	638	931	861	930	944	877	702	826	941	913	840	933	970	856	851	974	990	1,056	1,129	1,028	947
	1 PM - 2 PM	699	970	899	948	991	933	808	870	945	935	838	1,011	994	927	902	1,014	1,040	1,085	1,213	1,062	1,110
	2 PM - 3 PM	748	1,010	951	994	1,038	965	880	934	1,001	967	890	1,031	990	1,001	966	1,059	1,082	1,141	1,283	1,071	1,188
	3 PM - 4 PM	803	1,081	1,009	1,046	1,104	1,004	949	1,027	1,035	1,037	909	1,104	986	1,065	1,042	1,105	1,153	1,192	1,375	1,072	1,287
	4 PM - 5 PM	907	1,107	1,065	1,100	1,182	955	953	1,053	1,051	1,088	956	1,129	954	1,121	1,111	1,123	1,217	1,310	1,414	1,057	1,377
	5 PM - 6 PM	888	1,091	1,075	1,073	1,177	901	874	1,112	1,100	1,075	936	1,142	915	1,110	1,159	1,116	1,243	1,279	1,435	996	1,400
	6 PM - 7 PM	720	887	876	881	1,001	762	833	885	878	841	753	977	798	995	983	981	1,026	1,082	1,247	866	1,295
	7 PM - 8 PM	645	700	691	712	772	612	652	736	737	701	595	772	646	831	778	821	814	894	968	738	1,111
	8 PM - 9 PM	569	619	618	628	648	505	530	683	661	586	544	649	514	665	710	686	720	745	795	595	849
	9 PM - 10 PM	480	526	526	511	548	431	405	551	554	526	448	524	466	522	589	563	596	643	631	470	688
	10 PM - 11 PM	433	466	476	456	412	331	297	508	486	441	398	446	364	388	534	528	549	560	552	386	482
	11 PM - Midnight	354	367	367	385	342	238	217	419	368	377	292	336	289	304	427	431	416	427	392	296	340

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

209 Warren

TO

193 Ravenna

Route	I-80
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

NOTES:

- Refer to SP 104 for lane closure restrictions.
- If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
- If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Close 1 Lane	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	129	202	196	195	204	177	128	135	179	183	198	207	198	161	148	203	214	210	238	217	151
	1 AM - 2 AM	84	151	150	145	150	127	78	101	150	148	156	167	137	91	111	159	162	176	181	159	103
	2 AM - 3 AM	67	135	130	132	141	110	64	80	121	139	130	140	106	65	83	135	144	152	159	141	78
	3 AM - 4 AM	99	135	124	125	133	103	53	83	117	131	134	148	106	63	91	136	142	153	143	113	64
	4 AM - 5 AM	107	161	159	158	150	109	62	109	142	168	161	164	124	64	112	161	170	176	166	129	68
	5 AM - 6 AM	201	244	268	260	249	149	65	215	229	266	266	257	146	78	208	269	284	279	271	154	77
	6 AM - 7 AM	357	422	419	427	390	182	90	368	385	446	445	428	190	97	373	443	460	452	429	209	106
	7 AM - 8 AM	446	548	535	519	487	212	113	457	482	560	536	501	243	113	454	555	567	552	512	251	128
	8 AM - 9 AM	446	525	522	531	465	279	144	458	476	552	547	491	306	164	454	566	555	567	529	322	184
	9 AM - 10 AM	395	489	484	505	470	385	228	430	462	511	519	524	414	263	444	547	550	554	539	438	287
	10 AM - 11 AM	384	495	484	515	500	485	333	416	465	520	512	565	494	366	442	523	517	548	580	524	409
	11 AM - 12 PM	414	501	483	529	561	540	453	446	490	531	539	599	566	477	505	560	548	617	642	626	544
	12 PM - 1 PM	451	520	509	564	613	580	544	498	537	562	605	667	609	591	546	600	610	651	727	691	654
	1 PM - 2 PM	465	523	539	596	666	594	630	525	601	572	631	720	637	644	591	598	623	700	763	723	736
	2 PM - 3 PM	510	556	569	619	730	619	695	570	645	638	661	746	677	692	631	641	661	740	826	747	793
	3 PM - 4 PM	552	573	582	651	742	645	725	606	668	668	694	805	667	742	690	643	705	767	872	747	813
	4 PM - 5 PM	583	605	638	675	784	651	804	627	695	710	724	829	608	766	701	656	718	775	869	741	847
	5 PM - 6 PM	578	607	647	693	763	593	789	627	680	685	688	788	583	746	695	665	709	811	881	684	841
	6 PM - 7 PM	498	534	550	593	663	519	706	529	601	575	595	707	524	693	596	572	594	677	764	595	769
	7 PM - 8 PM	406	429	441	476	532	422	609	447	499	451	493	584	435	606	481	468	480	564	632	499	686
	8 PM - 9 PM	349	363	370	402	437	359	495	387	417	390	431	484	345	516	414	404	414	475	526	429	583
	9 PM - 10 PM	294	307	329	362	372	293	380	323	326	323	378	383	301	404	353	330	342	411	460	354	452
	10 PM - 11 PM	254	271	270	310	300	244	287	280	286	273	323	307	237	285	278	291	302	345	358	279	331
	11 PM - Midnight	207	219	226	255	211	170	189	228	228	228	250	260	186	202	236	237	252	306	283	218	235

Close 2 Lanes	Month	April							May							June						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	259	403	392	389	409	353	256	270	357	367	397	414	396	322	296	405	428	419	475	433	301
	1 AM - 2 AM	168	301	299	289	301	254	157	202	299	295	312	335	273	182	222	319	324	352	363	318	206
	2 AM - 3 AM	134	270	260	265	282	221	129	159	241	277	260	280	211	131	167	270	288	303	318	282	156
	3 AM - 4 AM	199	271	247	251	265	205	106	167	233	262	268	295	212	126	182	272	283	306	287	226	128
	4 AM - 5 AM	213	322	317	316	299	218	123	218	284	337	323	328	249	128	224	322	341	351	332	258	136
	5 AM - 6 AM	401	488	535	521	498	299	131	430	457	531	532	514	293	155	416	537	568	559	542	308	153
	6 AM - 7 AM	714	843	839	854	781	363	180	736	769	892	891	855	379	195	746	886	919	905	857	419	211
	7 AM - 8 AM	892	1,095	1,069	1,038	974	424	225	914	964	1,120	1,073	1,001	487	227	908	1,111	1,135	1,104	1,023	503	257
	8 AM - 9 AM	891	1,051	1,044	1,061	931	558	288	916	952	1,105	1,094	981	612	327	907	1,133	1,109	1,134	1,058	645	369
	9 AM - 10 AM	790	979	968	1,010	940	769	455	861	924	1,021	1,037	1,049	827	525	889	1,094	1,100	1,109	1,078	876	574
	10 AM - 11 AM	769	990	969	1,029	999	971	666	832	930	1,040	1,024	1,130	988	733	883	1,046	1,034	1,096	1,159	1,048	817
	11 AM - 12 PM	827	1,002	966	1,058	1,122	1,079	906	892	980	1,061	1,078	1,198	1,133	955	1,011	1,121	1,096	1,233	1,285	1,251	1,087
	12 PM - 1 PM	901	1,040	1,019	1,127	1,226	1,160	1,087	997	1,074	1,123	1,210	1,335	1,219	1,182	1,093	1,200	1,219	1,301	1,454	1,382	1,308
	1 PM - 2 PM	930	1,046	1,078	1,192	1,332	1,188	1,260	1,050	1,202	1,144	1,263	1,441	1,274	1,289	1,181	1,197	1,245	1,399	1,527	1,445	1,471
	2 PM - 3 PM	1,019	1,111	1,137	1,238	1,460	1,238	1,390	1,141	1,289	1,275	1,322	1,491	1,354	1,384	1,262	1,282	1,322	1,480	1,651	1,495	1,585
	3 PM - 4 PM	1,104	1,146	1,165	1,302	1,484	1,291	1,450	1,212	1,336	1,337	1,388	1,610	1,333	1,484	1,379	1,286	1,410	1,534	1,744	1,495	1,626
	4 PM - 5 PM	1,166	1,211	1,276	1,350	1,569	1,302	1,608	1,254	1,390	1,420	1,449	1,657	1,216	1,533	1,402	1,312	1,436	1,549	1,739	1,482	1,695
	5 PM - 6 PM	1,156	1,214	1,294	1,387	1,526	1,185	1,577	1,254	1,360	1,371	1,377	1,577	1,167	1,492	1,390	1,331	1,418	1,622	1,762	1,368	1,682
	6 PM - 7 PM	996	1,069	1,101	1,186	1,326	1,037	1,412	1,059	1,201	1,151	1,191	1,414	1,049	1,386	1,192	1,144	1,188	1,354	1,527	1,189	1,539
	7 PM - 8 PM	813	858	881	951	1,064	844	1,217	894	998	901	987	1,167	870	1,211	962	936	960	1,128	1,263	999	1,372
	8 PM - 9 PM	697	727	739	804	873	717	989	775	833	780	862	968	690	1,032	827	808	827	950	1,052	859	1,165
	9 PM - 10 PM	587	615	658	723	743	587	760	646	652	646	757	766	601	807	705	659	683	822	919	707	904
	10 PM - 11 PM	508	541	539	619	600	489	573	561	572	546	645	615	474	569	557	582	603	691	717	559	661
	11 PM - Midnight	414	437	453	510	422	339	377	455	456	455	501	520	372	404	473	473	503	612	566	435	471

