

Temporary Traffic Control (TTC) Devices

TEMPORARY BARRIER/CRASH CUSHIONS

- Improper barrier wall flare
- Improper barrier end treatment
- Improper temporary barrier end transition with existing W-Beam or concrete barrier
- Non-standard or no object marker/vertical panel
- Reflector maintenance needed
- Reflector on barrier flare not allowed
- Barrier wall damaged or dirty
- Barrier delineation improper
- Inadequate or no crash cushion
- Improper installation of crash cushions
- Crash cushions damaged or dirty

ARROW PANEL

- None or Non-standard
- Malfunction (bulb-out, etc)
- Incorrect placement
- Incorrectly aimed (or misaligned bulbs)
- Not dimmed at night
- Not protected as in SHA standard
- Inadequate sight distance
- Wrong indication/display

SIGNS

- SHA's typical or TCP (for the current phase of job) not followed
- Non-standard type (material, size, color)
- Poor reflectivity
- Conflicting permanent & temporary signing
- Sign legend problem
- Duct tape, obstructed, damaged, dirty, overlay plate, non-standard
- Wrong message
- Inappropriate/ contradictory signs not covered/removed
- Sign support problem
- Sign missing or down
- Horizontal and vertical clearances

PAVEMENT MARKINGS

- None or non-standard markings
- Less than full complement of pavement markings/ delineation
- Unnecessary or conflicting markings not obliterated completely
- Failing of temporary markings/Raised Pavement Markers (RPMs)
- Less than required number of RPMs
- Improper alignment
- Incorrect skip size/space

CHANNELIZING DEVICES (CDs) (CONES, DRUMS, ETC.)

- Non-standard device (shape, density)
- Non-standard single or multilane taper
- Incorrect spacing
- Placed too far away from traffic (> 2 ft.)
- Damaged, dirty or non-reflective
- Improper alignment
- No CDs placed preceding barrier end sections
- Improperly weighted
- Missing or poor reflectivity

FLAGGERS

- Non-certified flagger
- STOP/SLOW paddle is non-standard
- Incorrect signaling device (flag)
- Incorrect flagging
- Wearing improper clothing
- No flaggers present (signs displayed)
- Improper distance from advanced warning sign to flagger

PORTABLE VARIABLE MESSAGE SIGNS

- Application does not meet SHA guidelines
- Incorrect or unapproved message
- Non-standard or unapproved VMS equipment
- Not protected as in SHA standard
- Improper placement
- Inadequate sight distance
- Too many messages

GENERAL

- Traffic Control Device is not NCHRP-350 approved or not
- Listed as an SHA "Approved Product"
- Lane closures do not have on-going operations/work
- Improper stopping or detouring of traffic
- Unprotected hazards on or adjacent to travel roadway
- Pavement drop-off not in compliance with SHA standards and special provisions
- Missing or non-compliant retro-reflective apparel (Type II)

TTC Operations

WORK ZONE IMPACT

Visible problems/conflicts

- Excessive Queues/Delays
- High Speeds/Sudden Speed Changes
- Pedestrian/Bicycle Issues
- Business/Residential Impacts
- Limited Sight Distance
- Coordination w/ Adjacent Work Zones
- Reduced Ramp Merge Area/Ramp Queues

INTELLIGENT TRANSPORTATION SYSTEMS (ITS) APPLICATIONS

Not operating as intended/conveying inaccurate information/message not readable

- Speed Display
- Queue Detection System
- Dynamic Late Merge System
- Travel Time Estimation System
- Advanced Speed Information System
- Utilization of PCMS/Overhead DMS signs

TRAFFIC OPERATIONS STRATEGIES

Not operating as intended

- Lane Closure Restrictions
- Transit Service Operations
- Signal Timing Operations/Coordination
- Temporary Traffic Signal Operations
- Equipment Storage/Parking Issues

SAFETY

Visible need for/incorrect usage/location of

- Protection Vehicle
- Maryland State Trooper

ACCIDENTS

Evidence/reports of accidents

- Rear End
- Sideswipe
- Turning
- Run-off-Road/Drop-off
- Head On
- Fixed Object

Note: Include any suggested applications/strategies that may be applicable for the work zone.

TEMPORARY TRAFFIC CONTROL INSPECTION RATING SYSTEM

RATING “A”

The Inspector has rated the work zone as an “A” based on the actual traffic control meeting the following criteria:

- All traffic control devices are properly installed and maintained in accordance with the approved and applicable Traffic Control Plan, SHA Standards, Specifications, and/or Permits.
- Positive guidance is provided by delineating a clear, unmistakable, route for drivers and pedestrians utilizing approved signs, markings, and delineation.
- Lane closures are installed only at the prescribed times, are performed safely and efficiently, and create a minimal amount of disruption to traffic flow by assuring that the number and duration of lane closures is only as needed.
- Those responsible for the temporary traffic control installation/removal (i.e. Traffic Managers) or those responsible for regulating one lane, two-way traffic flow (Flaggers) are properly trained and possess credentials/proof of registration on site.
- The project needs little or no further attention at this time.
- By employing the use of the “+” and “-“ symbols, the Inspector may rate the work zone higher (“+”) or lower (“-“) within this range.

