1 INTENT AND SCOPE

Road traffic poses an obvious and well-recognized hazard to employees working on or near roadways. Section 5(a)(1) of the Occupational Safety and Health Act, also known as the General Duty Clause, therefore requires protection for these workers.

The purpose of the traffic safety procedures described below is to protect workers at the University at Albany from exposure to vehicular traffic when working on or near roadways while facilitating the safe and orderly flow of all road users. These procedures apply to all work performed on or near University at Albany roadways during in-house operations and contracted services. Examples of such work include (but are not limited to) the following: tree pruning and removal, weeding, litter removal, drain repair, fence installation and removal, loading and unloading materials, and spill clean-up. University roadways have posted speed limits less than 35 MPH and are therefore considered low speed roads.

These procedures show the minimum requirements for safe traffic control setup based on requirements set forth in the National Manual of Uniform Traffic Control Devices (MUTCD) and the New York State Supplement to the MUTCD. Traffic control can be enhanced for situations that may require additional measures such as high traffic volume or restricted sight distance.

2 RESPONSIBILITIES

2.1 Employees
Employees must protect themselves when working on or near roadways by being alert during work operations and following the safety procedures outlined in this document. Employees must also notify their supervisor of any safety concerns or incidents related to their work on or near roadways.

2.2 Supervisors
Supervisors are responsible for the implementation of this program. Supervisors assigning roadwork are responsible for developing the Temporary Traffic Control Plan for that given assignment, including the use of PPE, warning signs, channeling devices, and other traffic control elements (see Section 5 below for more details).

2.3 Environmental Health and Safety (EH&S)
EH&S is responsible for the development of this program and is available as requested to provide guidance with its implementation. EH&S will also administer training relevant to this program.
3 REQUIRED PERSONAL PROTECTIVE EQUIPMENT

3.1 High-visibility vest
Workers performing work on or within 10 feet of an active roadway must wear a high-visibility vest meeting current ANSI Class II or Class III standards.

The high-visibility vest should always be the employee’s outermost layer. High-visibility vests must be clean and well-maintained. Dirty or damaged materials provide lower visibility.

3.2 Hardhat
Flaggers must always wear a hardhat when performing flagger duties.

Hardhats are also required for all employees in the work zone if overhead hazards are present or objects might fall from above.

3.3 Other PPE required by work hazards
Employees and their supervisors must identify other required PPE based on existing work hazards. Such PPE may include (but is not limited to) the following:

- Eye and face protection (e.g., when power tilling, breaking up rocks or concrete, spraying, dusting, or using chemicals).
- Task-appropriate gloves (e.g., when handling abrasive materials or chemicals such as fertilizer or pesticide).
- Respiratory protection (e.g., when airborne contaminants are present). See UAlbany’s Respiratory Protection Program for more details.

As necessary, supervisors should consult with EH&S to assess and select control methods to ensure a level of protection greater than the minimum required to protect employees from the identified hazards.

See UAlbany’s Personal Protective Equipment (PPE) Program for more details.
4 TEMPORARY TRAFFIC CONTROL SAFETY REQUIREMENTS

4.1 Fundamental principles of traffic control
The principles listed below provide a guiding philosophy of good temporary traffic control:

- Make traffic safety and temporary traffic control an integral and high-priority element of every project.

- Select the most appropriate Temporary Traffic Control Plan for each worksite. For most applications at UAlbany, this will be one of the two general plans included as Appendices A and B. Other Temporary Traffic Control Plans can be found in the Cornell Local Roads Program’s Work Zone Safety pocket guide. A blank Traffic Control Plan is included as Appendix C.

- Inhibit traffic movement as little as possible. Provide clear and positive guidance to drivers and pedestrians as they approach and travel through the temporary traffic control zone.

- Keep in mind that conditions may change as the work progresses. Inspect traffic control elements routinely and modify when necessary.

- Workers shall maintain situational awareness when working in proximity of traffic. This may include the use of spotters.

- Immediately address any incidents that occur within the Traffic Control Zone. Activities may include documenting an incident, providing a temporary spotter during the incident, or temporarily suspending the work until the incident can be managed.

- Train all persons that are involved with temporary traffic control.

4.2 Momentary work tasks on an active roadway
Based on an evaluation of site conditions by the worker, a worker may enter a travel lane without traffic control only very briefly, as traffic gaps allow, for very short tasks such as removing easily manageable litter from the roadway. Traffic speed, traffic volume, line of sight distances, egress restrictions such as barriers or walls, as well as lane and shoulder widths shall all be taken into consideration. The purpose of this evaluation is to determine if a formal Temporary Traffic Control Plan is required.

Even if no Temporary Traffic Control Plan is required, workers must always be aware of traffic, wear a high visibility vest, and remain facing traffic at all times when briefly entering a lane or shoulder. If facing traffic is not possible, a spotter must be used.
4.3 **Components of the Traffic Control Zone**

The Traffic Control Zone is the distance between the first advance warning sign and the point beyond the work area where traffic is no longer affected.

The components of a Traffic Control Zone are list below and described in the following subsections.

**Advance Warning Area** — tells traffic what to expect ahead. This is accomplished by using warning signs.

**Transition Area** — moves traffic out of its normal path. This is accomplished using channelizing devices such as traffic cones.

**Activity Area** — provides space for the actual work, workers, equipment, material storage, buffer space, and a protective vehicle (if used).