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

209 Warren

TO

193 Ravenna

Route	I-80
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	152	183	222	214	230	210	174	175	217	208	219	230	221	142	135	196	199	190	206	227	139
	1 AM - 2 AM	114	145	171	175	169	158	106	125	169	166	161	171	162	100	98	151	153	159	157	161	91
	2 AM - 3 AM	83	118	146	149	155	127	77	100	147	135	154	146	129	77	87	118	139	130	138	123	70
	3 AM - 4 AM	89	121	130	134	144	114	72	90	149	130	151	134	113	63	87	122	124	136	134	113	65
	4 AM - 5 AM	115	139	168	172	169	120	69	112	163	168	168	164	125	66	110	143	149	150	158	127	59
	5 AM - 6 AM	206	236	276	284	265	155	79	208	275	257	262	271	147	75	197	236	245	259	258	141	73
	6 AM - 7 AM	369	416	428	421	410	199	101	359	432	431	434	408	188	93	364	412	402	439	409	195	92
	7 AM - 8 AM	446	487	520	531	498	223	119	456	566	533	537	513	228	116	435	508	512	527	513	232	133
	8 AM - 9 AM	443	523	546	564	511	306	172	459	567	567	575	521	324	183	428	503	518	534	502	306	196
	9 AM - 10 AM	416	506	553	541	535	407	275	443	556	549	559	547	432	287	407	490	506	516	511	409	311
	10 AM - 11 AM	461	508	541	576	584	518	394	456	546	554	578	588	535	409	421	481	488	518	522	510	428
	11 AM - 12 PM	505	546	565	613	662	621	533	524	576	589	618	683	649	567	445	511	501	538	590	612	527
	12 PM - 1 PM	578	591	614	671	736	719	667	566	578	607	676	737	730	666	495	530	519	572	657	644	605
	1 PM - 2 PM	590	610	643	714	787	734	758	615	623	646	738	814	765	702	535	559	561	609	712	666	616
	2 PM - 3 PM	608	656	669	761	831	789	790	668	664	672	760	862	783	786	585	604	613	649	796	646	664
	3 PM - 4 PM	654	672	706	812	862	793	861	682	681	709	806	903	770	821	613	608	628	685	812	677	731
	4 PM - 5 PM	691	703	720	810	880	779	920	698	710	764	820	936	816	876	649	641	683	759	869	648	736
	5 PM - 6 PM	684	712	724	822	882	718	909	709	697	735	831	903	759	905	647	663	667	765	877	626	727
	6 PM - 7 PM	584	590	615	676	768	654	804	616	592	636	715	794	671	831	546	554	552	643	771	547	719
	7 PM - 8 PM	486	490	518	574	661	541	723	494	486	524	602	654	562	716	433	440	432	510	618	455	659
	8 PM - 9 PM	430	413	418	495	534	446	590	427	414	456	507	496	463	580	359	377	370	448	465	379	556
	9 PM - 10 PM	360	366	368	435	447	369	455	346	347	388	428	416	379	438	316	318	311	387	377	340	449
	10 PM - 11 PM	306	309	308	346	372	297	334	292	298	313	352	383	305	323	270	272	276	338	342	263	305
	11 PM - Midnight	247	248	245	290	289	235	241	244	244	258	279	281	225	236	252	227	217	269	287	200	210

Close 2 Lanes	Month	July							August							September						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	303	366	443	429	460	419	348	350	435	416	438	461	442	283	271	392	398	380	412	453	279
	1 AM - 2 AM	227	289	341	349	339	316	213	251	338	332	321	342	324	200	197	302	305	318	315	321	181
	2 AM - 3 AM	166	237	293	299	311	255	153	199	293	269	308	292	257	155	173	236	278	259	276	246	141
	3 AM - 4 AM	177	242	261	268	287	228	144	181	297	259	302	268	226	127	174	244	247	273	268	227	129
	4 AM - 5 AM	230	278	336	343	337	240	138	223	325	335	335	327	250	131	221	286	298	300	317	253	118
	5 AM - 6 AM	411	471	553	568	531	311	157	416	549	513	524	541	295	150	393	472	491	517	517	281	147
	6 AM - 7 AM	738	832	856	842	820	397	203	718	865	861	868	816	375	186	728	823	804	878	817	389	185
	7 AM - 8 AM	892	975	1,039	1,062	997	447	238	912	1,131	1,067	1,074	1,026	457	232	870	1,017	1,024	1,053	1,025	464	266
	8 AM - 9 AM	886	1,047	1,093	1,128	1,022	613	343	917	1,133	1,134	1,149	1,041	649	366	856	1,006	1,035	1,068	1,004	612	392
	9 AM - 10 AM	831	1,012	1,106	1,082	1,070	815	551	887	1,112	1,097	1,119	1,094	863	575	814	980	1,011	1,031	1,023	818	623
	10 AM - 11 AM	921	1,016	1,083	1,152	1,168	1,036	788	912	1,091	1,108	1,156	1,177	1,069	819	842	962	977	1,036	1,045	1,019	856
	11 AM - 12 PM	1,009	1,092	1,130	1,226	1,324	1,241	1,065	1,048	1,152	1,178	1,236	1,367	1,299	1,133	891	1,022	1,002	1,075	1,180	1,224	1,054
	12 PM - 1 PM	1,157	1,181	1,228	1,342	1,473	1,439	1,334	1,133	1,156	1,213	1,352	1,474	1,461	1,331	989	1,060	1,039	1,145	1,313	1,288	1,210
	1 PM - 2 PM	1,179	1,219	1,286	1,428	1,573	1,467	1,516	1,229	1,246	1,292	1,477	1,627	1,529	1,405	1,070	1,118	1,122	1,217	1,424	1,332	1,231
	2 PM - 3 PM	1,215	1,312	1,338	1,522	1,663	1,577	1,579	1,337	1,327	1,345	1,520	1,724	1,567	1,572	1,170	1,207	1,226	1,299	1,591	1,292	1,327
	3 PM - 4 PM	1,308	1,343	1,412	1,625	1,723	1,587	1,723	1,364	1,363	1,418	1,612	1,807	1,539	1,642	1,227	1,216	1,255	1,370	1,624	1,353	1,462
	4 PM - 5 PM	1,383	1,407	1,441	1,619	1,760	1,559	1,839	1,396	1,419	1,527	1,639	1,872	1,632	1,752	1,297	1,282	1,365	1,518	1,737	1,297	1,472
	5 PM - 6 PM	1,368	1,424	1,448	1,644	1,763	1,436	1,818	1,417	1,394	1,471	1,663	1,807	1,518	1,809	1,294	1,326	1,334	1,529	1,753	1,251	1,454
	6 PM - 7 PM	1,168	1,180	1,229	1,352	1,537	1,308	1,608	1,231	1,183	1,271	1,431	1,589	1,342	1,661	1,092	1,108	1,103	1,285	1,541	1,094	1,439
	7 PM - 8 PM	972	980	1,036	1,147	1,322	1,083	1,446	988	972	1,048	1,203	1,307	1,124	1,431	866	881	863	1,020	1,237	910	1,318
	8 PM - 9 PM	860	825	837	990	1,068	892	1,180	854	828	913	1,014	993	926	1,159	719	754	740	896	931	758	1,111
	9 PM - 10 PM	719	732	736	869	894	738	911	692	693	775	855	833	759	876	632	637	622	774	755	680	897
	10 PM - 11 PM	612	618	617	693	744	594	667	584	596	625	704	766	609	646	541	544	552	675	684	525	610
	11 PM - Midnight	495	497	491	581	578	470	482	488	488	517	558	562	450	472	504	455	435	537	575	400	421

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

209 Warren

TO

193 Ravenna

Route	I-80
Direction	WB

Terrain	Level
Lanes Per Direction	3

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	136	203	187	194	216	204	136	123	188	183	169	181	176	117	107	191	184	172	181	157	99
	1 AM - 2 AM	101	170	148	155	160	145	97	86	150	152	148	153	128	104	82	144	154	142	143	123	78
	2 AM - 3 AM	85	136	144	139	140	109	74	69	138	123	136	128	112	61	66	129	117	120	121	105	52
	3 AM - 4 AM	87	139	137	142	137	107	60	83	136	128	138	126	106	58	72	131	121	125	128	108	57
	4 AM - 5 AM	111	153	152	156	157	110	63	102	156	155	160	155	116	54	96	155	153	148	149	97	55
	5 AM - 6 AM	188	262	249	259	239	138	69	191	247	255	270	242	137	63	176	251	248	250	235	133	69
	6 AM - 7 AM	348	410	415	421	405	174	82	336	413	412	421	394	182	86	307	404	406	408	380	165	80
	7 AM - 8 AM	432	521	503	498	479	199	108	437	517	510	511	479	219	108	396	482	482	479	473	203	94
	8 AM - 9 AM	445	553	521	527	506	280	170	431	536	517	504	495	283	162	374	533	489	514	477	260	135
	9 AM - 10 AM	394	509	497	514	495	396	262	411	504	491	513	485	380	249	366	499	483	499	476	327	220
	10 AM - 11 AM	408	514	499	501	528	489	388	428	492	499	519	527	467	346	397	489	497	495	492	416	337
	11 AM - 12 PM	458	531	514	535	592	567	503	435	520	500	509	574	553	444	414	513	513	506	540	509	434
	12 PM - 1 PM	501	532	535	579	642	614	610	491	540	503	550	634	581	543	426	526	539	521	586	546	522
	1 PM - 2 PM	547	573	551	626	722	615	652	501	561	533	588	661	578	584	472	559	589	571	599	570	586
	2 PM - 3 PM	564	599	592	666	774	637	704	544	595	556	631	716	609	599	516	594	603	564	661	580	630
	3 PM - 4 PM	617	613	634	722	805	656	753	562	606	598	672	745	621	659	540	613	649	589	705	616	673
	4 PM - 5 PM	650	637	664	752	838	620	746	627	605	640	716	786	647	722	554	652	679	667	702	616	698
	5 PM - 6 PM	662	647	663	764	832	611	736	632	613	639	711	775	593	713	550	616	666	616	712	581	661
	6 PM - 7 PM	554	549	566	641	737	538	676	511	497	529	591	669	514	609	447	525	538	491	573	472	581
	7 PM - 8 PM	442	431	424	489	563	436	587	411	404	399	452	518	384	550	365	407	441	416	459	367	503
	8 PM - 9 PM	386	371	366	445	469	362	476	333	340	356	398	446	336	468	330	359	383	364	388	290	403
	9 PM - 10 PM	323	313	314	377	371	318	382	287	283	292	346	350	283	363	284	312	312	315	313	249	315
	10 PM - 11 PM	263	260	272	308	320	251	266	259	251	244	271	289	238	262	247	272	280	271	270	204	227
	11 PM - Midnight	228	221	227	255	253	193	194	205	206	203	232	229	162	167	209	220	213	216	220	154	157