TEMPORARY TRAFFIC CONTROL INSPECTION RATING SYSTEM

RATING “B”

The Inspector has rated the work zone as a “B” based on the actual traffic control meeting the following criteria:

- Traffic control devices are installed and maintained in accordance with the approved and applicable Traffic Control Plan, SHA Standards, Specifications, and/or Permits, with the exception of the need for corrections as noted on the Temporary Traffic Control Inspection/Rating Report.
- Positive guidance is provided with the need for corrections as noted on the Temporary Traffic Control Inspection/Rating Report.
- Monitoring and maintenance of Traffic Control Devices is performed at regular intervals, appropriate to the location and type of work zone setup.
- Lane closures are installed at the prescribed times, are performed safely and efficiently, and create a minimal amount of disruption to traffic flow, by assuring that the number and duration of lane closures is only as needed.
- Approved modifications are required to bring the work zone in compliance with the Traffic Control Plan, SHA Standards, Specifications, and/or Permits.
- Those responsible for the temporary traffic control installation/removal (i.e. Traffic Managers) or those responsible for regulating one lane, two-way traffic flow (Flaggers) are properly trained and possess credentials/proof of registration on site.
- If corrective actions are not performed within timeframes outlined on the Temporary Traffic Control Inspection/Rating Report, then a rating of “C” or lower will be given.
- By employing the use of the “+” and “-“ symbols, the Inspector may rate the work zone higher (“+”) or lower (“-“) within this range.

TEMPORARY TRAFFIC CONTROL INSPECTION RATING SYSTEM

RATING “C”

The Inspector has rated the work zone as a “C” based on the actual traffic control meeting the following criteria:

- Traffic control devices are not installed and maintained in accordance with the approved and applicable Traffic Control Plan, SHA Standards, Specifications, and/or Permits and corrective actions are required as noted on the Temporary Traffic Control Inspection/Rating Report.
- Positive guidance is not provided and there is a need for corrections as noted on the Temporary Traffic Control Inspection/Rating Report.
- Monitoring of the temporary traffic control zone, by the Inspector and at the request of the Administration, is necessary to ensure compliance with the Traffic Control Plan, SHA Standards, Specifications, and/or Permits.
- Traffic safety and flow are maintained, but is reduced due to non-compliance with the Traffic Control Plan, SHA Standards, Specifications, and/or Permits.
- Those responsible for the temporary traffic control installation/removal (i.e. Traffic Managers) or those responsible for regulating one lane, two-way traffic flow (Flaggers) are properly trained and possess credentials/proof of registration on site.
- If corrective actions are not performed within timeframes outlined on the Temporary Traffic Control Inspection/Rating Report, then a rating of “D” or lower will be given.
- By employing the use of the “+” and “-“ symbols, the Inspector may rate the work zone higher (“+”) or lower (“-“) within this range.

TEMPORARY TRAFFIC CONTROL INSPECTION RATING SYSTEM

RATING “D”

The Inspector has rated the work zone as a “D” based on the actual traffic control meeting the following criteria:

- Traffic control devices are not installed and maintained correctly in accordance with the approved and applicable Traffic Control Plan, SHA Standards, Specifications, and/or Permits. Corrective actions are necessary, as noted on the Temporary Traffic Control Inspection/Rating Report.
- Positive guidance is not provided and corrections are necessary, as noted on the Temporary Traffic Control Inspection/Rating Report.
- Those responsible for monitoring the temporary traffic control only do so regularly when mandated by the Administration.
- Unsafe conditions for drivers, workers, and pedestrians exist as a result of temporary traffic control non-compliance.
- Those responsible for the temporary traffic control installation/removal (i.e. Traffic Managers) or those responsible for regulating one lane, two-way traffic flow (Flaggers) are properly trained and possess credentials/proof of registration on site.
- If corrective actions are not performed within timeframes outlined on the Temporary Traffic Control Inspection/Rating Report, then a rating of “F” will be given.
- Action will be taken, up to and including project shutdown, if corrective actions in accordance with the Temporary Traffic Control Inspection/Rating Report are not performed.
- In cases of project shutdown, those responsible for the temporary traffic control must ensure that the roadway is restored to a condition where safe traffic flow exists, prior to cessation of work activity.
- By employing the use of the “+” and “-“ symbols, the Inspector may rate the work zone higher (“+”) or lower (“-“) within this range.

TEMPORARY TRAFFIC CONTROL INSPECTION RATING SYSTEM

RATING “F”

The Inspector has rated the work zone as an “F” based on the actual traffic control meeting the following criteria:

- Traffic control devices are not installed and maintained correctly in accordance with the approved and applicable Traffic Control Plan, SHA Standards, Specifications, and/or Permits. Corrective actions are necessary, as noted on the Temporary Traffic Control Inspection/Rating Report.
- Positive guidance is not provided and corrections are necessary, as noted on the Temporary Traffic Control Inspection/Rating Report.
- Monitoring and maintenance/replacement of temporary traffic control devices is not being performed.
- Unsafe conditions for drivers, workers, and pedestrians exist as a result of temporary traffic control non-compliance.
- Immediate action will be taken against those responsible for the temporary traffic control and the entire project will be shut down.
- If those responsible for the temporary traffic control installation/removal (i.e. Traffic Managers) or those responsible for regulating one lane, two-way traffic flow (Flaggers) are not properly trained and do not possess credentials/proof of registration on site, the project will be immediately shut down.
- In cases of project shutdown, those responsible for the temporary traffic control must ensure that the roadway is restored to a condition where safe traffic flow exists prior to cessation of work activity.
- Authorization from the appropriate SHA Division must be given before work can resume if the project has been shut down.