Close 2 Lanes	Month	October							November							December						
	Day	Weekday			Weekend				Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	272	406	374	388	432	407	272	246	377	366	337	363	352	233	215	382	368	345	361	313	199
	1 AM - 2 AM	202	339	296	309	321	290	194	171	299	303	296	306	256	207	165	289	308	284	285	246	157
	2 AM - 3 AM	171	271	288	278	280	218	147	138	276	245	272	255	223	121	131	257	234	239	242	209	105
	3 AM - 4 AM	174	278	275	285	273	214	119	165	272	256	276	251	211	116	144	262	243	249	256	215	114
	4 AM - 5 AM	222	305	304	312	314	220	125	204	313	309	320	310	232	107	191	309	306	295	297	194	110
	5 AM - 6 AM	375	524	499	517	478	276	138	383	493	510	541	485	273	125	352	502	496	500	469	266	137
	6 AM - 7 AM	695	820	830	843	811	349	164	672	826	823	842	788	363	172	615	808	813	815	759	329	159
	7 AM - 8 AM	864	1,042	1,005	997	957	398	216	874	1,033	1,020	1,021	958	438	217	792	963	965	958	945	405	189
	8 AM - 9 AM	889	1,105	1,042	1,054	1,013	560	339	863	1,072	1,034	1,007	990	565	324	747	1,065	978	1,028	954	519	269
	9 AM - 10 AM	787	1,018	994	1,027	991	792	524	822	1,009	981	1,026	970	761	497	732	999	967	997	951	655	439
	10 AM - 11 AM	816	1,028	999	1,002	1,057	978	776	857	983	997	1,038	1,053	933	691	793	979	994	990	983	831	675
	11 AM - 12 PM	917	1,062	1,029	1,069	1,184	1,135	1,006	871	1,040	1,001	1,018	1,148	1,106	887	829	1,026	1,026	1,013	1,080	1,018	868
	12 PM - 1 PM	1,002	1,064	1,069	1,159	1,284	1,229	1,220	982	1,080	1,006	1,101	1,267	1,161	1,086	853	1,052	1,078	1,041	1,171	1,093	1,045
	1 PM - 2 PM	1,094	1,145	1,101	1,252	1,445	1,230	1,303	1,002	1,122	1,066	1,176	1,321	1,157	1,167	945	1,117	1,178	1,141	1,198	1,139	1,172
	2 PM - 3 PM	1,127	1,198	1,183	1,333	1,547	1,274	1,409	1,088	1,190	1,112	1,261	1,431	1,219	1,198	1,033	1,187	1,206	1,127	1,322	1,159	1,259
	3 PM - 4 PM	1,234	1,227	1,268	1,443	1,610	1,312	1,507	1,125	1,212	1,197	1,344	1,489	1,242	1,317	1,079	1,226	1,298	1,177	1,409	1,231	1,345
	4 PM - 5 PM	1,300	1,273	1,328	1,503	1,677	1,240	1,492	1,255	1,209	1,280	1,432	1,572	1,294	1,444	1,108	1,304	1,359	1,334	1,403	1,231	1,395
	5 PM - 6 PM	1,324	1,293	1,326	1,527	1,663	1,222	1,472	1,265	1,226	1,278	1,422	1,550	1,294	1,426	1,101	1,232	1,332	1,233	1,425	1,162	1,322
	6 PM - 7 PM	1,107	1,099	1,132	1,281	1,474	1,075	1,352	1,022	994	1,058	1,181	1,338	1,028	1,218	894	1,049	1,075	982	1,145	944	1,162
	7 PM - 8 PM	884	861	847	977	1,126	872	1,173	821	808	797	903	1,036	768	1,099	729	814	882	832	918	733	1,006
	8 PM - 9 PM	773	741	731	890	938	725	951	667	680	711	795	892	672	935	661	717	766	728	775	580	805
	9 PM - 10 PM	645	626	628	754	742	636	764	573	565	584	692	700	566	725	567	623	624	629	626	498	630
	10 PM - 11 PM	525	521	543	615	639	501	532	518	502	488	542	577	476	524	495	543	561	542	541	408	454
	11 PM - Midnight	456	441	454	511	505	386	388	411	413	407	463	457	324	334	418	440	426	432	440	308	315

Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

218 Niles - Youngstown

TO

232 Youngstown

Route	I-76
Direction	EB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	88	116	137	137	133	118	88	118	135	151	140	120	130	88	134	147	145	158	158	151	97
	1 AM - 2 AM	72	102	113	115	120	95	65	93	123	131	126	99	101	67	103	122	129	130	133	119	89
	2 AM - 3 AM	69	92	112	114	113	87	51	77	117	125	109	92	91	59	93	115	111	127	139	108	76
	3 AM - 4 AM	69	111	122	124	131	89	49	90	130	136	130	106	87	46	102	135	135	137	146	105	56
	4 AM - 5 AM	91	118	131	133	146	80	60	113	129	132	129	122	93	59	107	146	135	153	166	115	62
	5 AM - 6 AM	153	186	211	208	195	91	53	198	200	223	189	159	125	62	206	227	218	236	243	133	68
	6 AM - 7 AM	260	315	333	326	329	150	83	346	354	363	311	264	167	93	348	355	379	390	392	186	94
	7 AM - 8 AM	281	365	394	388	370	193	112	398	419	423	357	306	218	140	398	412	437	420	442	258	144
	8 AM - 9 AM	305	424	410	420	407	270	180	454	463	455	391	345	295	218	475	494	511	521	533	364	260
	9 AM - 10 AM	380	465	441	467	477	384	266	498	493	458	419	414	412	313	514	500	527	589	650	507	387
	10 AM - 11 AM	403	481	459	469	501	471	387	537	488	485	444	481	544	445	559	537	536	604	718	610	625
	11 AM - 12 PM	448	485	460	486	504	552	468	543	489	470	456	515	620	598	558	509	549	605	737	702	768
	12 PM - 1 PM	483	458	462	490	524	545	531	564	497	481	476	560	596	614	588	529	543	621	719	672	812
	1 PM - 2 PM	511	472	497	522	542	546	580	584	515	487	478	590	576	646	568	550	533	655	774	654	901
	2 PM - 3 PM	523	510	489	553	601	523	637	574	550	524	507	689	561	667	614	594	591	700	833	653	823
	3 PM - 4 PM	556	526	537	565	614	562	570	616	570	555	556	686	536	658	588	612	607	743	860	632	872
	4 PM - 5 PM	589	504	518	607	639	474	524	589	592	584	542	705	489	649	582	596	604	712	851	575	839
	5 PM - 6 PM	504	519	530	577	636	424	481	605	586	575	550	724	447	632	575	604	631	739	879	512	725
	6 PM - 7 PM	382	390	402	435	526	363	379	447	439	402	393	576	383	487	458	419	492	597	732	431	620
	7 PM - 8 PM	310	317	327	350	385	271	307	353	342	334	331	451	322	398	347	347	390	454	537	331	494
	8 PM - 9 PM	242	279	271	292	313	224	255	301	304	285	253	336	246	317	292	337	305	389	413	255	380
	9 PM - 10 PM	207	214	226	266	253	193	177	250	256	241	221	265	194	234	266	287	284	341	326	216	302
	10 PM - 11 PM	188	204	202	225	207	156	146	214	224	204	176	224	149	194	250	230	247	263	273	165	209
	11 PM - Midnight	166	178	172	160	162	103	114	180	173	170	144	162	117	149	222	184	210	216	202	119	167

Close 2 Lanes	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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	6 PM - 7 PM																					
	7 PM - 8 PM																					
	8 PM - 9 PM																					
	9 PM - 10 PM																					
	10 PM - 11 PM																					
	11 PM - Midnight																					

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

218 Niles - Youngstown

TO

232 Youngstown

Route	I-76
Direction	EB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	126	144	157	169	188	156	107	149	133	159	168	176	180	116	166	189	182	171	196	238	152
	1 AM - 2 AM	91	122	130	140	137	128	70	106	132	138	141	159	126	85	126	152	144	150	180	167	96
	2 AM - 3 AM	92	120	117	144	136	98	54	106	120	131	139	146	116	74	101	136	136	161	162	135	78
	3 AM - 4 AM	95	134	137	148	154	116	64	94	117	139	153	155	130	66	109	152	152	165	184	140	75
	4 AM - 5 AM	119	147	146	169	167	108	59	123	140	139	163	168	123	63	123	138	154	179	170	156	87
	5 AM - 6 AM	224	220	235	242	243	140	62	227	210	254	239	270	140	85	236	239	252	270	288	193	120
	6 AM - 7 AM	385	372	388	415	403	194	119	389	361	411	425	427	238	133	411	400	407	415	474	302	173
	7 AM - 8 AM	417	449	474	446	479	277	172	439	426	495	496	517	309	201	485	467	497	504	546	401	273
	8 AM - 9 AM	482	482	522	543	573	419	270	508	500	564	557	593	416	307	563	544	565	590	679	535	406
	9 AM - 10 AM	512	554	554	620	687	548	457	605	566	605	677	720	583	494	695	606	649	707	817	692	602
	10 AM - 11 AM	553	573	598	657	792	673	597	612	608	617	678	788	661	690	753	669	687	770	905	803	832
	11 AM - 12 PM	577	562	592	674	798	751	760	659	666	654	754	812	764	860	778	684	695	814	967	910	996
	12 PM - 1 PM	587	566	588	692	783	724	796	667	669	635	741	846	744	937	778	669	706	836	974	934	1,066
	1 PM - 2 PM	581	564	597	699	831	724	849	711	702	662	776	876	720	953	823	710	732	864	996	892	1,099
	2 PM - 3 PM	592	639	634	796	871	701	862	703	743	706	801	927	728	979	832	737	802	908	1,008	852	1,056
	3 PM - 4 PM	616	650	654	800	874	678	857	695	757	752	849	912	730	1,011	829	755	798	936	1,091	769	1,152
	4 PM - 5 PM	622	616	644	839	870	614	816	702	721	707	856	940	646	971	791	727	769	951	1,014	704	1,054
	5 PM - 6 PM	596	633	676	816	869	548	798	635	697	705	830	876	592	911	711	689	746	848	912	593	947
	6 PM - 7 PM	454	486	501	658	713	472	711	563	566	543	684	749	492	813	597	578	570	747	765	579	833
	7 PM - 8 PM	364	397	412	521	554	386	583	418	448	430	513	583	380	693	477	446	486	569	624	467	728
	8 PM - 9 PM	299	309	330	446	408	300	439	359	387	397	465	468	355	542	412	386	360	471	480	406	585
	9 PM - 10 PM	271	297	285	371	345	235	323	308	333	342	413	365	286	411	373	335	311	418	398	317	435
	10 PM - 11 PM	236	235	239	310	269	184	289	245	261	277	321	295	245	268	292	280	280	341	333	268	316
	11 PM - Midnight	176	191	188	208	194	140	162	188	200	203	228	230	171	195	228	221	223	254	278	206	218

Close 2 Lanes	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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	11 PM - Midnight																					

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Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

218 Niles - Youngstown

TO

232 Youngstown

Route	I-76
Direction	EB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	169	165	176	203	213	195	151	166	166	189	186	198	190	160	147	150	181	209	182	180	140
	1 AM - 2 AM	137	131	152	158	176	146	111	134	125	164	159	157	154	139	110	126	142	154	156	148	98
	2 AM - 3 AM	107	131	133	145	153	135	85	118	139	142	148	147	125	96	94	121	128	147	138	119	74
	3 AM - 4 AM	121	131	145	161	182	132	75	106	137	149	154	175	119	78	99	125	141	155	165	120	57
	4 AM - 5 AM	141	128	148	167	182	130	79	125	150	151	166	163	122	77	124	154	158	167	178	126	67
	5 AM - 6 AM	237	242	245	277	293	179	103	244	244	239	260	278	162	96	250	238	251	271	277	160	84
	6 AM - 7 AM	394	384	424	429	430	277	162	388	364	410	410	430	221	144	368	359	358	396	407	220	125
	7 AM - 8 AM	490	475	532	515	561	362	249	468	469	500	503	494	346	245	438	429	443	475	484	314	238
	8 AM - 9 AM	541	534	558	580	648	527	368	557	524	568	564	621	471	372	508	517	515	564	601	535	349
	9 AM - 10 AM	655	654	654	714	787	696	588	653	602	638	719	732	714	583	617	575	554	630	735	641	608
	10 AM - 11 AM	738	719	695	770	899	873	822	743	640	691	805	856	835	827	680	596	587	707	780	768	828
	11 AM - 12 PM	824	736	727	775	990	956	1,001	779	676	714	792	970	930	1,072	679	629	589	694	804	811	921
	12 PM - 1 PM	797	738	715	818	956	912	1,091	779	683	695	822	886	916	1,021	675	629	624	701	810	778	945
	1 PM - 2 PM	826	783	710	846	1,023	868	1,048	854	717	738	820	989	901	1,132	685	650	621	760	853	771	942
	2 PM - 3 PM	828	815	825	915	1,024	889	1,126	823	731	756	863	1,063	815	1,133	705	678	670	789	913	764	1,012
	3 PM - 4 PM	808	856	824	895	1,073	892	1,008	868	778	822	991	998	912	1,180	690	668	692	792	906	681	946
	4 PM - 5 PM	757	796	766	889	1,141	797	1,010	790	746	778	926	1,011	830	1,055	690	674	688	818	887	602	890
	5 PM - 6 PM	681	717	734	860	965	650	1,049	723	695	745	864	935	723	1,015	594	649	665	793	954	620	917
	6 PM - 7 PM	547	646	610	694	847	575	805	585	558	623	713	799	592	903	523	477	535	623	760	525	866
	7 PM - 8 PM	456	491	462	595	623	497	648	472	454	474	553	659	480	715	391	408	410	524	603	436	689
	8 PM - 9 PM	389	381	401	498	515	416	527	401	389	406	447	515	419	590	359	330	359	433	464	359	544
	9 PM - 10 PM	335	353	330	398	409	331	402	307	327	353	393	423	331	426	292	294	313	387	364	303	394
	10 PM - 11 PM	286	293	297	330	357	280	310	296	272	295	356	336	270	321	231	242	276	316	299	257	252
	11 PM - Midnight	232	230	230	272	263	201	236	231	222	222	271	257	213	228	186	193	223	258	240	199	185

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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	11 PM - Midnight																					

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Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

218 Niles - Youngstown

TO

232 Youngstown

Route	I-76
Direction	EB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	147	160	143	153	173	156	120	132	142	136	156	168	128	124	118	143	150	157	148	134	90
	1 AM - 2 AM	105	133	126	132	147	131	87	110	123	127	118	142	107	107	93	125	142	129	143	121	74
	2 AM - 3 AM	98	136	125	141	159	121	77	89	126	129	128	148	109	72	85	129	127	133	133	110	68
	3 AM - 4 AM	97	149	138	146	165	111	65	103	139	150	136	149	110	55	87	131	140	137	148	105	50
	4 AM - 5 AM	129	140	153	151	172	116	68	121	152	141	160	170	105	54	112	154	157	155	167	104	65
	5 AM - 6 AM	249	245	248	255	262	128	87	247	221	250	246	241	145	76	200	222	230	252	255	115	65
	6 AM - 7 AM	368	372	360	397	397	184	124	364	369	390	376	411	191	127	344	383	356	379	380	173	112
	7 AM - 8 AM	424	445	460	454	459	278	186	423	425	443	442	470	300	209	396	417	432	432	439	245	160
	8 AM - 9 AM	499	499	532	553	579	437	332	491	521	521	532	566	426	320	450	487	512	500	505	337	290
	9 AM - 10 AM	596	581	582	604	712	604	532	591	550	550	589	601	562	556	500	530	549	550	571	470	469
	10 AM - 11 AM	665	583	602	684	797	690	738	625	511	534	643	687	669	701	514	556	595	585	638	585	660
	11 AM - 12 PM	719	611	638	683	827	798	926	671	555	585	642	785	769	868	554	570	626	579	673	655	843
	12 PM - 1 PM	757	618	629	716	847	751	986	662	563	574	673	799	764	884	545	576	613	587	675	650	891
	1 PM - 2 PM	643	613	643	748	865	744	1,004	696	571	579	669	780	725	887	569	580	625	587	703	642	910
	2 PM - 3 PM	715	639	710	782	947	754	1,005	680	571	600	738	871	726	895	567	632	657	724	737	651	921
	3 PM - 4 PM	784	665	672	830	885	674	1,027	711	614	615	770	846	688	952	595	633	680	672	756	633	855
	4 PM - 5 PM	696	714	705	822	910	598	947	688	617	648	749	868	653	828	577	661	668	725	765	593	754
	5 PM - 6 PM	656	687	679	820	891	565	918	645	603	633	761	863	601	806	562	614	609	672	730	491	666
	6 PM - 7 PM	478	519	534	660	768	475	817	486	454	511	555	723	513	700	412	480	491	516	599	445	599
	7 PM - 8 PM	388	389	418	512	589	378	643	359	354	371	452	539	416	498	335	375	365	440	456	345	490
	8 PM - 9 PM	303	313	352	414	466	326	518	323	296	273	383	408	315	380	295	328	317	342	366	256	373
	9 PM - 10 PM	304	286	298	359	359	285	383	277	246	234	322	343	251	277	265	281	314	319	301	213	271
	10 PM - 11 PM	258	243	251	312	283	220	253	249	227	268	245	294	193	203	255	250	269	252	244	179	202
	11 PM - Midnight	196	189	208	245	243	154	178	196	178	231	229	223	169	151	196	187	217	198	187	142	139

Close 2 Lanes	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
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Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

232 Youngstown

TO

218 Niles - Youngstown

Route	I-76
Direction	WB

Terrain	Level
Lanes Per Direction	2

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xxx Lane Closure Not Permitted

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Close 1 Lane	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	96	214	177	201	207	192	105	134	203	231	187	180	192	147	170	203	210	210	218	210	131
	1 AM - 2 AM	75	227	148	150	151	130	74	99	154	164	146	130	127	87	112	170	161	156	162	152	101
	2 AM - 3 AM	61	174	122	134	144	103	54	80	140	133	132	122	96	62	90	143	133	135	146	110	76
	3 AM - 4 AM	65	135	131	136	134	101	52	70	124	128	132	124	91	57	82	127	125	127	134	102	60
	4 AM - 5 AM	67	124	144	145	149	99	47	91	144	141	133	131	98	52	83	136	158	149	153	98	55
	5 AM - 6 AM	131	205	218	232	199	123	48	171	220	237	203	177	132	60	167	239	226	229	237	135	60
	6 AM - 7 AM	225	335	339	351	303	155	59	317	393	336	327	271	162	71	303	401	394	375	356	175	84
	7 AM - 8 AM	247	354	398	365	360	163	86	366	449	409	370	315	191	94	362	438	436	443	427	192	102
	8 AM - 9 AM	289	426	446	463	423	248	120	400	488	440	412	396	258	156	386	499	473	473	468	277	132
	9 AM - 10 AM	297	444	443	471	427	336	180	411	531	485	434	410	389	224	413	511	510	514	521	360	228
	10 AM - 11 AM	326	494	447	439	450	423	270	437	499	473	447	452	484	334	444	502	523	510	566	519	355
	11 AM - 12 PM	359	523	446	471	522	536	375	470	517	508	457	491	591	481	479	508	537	553	635	583	508
	12 PM - 1 PM	383	565	484	511	564	525	477	499	503	521	478	578	585	540	524	546	575	576	698	602	621
	1 PM - 2 PM	428	569	488	545	601	544	523	555	513	536	492	631	595	632	578	587	611	635	769	603	718
	2 PM - 3 PM	477	605	545	566	658	583	586	599	601	574	530	686	573	671	621	615	660	683	845	626	837
	3 PM - 4 PM	521	668	629	666	747	588	646	704	633	640	587	755	554	733	711	681	735	787	898	623	891
	4 PM - 5 PM	524	639	588	649	731	554	631	645	588	633	566	745	548	758	693	667	722	822	897	616	936
	5 PM - 6 PM	497	583	582	584	718	509	548	644	591	583	531	768	499	697	666	623	671	762	884	581	886
	6 PM - 7 PM	414	493	479	487	632	434	507	532	485	475	441	635	444	642	566	552	592	634	809	494	844
	7 PM - 8 PM	377	402	378	425	487	358	390	446	392	402	360	503	377	528	465	480	478	549	651	441	744
	8 PM - 9 PM	316	337	342	351	404	290	319	388	362	333	335	416	285	417	405	388	411	433	498	351	557
	9 PM - 10 PM	271	288	288	291	314	256	237	299	294	291	268	319	251	309	324	311	331	382	417	286	432
	10 PM - 11 PM	232	244	250	254	260	181	174	263	249	244	247	278	198	225	281	291	294	339	341	236	295
	11 PM - Midnight	202	220	216	236	205	138	125	234	214	222	188	221	154	174	239	262	237	259	243	164	215

Close 2 Lanes	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
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	11 PM - Midnight																					

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Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

232 Youngstown

TO

218 Niles - Youngstown

Route	I-76
Direction	WB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

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Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	172	237	230	233	256	240	196	182	214	212	257	272	268	165	197	241	256	270	291	294	205
	1 AM - 2 AM	113	162	165	168	181	161	93	124	171	152	180	204	170	98	146	180	189	211	209	205	130
	2 AM - 3 AM	91	138	136	151	168	140	80	92	138	152	141	168	138	80	111	146	162	186	186	175	95
	3 AM - 4 AM	105	132	127	136	142	117	65	90	112	130	131	154	124	71	101	128	142	158	147	142	80
	4 AM - 5 AM	99	154	146	147	161	116	60	97	139	150	154	168	128	72	108	147	160	167	168	148	77
	5 AM - 6 AM	175	227	246	234	226	156	75	192	209	248	232	225	143	69	186	238	262	260	247	171	73
	6 AM - 7 AM	344	393	401	398	366	195	91	344	371	419	410	386	210	99	341	407	416	419	411	213	101
	7 AM - 8 AM	386	453	450	465	436	248	129	378	418	494	499	442	284	124	410	468	502	494	463	281	164
	8 AM - 9 AM	396	510	488	513	471	333	177	426	458	540	523	497	380	183	443	549	548	553	526	395	203
	9 AM - 10 AM	436	532	516	546	520	457	271	460	488	551	571	591	486	308	496	585	592	620	602	525	336
	10 AM - 11 AM	448	523	522	551	596	608	424	512	517	568	591	680	647	450	535	564	572	629	685	662	540
	11 AM - 12 PM	503	546	556	600	680	705	600	561	554	600	635	746	720	608	626	642	626	725	828	836	751
	12 PM - 1 PM	571	580	597	643	767	738	746	631	622	656	696	886	763	757	690	667	709	774	938	887	882
	1 PM - 2 PM	591	580	630	696	851	744	876	654	717	668	780	964	760	847	775	678	734	865	1,019	942	1,020
	2 PM - 3 PM	663	641	656	750	977	771	997	725	769	772	835	1,005	822	911	839	759	808	919	1,127	994	1,070
	3 PM - 4 PM	726	719	738	852	1,030	799	1,034	837	894	878	931	1,103	823	1,024	955	846	885	1,023	1,179	974	1,108
	4 PM - 5 PM	726	731	795	849	1,021	804	1,156	795	859	852	930	1,084	747	1,023	936	813	908	1,012	1,180	952	1,195
	5 PM - 6 PM	677	687	739	838	993	743	1,127	762	853	834	874	1,061	709	1,037	881	779	866	1,022	1,113	904	1,153
	6 PM - 7 PM	576	611	664	723	902	644	987	669	732	689	737	950	628	951	761	703	741	887	982	783	1,059
	7 PM - 8 PM	496	503	535	611	714	544	845	577	619	551	641	820	546	791	616	573	615	749	866	690	949
	8 PM - 9 PM	425	415	438	487	583	474	672	490	497	479	578	646	419	683	531	502	522	658	724	598	796
	9 PM - 10 PM	376	359	382	450	488	377	477	393	380	390	480	510	364	517	445	409	440	567	610	483	599
	10 PM - 11 PM	294	301	308	371	359	298	392	340	331	316	409	405	298	361	356	353	372	463	455	372	429
	11 PM - Midnight	244	255	255	320	274	222	249	284	280	268	324	342	236	260	291	292	314	396	357	285	312

Close 2 Lanes	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
	6 AM - 7 AM																					
	7 AM - 8 AM																					
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	5 PM - 6 PM																					
	6 PM - 7 PM																					
	7 PM - 8 PM																					
	8 PM - 9 PM																					
	9 PM - 10 PM																					
	10 PM - 11 PM																					
	11 PM - Midnight																					

NOTES:

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3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

232 Youngstown

TO

218 Niles - Youngstown

Route	I-76
Direction	WB

Terrain	Level
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	192	226	279	287	293	293	207	226	263	253	270	304	309	187	178	226	221	234	243	299	175
	1 AM - 2 AM	155	172	205	211	205	202	144	185	192	190	182	214	216	134	123	152	166	169	191	196	110
	2 AM - 3 AM	113	135	159	163	194	162	99	121	160	144	167	182	163	98	97	125	148	145	157	147	88
	3 AM - 4 AM	101	119	139	147	172	138	89	101	146	135	161	151	141	73	96	131	131	143	148	126	70
	4 AM - 5 AM	110	141	177	179	186	137	81	99	166	174	166	184	135	73	102	142	147	151	170	129	57
	5 AM - 6 AM	180	219	245	251	245	154	78	190	254	236	247	254	145	78	185	227	239	250	255	155	71
	6 AM - 7 AM	327	363	378	385	384	197	104	338	399	390	389	376	195	92	334	386	358	403	369	205	82
	7 AM - 8 AM	403	436	469	472	471	249	129	412	519	498	470	467	272	141	371	437	449	444	463	256	127
	8 AM - 9 AM	414	545	555	557	531	363	204	462	564	568	543	578	403	204	422	493	499	501	480	358	220
	9 AM - 10 AM	456	565	590	594	617	504	339	509	611	607	650	636	548	365	442	526	538	553	539	511	351
	10 AM - 11 AM	565	559	604	663	701	656	499	581	630	639	665	742	703	520	494	532	528	570	627	649	460
	11 AM - 12 PM	611	619	673	733	815	802	722	695	645	701	727	848	870	734	553	574	558	619	734	780	626
	12 PM - 1 PM	702	674	713	789	954	939	896	726	670	726	815	967	951	836	614	598	594	651	814	815	728
	1 PM - 2 PM	756	717	776	875	1,010	984	1,034	795	722	759	887	1,048	982	888	690	653	640	695	908	837	768
	2 PM - 3 PM	794	810	819	981	1,099	1,041	1,082	862	803	822	935	1,099	1,003	987	749	707	725	779	1,053	783	844
	3 PM - 4 PM	921	893	942	1,052	1,158	1,064	1,177	941	863	910	1,034	1,171	939	1,037	773	760	767	875	1,076	809	970
	4 PM - 5 PM	897	872	902	1,018	1,155	1,037	1,254	909	858	928	1,051	1,184	1,000	1,110	803	748	790	921	1,090	783	969
	5 PM - 6 PM	828	860	874	1,035	1,141	962	1,244	908	828	867	1,037	1,149	928	1,188	746	727	721	887	1,077	745	865
	6 PM - 7 PM	734	721	750	916	1,064	869	1,102	795	704	771	934	1,026	864	1,080	655	649	612	752	968	678	980
	7 PM - 8 PM	634	615	642	785	952	738	988	621	596	656	803	918	742	932	551	518	523	627	831	555	885
	8 PM - 9 PM	530	511	527	659	749	629	810	538	490	565	651	689	592	746	436	428	426	540	633	484	755
	9 PM - 10 PM	423	445	474	562	625	492	599	421	406	479	568	563	489	580	382	380	367	470	520	420	588
	10 PM - 11 PM	369	383	369	444	493	388	434	337	344	389	438	487	388	408	318	313	323	403	423	302	376
	11 PM - Midnight	299	287	297	369	383	290	306	298	291	319	360	358	286	305	278	254	251	317	352	242	262

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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	7 PM - 8 PM																					
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	10 PM - 11 PM																					
	11 PM - Midnight																					

NOTES:

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3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

232 Youngstown

218 Niles - Youngstown

Route	I-76
Direction	WB

Terrain	Level
Lanes Per Direction	2

XXX Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

1. Refer to SP 104 for lane closure restrictions.
2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
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Close 1 Lane	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	175	257	227	234	262	268	181	152	225	209	176	220	222	138	132	216	212	198	201	194	119
	1 AM - 2 AM	140	202	156	165	197	182	112	106	200	163	159	191	170	124	100	158	179	153	157	146	95
	2 AM - 3 AM	126	148	154	148	165	129	89	80	161	131	163	158	128	75	88	152	142	139	155	140	62
	3 AM - 4 AM	98	135	128	145	149	122	66	86	139	125	127	142	120	60	77	146	135	141	140	120	56
	4 AM - 5 AM	112	137	150	151	170	124	65	103	158	168	160	156	120	58	95	160	161	145	165	117	59
	5 AM - 6 AM	183	254	247	267	240	148	64	182	245	223	269	249	147	65	179	253	256	255	246	149	65
6 AM - 7 AM	336	369	392	377	378	187	80	324	391	375	402	366	173	84	297	394	392	384	356	179	71	
7 AM - 8 AM	377	443	466	437	393	235	117	383	452	460	459	430	241	113	358	432	437	442	417	221	101	
8 AM - 9 AM	431	520	498	490	483	335	183	413	489	470	476	489	341	186	380	495	487	496	454	316	158	
9 AM - 10 AM	443	536	538	553	522	491	296	452	537	512	526	538	449	273	400	520	510	524	520	394	257	
10 AM - 11 AM	508	556	565	556	618	607	469	484	536	558	585	605	560	416	466	545	554	550	569	526	384	
11 AM - 12 PM	576	611	584	597	711	726	638	540	565	559	564	711	689	558	492	542	566	565	624	657	567	
12 PM - 1 PM	646	613	605	688	804	768	761	627	613	553	618	774	716	703	556	585	624	597	691	655	669	
1 PM - 2 PM	667	653	639	734	912	781	861	667	640	604	697	839	706	772	597	626	706	654	754	700	755	
2 PM - 3 PM	664	692	674	814	1,025	791	952	719	619	649	760	928	748	813	656	708	721	657	823	702	835	
3 PM - 4 PM	748	774	810	885	1,061	781	1,034	758	734	736	825	988	752	881	676	774	823	787	922	748	882	
4 PM - 5 PM	694	740	795	902	1,096	760	1,022	779	726	744	885	995	760	986	660	774	811	760	911	715	889	
5 PM - 6 PM	702	694	744	882	1,055	765	994	721	661	703	821	949	688	920	625	672	743	621	852	669	819	
6 PM - 7 PM	610	618	662	778	945	650	958	608	549	578	704	837	585	817	532	609	610	499	712	562	755	
7 PM - 8 PM	517	500	506	633	730	543	817	496	480	459	555	656	474	799	451	463	544	459	576	444	640	
8 PM - 9 PM	461	435	433	568	623	452	633	393	381	402	477	571	379	646	396	396	428	343	478	358	495	
9 PM - 10 PM	389	363	380	470	486	377	504	338	315	314	411	444	323	484	302	336	351	300	371	279	405	
10 PM - 11 PM	307	305	302	377	406	292	337	299	261	240	343	373	263	350	279	296	332	261	313	216	287	
11 PM - Midnight	264	244	257	325	309	224	253	241	236	197	297	279	187	214	238	254	257	228	274	190	209	

[illegible]

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

234 Youngstown - Poland

TO

241.26 PA State Line

Route	I-76
Direction	EB

Terrain	Rolling
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	95	123	143	140	144	127	92	127	139	155	146	122	139	95	139	152	149	165	170	160	103
	1 AM - 2 AM	79	110	121	126	126	99	70	104	130	140	136	102	111	71	115	128	136	137	135	131	94
	2 AM - 3 AM	72	105	121	127	124	95	58	86	134	133	119	99	104	66	97	128	123	143	149	114	86
	3 AM - 4 AM	86	129	136	139	144	99	56	111	142	146	146	123	96	54	123	150	152	155	167	120	70
	4 AM - 5 AM	125	158	165	168	179	94	73	168	171	173	178	154	113	76	165	184	178	192	211	126	77
	5 AM - 6 AM	211	247	280	271	262	107	71	270	272	293	247	213	146	82	283	299	285	306	306	154	86
	6 AM - 7 AM	327	384	405	404	388	158	98	452	441	458	383	323	186	109	454	457	474	489	481	213	118
	7 AM - 8 AM	354	465	477	458	438	231	147	487	529	526	439	376	265	179	505	517	540	529	540	304	172
	8 AM - 9 AM	378	496	501	507	490	326	223	539	530	558	471	414	365	264	571	583	601	610	622	423	307
	9 AM - 10 AM	438	538	510	531	550	454	344	592	579	546	487	500	484	406	605	591	617	679	777	584	495
	10 AM - 11 AM	462	550	525	540	577	550	468	605	559	556	489	561	622	550	625	610	606	682	833	698	750
	11 AM - 12 PM	502	539	507	535	568	620	574	609	533	532	510	581	715	734	625	573	604	669	821	793	897
	12 PM - 1 PM	541	527	509	549	579	633	615	617	550	543	519	637	707	723	644	593	590	686	797	771	927
	1 PM - 2 PM	559	537	551	577	607	642	645	644	567	556	534	671	701	750	622	598	599	730	861	771	999
	2 PM - 3 PM	575	550	550	592	668	635	702	632	602	573	562	754	678	751	652	651	647	756	894	754	933
	3 PM - 4 PM	594	556	559	603	667	663	641	638	615	595	593	736	657	743	614	657	636	803	902	745	976
	4 PM - 5 PM	610	528	527	628	670	599	583	603	627	611	583	752	612	734	603	630	616	751	918	674	943
	5 PM - 6 PM	528	505	515	558	669	523	521	613	590	564	548	770	558	724	567	626	620	720	924	606	831
	6 PM - 7 PM	403	394	412	451	555	434	403	462	440	423	414	616	456	556	478	446	507	608	771	511	685
	7 PM - 8 PM	317	346	344	374	440	338	332	376	354	349	354	482	399	445	373	372	408	485	580	398	564
	8 PM - 9 PM	265	295	295	314	341	269	273	320	334	318	273	364	299	347	320	351	328	418	450	294	436
	9 PM - 10 PM	218	232	240	266	275	218	187	265	264	251	235	289	263	257	282	300	295	354	364	249	337
	10 PM - 11 PM	194	219	211	246	232	174	153	226	234	225	183	258	186	212	264	244	260	286	300	189	228
	11 PM - Midnight	174	178	177	167	170	111	120	197	185	173	152	178	134	160	226	194	213	219	213	129	180

Close 2 Lanes	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
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Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

234 Youngstown - Poland

TO

241.26 PA State Line

Route	I-76
Direction	EB

Terrain	Rolling
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	140	151	160	174	192	167	116	155	144	165	174	179	178	123	176	195	182	174	197	237	165
	1 AM - 2 AM	101	126	137	143	142	130	68	116	136	140	145	164	129	91	132	157	151	158	181	180	96
	2 AM - 3 AM	104	133	124	149	147	108	63	115	131	141	149	159	120	77	121	142	146	171	174	148	92
	3 AM - 4 AM	125	152	157	167	178	128	75	120	134	160	163	176	139	77	135	164	167	183	206	158	81
	4 AM - 5 AM	169	183	181	205	202	126	76	182	172	180	198	210	141	85	174	179	198	216	205	183	113
	5 AM - 6 AM	317	291	302	313	310	172	85	312	280	325	320	329	163	110	322	314	333	350	352	235	146
	6 AM - 7 AM	511	480	493	509	480	235	142	498	444	506	520	511	272	175	518	476	503	505	557	354	204
	7 AM - 8 AM	538	559	584	558	564	337	205	556	532	622	614	594	371	261	619	591	620	625	637	485	331
	8 AM - 9 AM	576	585	638	647	658	513	331	632	596	677	671	705	489	394	679	640	692	700	780	631	489
	9 AM - 10 AM	615	645	634	725	802	649	527	698	659	698	783	840	676	597	821	718	748	825	932	826	703
	10 AM - 11 AM	636	654	689	727	887	776	725	705	692	699	763	895	757	822	846	760	780	865	1,006	908	977
	11 AM - 12 PM	659	640	664	765	885	860	885	750	745	743	837	889	875	1,012	888	752	781	905	1,076	1,015	1,170
	12 PM - 1 PM	647	630	654	751	852	831	921	729	749	709	823	914	846	1,065	850	753	780	924	1,067	1,061	1,193
	1 PM - 2 PM	646	635	674	775	931	833	954	774	766	733	860	943	840	1,086	909	769	809	953	1,107	1,037	1,187
	2 PM - 3 PM	652	705	706	876	933	827	978	759	807	767	887	990	854	1,056	910	809	862	985	1,057	1,001	1,096
	3 PM - 4 PM	657	698	699	843	921	829	982	723	814	781	883	950	862	1,097	871	795	854	978	1,139	889	1,240
	4 PM - 5 PM	636	639	676	862	938	751	963	727	742	732	890	985	771	1,063	811	779	809	984	1,078	811	1,168
	5 PM - 6 PM	595	638	662	822	930	643	937	639	716	700	863	914	691	990	730	698	768	866	977	700	1,067
	6 PM - 7 PM	474	495	522	666	765	555	789	563	587	566	711	793	565	877	625	603	599	775	831	651	912
	7 PM - 8 PM	380	412	427	536	598	442	637	446	485	460	536	629	458	745	510	470	524	598	677	541	804
	8 PM - 9 PM	325	324	347	464	434	358	480	377	402	405	492	504	409	593	441	411	393	491	541	473	645
	9 PM - 10 PM	289	300	302	396	384	278	374	320	342	359	420	380	326	439	385	343	328	439	430	370	466
	10 PM - 11 PM	250	245	254	323	297	215	303	258	278	303	341	328	270	281	319	299	300	359	367	306	331
	11 PM - Midnight	179	199	191	220	205	154	165	195	206	227	239	236	183	202	238	230	233	262	292	220	232

Close 2 Lanes	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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	7 AM - 8 AM																					
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	7 PM - 8 PM																					
	8 PM - 9 PM																					
	9 PM - 10 PM																					
	10 PM - 11 PM																					
	11 PM - Midnight																					

NOTES:

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Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

234 Youngstown - Poland

TO

241.26 PA State Line

Route	I-76
Direction	EB

Terrain	Rolling
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	175	173	181	198	219	207	166	180	173	187	190	202	204	160	157	158	181	211	184	196	140
	1 AM - 2 AM	148	141	158	165	180	152	117	145	132	173	161	163	157	143	124	131	149	165	163	158	101
	2 AM - 3 AM	116	143	140	152	164	148	90	127	153	153	160	159	129	102	100	137	143	161	154	126	83
	3 AM - 4 AM	142	147	165	175	200	145	94	128	152	166	180	193	129	86	124	141	154	173	178	134	61
	4 AM - 5 AM	198	178	192	213	219	157	97	179	201	193	203	199	150	99	173	199	192	208	214	149	90
	5 AM - 6 AM	336	326	324	369	362	227	131	345	322	322	338	347	190	124	337	317	318	343	344	200	114
	6 AM - 7 AM	496	467	511	523	513	314	193	495	438	495	510	508	265	178	471	459	447	489	474	256	158
	7 AM - 8 AM	623	602	650	630	645	438	303	588	588	608	619	588	408	302	552	521	543	584	575	368	298
	8 AM - 9 AM	662	648	669	698	748	619	447	676	642	672	668	702	542	462	613	603	603	672	693	562	450
	9 AM - 10 AM	735	768	752	827	900	798	717	775	721	737	840	852	761	701	727	659	628	733	813	697	760
	10 AM - 11 AM	838	811	801	881	1,003	974	978	854	729	789	899	960	907	963	749	670	656	781	859	845	1,006
	11 AM - 12 PM	880	816	810	845	1,052	1,055	1,104	862	755	788	858	1,067	1,013	1,197	748	704	655	771	887	903	1,068
	12 PM - 1 PM	864	803	800	869	1,021	1,026	1,150	854	759	765	908	979	1,008	1,051	725	674	672	775	898	849	1,071
	1 PM - 2 PM	883	840	796	890	1,112	957	1,067	912	792	814	886	1,073	1,025	1,134	719	714	680	822	930	841	1,034
	2 PM - 3 PM	865	850	890	969	1,076	956	1,121	883	780	817	902	1,135	930	1,153	766	723	722	850	1,005	845	1,099
	3 PM - 4 PM	818	868	845	913	1,107	967	1,006	894	810	859	1,031	1,035	1,101	1,214	719	702	717	826	961	784	1,047
	4 PM - 5 PM	783	849	831	894	1,171	906	1,011	795	779	801	1,003	1,053	989	1,130	681	697	703	856	930	707	982
	5 PM - 6 PM	691	741	758	872	1,031	724	1,098	721	704	749	873	990	853	1,103	585	628	655	798	997	724	960
	6 PM - 7 PM	563	654	638	703	893	642	856	598	571	634	746	857	662	976	520	494	538	637	803	585	893
	7 PM - 8 PM	471	518	486	611	659	541	703	492	470	486	576	689	558	766	415	441	421	535	643	504	734
	8 PM - 9 PM	419	416	426	518	556	473	559	422	410	426	485	545	468	631	385	358	385	468	504	419	569
	9 PM - 10 PM	352	369	343	425	451	377	420	315	340	362	409	453	371	447	304	309	325	403	390	353	410
	10 PM - 11 PM	297	303	307	355	381	316	325	299	285	309	376	353	296	329	262	262	291	327	327	284	255
	11 PM - Midnight	228	241	231	277	287	231	247	236	226	233	283	266	225	239	208	217	227	274	290	227	192

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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	7 PM - 8 PM																					
	8 PM - 9 PM																					
	9 PM - 10 PM																					
	10 PM - 11 PM																					
	11 PM - Midnight																					

NOTES:

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2. If the first arrow board will be within two (2) miles of the beginning of this section, then the previous section must also be checked for permission.
3. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the **LATEST** Permitted Lane Closure Time and lane closures must be removed (i.e. tear down operations) prior to the **EARLIEST** Prohibited Lane Closure Time.

Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

234 Youngstown - Poland

TO

241.26 PA State Line

Route	I-76
Direction	EB

Terrain	Rolling
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	152	159	156	157	179	164	127	136	149	145	164	172	133	133	127	148	154	157	162	137	97
	1 AM - 2 AM	114	145	141	141	153	135	88	120	133	138	141	150	115	114	103	139	144	137	153	131	76
	2 AM - 3 AM	114	147	136	155	169	126	81	101	135	134	136	155	116	76	97	138	137	147	143	117	73
	3 AM - 4 AM	123	163	160	162	182	121	76	122	148	160	155	171	117	61	110	152	157	152	164	113	60
	4 AM - 5 AM	178	181	194	196	206	136	85	168	179	179	200	203	122	71	160	196	193	197	207	125	84
	5 AM - 6 AM	334	306	322	327	326	154	109	326	296	331	322	312	160	98	275	289	302	329	312	133	87
	6 AM - 7 AM	477	462	446	495	477	213	151	469	458	486	478	512	219	150	436	469	462	460	459	193	134
	7 AM - 8 AM	525	548	591	553	560	329	219	536	524	556	556	562	353	254	501	518	539	546	515	309	207
	8 AM - 9 AM	606	589	639	658	658	474	388	584	591	599	631	655	498	389	552	565	603	573	573	405	357
	9 AM - 10 AM	691	652	662	703	821	647	603	673	633	625	679	695	651	665	592	605	648	644	692	556	578
	10 AM - 11 AM	757	648	677	765	871	762	850	695	590	594	720	764	770	830	604	627	661	644	730	667	806
	11 AM - 12 PM	776	671	708	775	910	858	1,029	732	615	663	716	871	869	988	618	632	678	636	751	748	982
	12 PM - 1 PM	808	670	671	782	916	815	1,081	703	603	619	725	868	846	987	583	618	683	663	749	733	1,001
	1 PM - 2 PM	648	666	723	835	927	823	1,093	735	618	634	747	866	822	965	617	653	688	639	793	741	1,022
	2 PM - 3 PM	635	684	767	857	1,016	840	1,101	735	615	644	804	928	813	971	616	687	708	783	820	765	1,007
	3 PM - 4 PM	649	695	704	854	929	775	1,112	733	626	652	803	907	793	1,034	630	685	727	720	813	752	947
	4 PM - 5 PM	679	727	727	850	947	728	1,039	708	636	656	756	908	777	908	599	693	680	744	844	713	838
	5 PM - 6 PM	668	647	672	848	905	676	995	657	589	620	775	905	693	897	577	618	599	681	780	602	736
	6 PM - 7 PM	506	516	551	672	787	543	900	512	457	515	584	759	573	758	437	484	503	527	640	503	641
	7 PM - 8 PM	408	406	441	534	637	444	687	379	378	389	470	584	468	521	361	384	395	454	498	404	531
	8 PM - 9 PM	329	336	372	448	497	372	538	334	331	288	399	453	357	403	329	352	336	378	398	296	400
	9 PM - 10 PM	311	296	309	366	380	328	394	282	251	174	325	364	297	296	281	300	324	343	338	268	287
	10 PM - 11 PM	275	255	267	328	305	247	260	259	232	203	259	312	212	208	264	276	285	263	272	200	212
	11 PM - Midnight	207	190	219	244	253	166	184	203	186	238	238	226	172	166	212	194	230	208	204	152	153

Close 2 Lanes	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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	7 PM - 8 PM																					
	8 PM - 9 PM																					
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	10 PM - 11 PM																					
	11 PM - Midnight																					

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Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

241.26 PA State Line

TO

234 Youngstown - Poland

Route	I-76
Direction	WB

Terrain	Rolling
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	116	268	200	214	235	224	147	156	227	291	209	211	235	188	200	235	245	229	252	268	189
	1 AM - 2 AM	90	298	153	160	166	151	98	114	173	181	164	144	149	113	132	185	169	172	175	171	126
	2 AM - 3 AM	69	188	128	139	150	111	65	90	139	135	139	124	115	75	102	148	133	137	149	122	95
	3 AM - 4 AM	73	146	131	142	135	101	62	82	131	128	134	128	96	69	92	132	131	139	140	111	70
	4 AM - 5 AM	68	128	146	146	156	110	56	99	149	139	133	139	111	60	94	146	161	156	163	104	64
	5 AM - 6 AM	128	207	219	227	203	132	58	166	212	224	206	177	142	74	161	232	223	225	241	147	67
	6 AM - 7 AM	224	324	335	342	294	159	79	320	370	320	318	266	174	87	295	392	388	375	355	193	104
	7 AM - 8 AM	290	395	440	405	399	189	112	399	500	434	420	354	226	123	412	486	486	474	473	241	144
	8 AM - 9 AM	325	477	509	512	466	303	145	458	557	514	477	438	325	190	454	580	553	556	547	332	178
	9 AM - 10 AM	351	529	521	539	495	438	220	491	607	571	501	475	479	286	488	600	589	607	597	469	284
	10 AM - 11 AM	379	574	518	523	537	538	329	517	577	562	516	527	620	411	526	594	606	604	669	624	453
	11 AM - 12 PM	413	616	529	563	611	667	456	554	598	597	531	570	742	591	558	597	625	652	744	704	613
	12 PM - 1 PM	453	652	557	582	659	648	572	585	577	613	558	654	730	671	611	612	666	659	816	715	746
	1 PM - 2 PM	492	640	577	631	710	678	607	641	590	614	565	726	738	767	676	680	699	729	893	720	835
	2 PM - 3 PM	551	705	630	670	785	710	683	703	698	669	620	806	715	797	720	711	762	792	963	752	979
	3 PM - 4 PM	631	785	755	783	897	699	752	826	773	775	703	892	686	866	846	823	883	940	1,079	737	1,007
	4 PM - 5 PM	635	772	733	800	889	670	730	808	739	795	715	917	687	889	850	815	879	978	1,090	740	1,064
	5 PM - 6 PM	606	718	746	715	882	637	649	814	751	718	659	948	630	828	825	791	834	947	1,098	701	1,047
	6 PM - 7 PM	513	614	602	602	754	527	573	680	612	629	541	785	555	758	702	690	730	787	1,005	610	969
	7 PM - 8 PM	446	468	461	507	580	430	443	538	473	479	445	626	492	615	558	559	577	641	787	543	863
	8 PM - 9 PM	362	396	403	418	478	363	367	464	409	393	392	491	386	488	466	457	478	516	592	436	648
	9 PM - 10 PM	333	329	348	357	386	317	277	372	348	358	324	389	328	368	385	380	394	445	494	366	506
	10 PM - 11 PM	260	280	281	304	319	256	196	307	283	283	290	332	262	268	324	357	340	383	419	301	337
	11 PM - Midnight	231	245	246	274	259	182	142	270	265	254	228	261	211	212	277	318	270	312	309	219	262

Close 2 Lanes	Month	January							February							March						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
	3 AM - 4 AM																					
	4 AM - 5 AM																					
	5 AM - 6 AM																					
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	8 PM - 9 PM																					
	9 PM - 10 PM																					
	10 PM - 11 PM																					
	11 PM - Midnight																					

NOTES:

1. Refer to SP 104 for lane closure restrictions.
2. If a Lane Closure will involve multiple sections, implementation of the lane closure (i.e. set-up operations) may not occur prior to the latest permitted lane closure time and lane closures must be removed (i.e. tear down operations) prior to the earliest prohibited lane closure time.

Revision Date: 9/1/2022

Ohio Turnpike and Infrastructure Commission Permitted Lane Closures

241.26 PA State Line

TO

234 Youngstown - Poland

Route	I-76
Direction	WB

Terrain	Rolling
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	208	254	253	265	301	296	269	206	244	243	302	326	312	215	235	274	289	301	321	342	268
	1 AM - 2 AM	138	170	177	181	198	190	115	140	180	166	192	217	187	123	166	198	206	233	228	237	164
	2 AM - 3 AM	101	143	138	157	173	154	102	103	141	150	143	170	155	100	126	146	158	186	199	194	107
	3 AM - 4 AM	119	133	134	142	154	127	72	101	120	139	141	167	133	91	112	133	150	167	161	159	95
	4 AM - 5 AM	103	162	149	152	174	132	68	109	143	155	161	173	135	79	111	149	162	169	175	157	86
	5 AM - 6 AM	175	223	245	235	229	164	88	192	209	243	222	234	158	74	194	241	262	260	256	187	85
	6 AM - 7 AM	336	376	382	385	359	219	112	325	355	406	397	365	244	120	325	381	405	404	408	261	132
	7 AM - 8 AM	447	517	505	510	493	311	160	435	471	547	538	485	342	163	453	525	557	539	550	355	226
	8 AM - 9 AM	472	590	600	595	554	428	230	490	517	615	590	556	447	228	533	643	638	637	625	477	285
	9 AM - 10 AM	514	623	610	634	610	577	344	546	565	638	657	688	585	360	603	678	683	717	735	655	428
	10 AM - 11 AM	529	624	611	650	703	753	500	602	615	658	697	784	778	549	645	653	678	747	817	817	642
	11 AM - 12 PM	582	641	654	720	788	858	722	652	658	709	750	860	854	729	723	741	728	815	977	984	904
	12 PM - 1 PM	677	670	704	755	879	879	869	720	719	750	788	982	938	887	784	763	826	888	1,059	1,033	1,051
	1 PM - 2 PM	693	671	733	794	967	888	1,006	753	805	778	885	1,072	895	990	877	787	854	987	1,121	1,097	1,165
	2 PM - 3 PM	748	733	740	855	1,107	908	1,138	839	886	878	955	1,109	949	1,053	969	863	929	1,048	1,213	1,131	1,212
	3 PM - 4 PM	835	848	842	990	1,188	936	1,154	978	1,021	1,025	1,093	1,237	949	1,157	1,098	984	1,018	1,138	1,264	1,135	1,237
	4 PM - 5 PM	872	885	945	1,020	1,223	949	1,285	955	1,002	1,022	1,103	1,245	892	1,173	1,095	965	1,072	1,172	1,282	1,099	1,328
	5 PM - 6 PM	861	873	931	1,042	1,184	894	1,259	952	1,018	1,024	1,055	1,238	840	1,180	1,079	954	1,049	1,201	1,183	1,049	1,277
	6 PM - 7 PM	704	756	823	878	1,074	788	1,113	804	857	864	902	1,130	761	1,084	912	842	888	1,043	1,096	934	1,192
	7 PM - 8 PM	593	606	643	723	842	685	967	673	703	656	751	924	661	907	718	650	736	882	984	810	1,045
	8 PM - 9 PM	498	486	503	569	667	591	779	565	571	553	681	746	531	772	611	589	610	763	813	705	885
	9 PM - 10 PM	429	423	454	523	580	478	558	463	440	458	564	599	477	584	522	484	510	642	703	577	669
	10 PM - 11 PM	335	370	350	435	440	376	443	402	384	354	484	472	394	411	409	400	436	535	549	449	486
	11 PM - Midnight	281	296	290	381	353	326	309	321	320	318	380	429	334	298	341	347	358	449	445	382	359

Close 2 Lanes	Month	April							May							June						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
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Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

241.26 PA State Line

TO

234 Youngstown - Poland

Route	I-76
Direction	WB

Terrain	Rolling
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

xxx Blocks highlighted this color are close enough to Capacity that a backup may result from a lane closure.

Close 1 Lane	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	229	254	318	339	324	358	256	282	294	287	296	362	379	248	212	252	247	255	276	354	230
	1 AM - 2 AM	178	185	227	222	226	243	175	221	204	201	199	239	255	168	146	174	179	183	206	233	143
	2 AM - 3 AM	120	142	164	166	207	181	118	138	161	146	170	189	185	113	106	128	149	150	171	160	103
	3 AM - 4 AM	114	122	144	157	181	148	101	115	152	140	171	155	152	83	108	137	140	146	149	145	87
	4 AM - 5 AM	115	145	172	183	196	148	87	109	166	173	164	184	147	82	106	146	152	156	172	145	63
	5 AM - 6 AM	180	221	245	249	255	165	87	192	246	230	245	250	153	89	185	230	231	241	267	167	86
	6 AM - 7 AM	318	356	375	382	388	231	140	328	388	379	400	393	216	109	338	382	364	396	374	241	114
	7 AM - 8 AM	436	483	518	522	542	316	178	446	567	533	505	514	322	192	428	504	499	507	546	332	167
	8 AM - 9 AM	494	611	642	643	605	446	267	517	654	648	628	645	483	248	500	565	572	581	582	465	265
	9 AM - 10 AM	542	660	695	682	711	611	413	587	710	695	733	726	738	467	542	608	633	660	670	626	400
	10 AM - 11 AM	644	649	696	764	819	782	605	669	712	746	760	840	929	664	586	625	616	670	756	800	526
	11 AM - 12 PM	706	708	773	845	916	952	834	774	733	789	828	941	1,050	875	633	663	656	714	846	894	722
	12 PM - 1 PM	782	757	820	885	1,042	1,058	1,013	823	753	825	907	1,039	1,075	927	688	689	684	734	907	901	856
	1 PM - 2 PM	858	804	889	961	1,090	1,119	1,131	890	815	844	982	1,116	1,123	978	766	753	714	794	996	940	872
	2 PM - 3 PM	893	923	922	1,078	1,157	1,171	1,191	951	909	912	1,032	1,164	1,087	1,062	833	802	806	873	1,160	905	958
	3 PM - 4 PM	1,039	1,026	1,077	1,158	1,237	1,200	1,275	1,052	976	998	1,131	1,229	1,045	1,090	861	882	872	1,025	1,200	931	1,087
	4 PM - 5 PM	1,060	1,047	1,038	1,141	1,272	1,189	1,367	1,049	999	1,036	1,156	1,259	1,118	1,187	947	871	936	1,064	1,245	921	1,072
	5 PM - 6 PM	1,004	1,039	1,054	1,198	1,269	1,123	1,367	1,060	977	982	1,174	1,261	1,052	1,288	909	907	875	1,068	1,249	859	962
	6 PM - 7 PM	886	847	883	1,058	1,225	1,010	1,241	925	836	902	1,075	1,179	979	1,205	785	770	742	906	1,155	819	1,105
	7 PM - 8 PM	724	703	750	917	1,075	872	1,073	720	697	748	912	1,053	858	1,022	651	611	630	740	1,004	657	970
	8 PM - 9 PM	605	592	600	759	845	736	899	615	560	640	739	786	693	850	517	500	508	634	732	579	812
	9 PM - 10 PM	489	511	555	645	722	595	665	482	473	545	648	659	592	666	445	442	431	553	618	490	617
	10 PM - 11 PM	415	448	424	521	579	476	491	390	391	442	511	574	477	465	368	373	364	471	489	367	422
	11 PM - Midnight	344	353	361	430	458	373	358	331	347	360	425	454	373	346	314	300	291	365	428	314	300

Close 2 Lanes	Month	July							August							September						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
	1 AM - 2 AM																					
	2 AM - 3 AM																					
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Revision Date: 9/1/2022

**Ohio Turnpike and Infrastructure
Commission Permitted Lane Closures**

241.26 PA State Line

TO

234 Youngstown - Poland

Route	I-76
Direction	WB

Terrain	Rolling
Lanes Per Direction	2

The traffic volumes shown are the average traffic volumes for each day of the week for the entire month; therefore, actual traffic volume may be higher or lower than the volume shown.

xxx Lane Closure Not Permitted

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Close 1 Lane	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM	207	312	265	264	308	322	246	174	261	230	190	260	261	183	166	239	235	222	231	237	164
	1 AM - 2 AM	194	224	166	183	222	218	138	126	243	173	190	211	193	156	119	174	188	165	165	159	116
	2 AM - 3 AM	146	162	159	152	174	147	108	95	170	133	156	162	141	89	101	155	144	144	153	145	77
	3 AM - 4 AM	111	141	135	142	159	133	78	97	147	136	130	151	127	76	93	160	144	146	157	126	64
	4 AM - 5 AM	115	141	155	153	174	130	74	108	158	166	167	169	127	65	97	166	163	148	174	123	65
	5 AM - 6 AM	185	242	246	262	241	157	77	181	245	215	261	251	161	68	182	250	256	253	246	162	74
	6 AM - 7 AM	326	355	382	370	356	195	92	323	379	358	386	361	181	96	311	387	376	367	352	197	81
	7 AM - 8 AM	438	497	524	496	446	264	152	435	512	496	523	494	264	136	410	482	488	505	464	259	117
	8 AM - 9 AM	508	587	576	564	535	420	245	485	550	543	549	552	382	215	423	569	547	545	520	360	193
	9 AM - 10 AM	523	619	625	627	583	603	411	525	629	606	602	606	523	338	478	612	601	590	606	496	296
	10 AM - 11 AM	581	651	644	655	735	749	595	564	621	632	666	708	658	519	572	653	645	633	670	641	465
	11 AM - 12 PM	666	693	678	681	801	876	786	626	660	650	670	813	822	672	599	634	670	666	736	787	673
	12 PM - 1 PM	738	693	700	785	914	907	915	720	687	643	707	868	855	824	636	677	714	679	795	788	790
	1 PM - 2 PM	717	734	711	835	1,010	903	980	734	706	711	789	939	834	900	692	692	787	760	894	837	880
	2 PM - 3 PM	730	798	778	935	1,145	888	1,056	820	701	748	885	1,040	885	934	747	831	805	770	978	826	959
	3 PM - 4 PM	803	912	950	1,033	1,198	885	1,120	897	863	873	960	1,123	898	1,025	795	930	972	939	1,078	880	1,010
	4 PM - 5 PM	784	878	940	1,031	1,245	866	1,129	916	840	897	1,036	1,147	873	1,107	782	939	967	879	1,087	833	1,004
	5 PM - 6 PM	827	864	909	1,058	1,248	856	1,119	881	825	850	976	1,085	819	1,038	799	852	898	707	1,046	805	967
	6 PM - 7 PM	722	741	793	926	1,111	729	1,081	754	666	712	853	986	714	945	679	748	767	629	887	680	893
	7 PM - 8 PM	610	584	611	728	858	625	921	602	560	552	649	781	569	910	553	558	641	527	691	552	745
	8 PM - 9 PM	530	487	506	642	709	547	712	472	445	450	559	656	462	706	460	464	501	364	560	442	598
	9 PM - 10 PM	458	431	458	549	569	467	562	404	363	345	473	536	407	540	366	398	426	318	438	353	484
	10 PM - 11 PM	340	353	346	435	481	381	390	343	305	258	394	437	318	396	323	351	381	307	389	294	332
	11 PM - Midnight	309	291	291	380	383	313	287	287	280	213	346	349	258	249	281	276	298	252	333	255	248

Close 2 Lanes	Month	October							November							December						
	Day	Weekday				Weekend			Weekday				Weekend			Weekday				Weekend		
	Day of the Week	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
	Hour	Traffic Volume per Open Lane							Traffic Volume per Open Lane							Traffic Volume per Open Lane						
	Midnight-1AM																					
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