**Termination Area** — lets traffic resume normal driving.
4.3.1 **Advance Warning Area**

The Advance Warning Area tells traffic what to expect ahead. This is accomplished by using warning signs. For work which obstructs a traffic lane and/or shoulder, use a minimum of three advance warning signs:

- The first sign is a general sign to get the motorist’s attention (e.g., “ROAD WORK AHEAD”). This one sign may be adequate for minor changes that do not encroach on the travel lane.

- The second sign tells the driver what to expect (e.g., “ONE LANE ROAD AHEAD”).

- The third sign instructs the driver of what to do (e.g., a “FLAGGER AHEAD” or a pictorial flagger sign informs drivers to follow the commands of the flagger).

These signs must be located far enough in advance of the work area that drivers have sufficient time to react to them appropriately. On University roadways, the required spacing for advance warning signs is 100 feet between signs, as shown below. Advance warning sign spacings may be adjusted in order to accommodate side streets and driveways.

If there is a side road intersection/driveway or ramp within the work area, additional traffic control, such as flaggers and appropriate signs, may be needed.

Remove or cover the signs when they are no longer appropriate. Do not mislead the public.
4.3.2 Transition Area
The Transition Area moves traffic out of its normal path. This is accomplished using channelizing devices such as traffic cones. Traffic cones used on campus must be at least 18 inches in height.

When one lane of a two lane, two-way roadway is closed to traffic, the lane taper length is 100 feet. On University roadways, traffic cones in the lane taper should be spaced no more than 25 feet apart (at least 5 cones are needed per 100-foot-long lane taper).

4.3.3 Activity Area
The Activity Area provides space for actual work, workers, equipment, buffer space, and a protective vehicle (if used). Cone spacing in all parts of the Activity Area shall be a maximum of 40 feet apart.

- **Buffer Area** – separates traffic from workers and provides a recovery area for errant vehicles. No equipment, vehicles, or materials shall be placed in this area. On University roadways, the Buffer Area should be at least 155 feet.

- **Protective Vehicle and Roll Ahead Distance** – provide space for a protective vehicle, such as a barrier vehicle for stationary operations or a shadow vehicle for mobile operations.
  - If used, a barrier vehicle must be substantial in weight and must be placed closed enough to the operations to prevent motorists from intruding into the Work Area, but not so close as to have the barrier vehicle pushed ahead into the Work Area if hit from behind. This distance is known as the Roll Ahead Distance, which is 50-100 feet on University roads. No equipment, vehicles, or material shall be placed in the Roll Ahead Distance. If a barrier vehicle is not being used, then the Roll Ahead Distance is not needed.
  - A shadow vehicle is for mobile operations only. The driver shall remain in the vehicle and adjust the vehicle’s spacing as work progresses to ensure that the vehicle will not be pushed ahead into the Work Area if hit from behind.
  - Protective lighting: The protective vehicle’s 4-way flashers must be on, as well as an amber beacon light if available.

- **Work Area** – set aside for workers, equipment, and materials.

4.3.4 Termination Area
The Termination Area lets traffic resume normal driving. On University roadways, the Termination Area should be 100 feet. Like the Activity Area, cone spacing in the this area shall be a maximum of 40 feet apart.
4.4 Flagger
The role of a flagger is to move vehicles and pedestrians safely and expeditiously around temporary traffic control zones while protecting on-site workers and equipment.

Flaggers must be used in the following situations:
- One lane is alternately used for both directions of traffic
- The roadway is temporarily closed
- Traffic speeds need to be substantially reduced
- Information, such as changing or unusual conditions, need to be conveyed to drivers

4.4.1 Flagger requirements
The job of flagging in the work zone is a very important and demanding job. Flaggers should be physically able, mentally alert, and capable of giving guidance to the motoring public.

All flaggers must:
- Wear a high-visibility vest and hardhat, as well as any other required PPE as described in Section 3 above.
- Never stand in the lane being used by traffic. Instead stand next to the lane of traffic being controlled (i.e., on the shoulder or off the roadway). Stand behind three traffic cones for additional protection and visibility.
- Take a position where they are visible to approaching traffic (e.g., before a hill or before a curve).
- Face traffic to check the path and speed of approaching vehicles.
- Have an escape route planned in the event of an errant vehicle.
- Stay alert and focused on flagger duties. Never assist the crew with work activities or engage in any distraction such as using a personal phone or other device.
- Conduct themselves in a courteous but firm manner. Keep conversation brief and never lose focus on traffic. Tell motorists clearly what is expected of them.
- Notify their supervisor when problems arise.
- Remain on duty until properly relieved.
4.4.2 *Flagger equipment and signals*

The **stop/slow paddle** is the preferred signaling device and should be used wherever practicable. The **red flag** should only be used for emergency situations (until STOP/SLOW paddles can be obtained) or when flagging in the center of an intersection. For the safety of the flaggers, as well as that of motorists and fellow workers, flaggers must use proper hand signals when using the STOP/SLOW paddle or red flag, as shown in the table below.

<table>
<thead>
<tr>
<th>Use of Hand-Signaling Devices for Flaggers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STOP/SLOW Paddle</strong> <em>(Preferred method)</em></td>
</tr>
<tr>
<td>TO STOP TRAFFIC</td>
</tr>
<tr>
<td>Hold the paddle away from your body with the STOP sign facing traffic. Raise your free hand with the palm exposed to approaching traffic.</td>
</tr>
<tr>
<td><img src="image" alt="STOP Paddle" /></td>
</tr>
<tr>
<td>TO LET TRAFFIC PROCEED</td>
</tr>
<tr>
<td>Hold the paddle away from your body with the SLOW sign facing traffic. Motion with the free hand for road users to proceed.</td>
</tr>
<tr>
<td><img src="image" alt="SLOW Paddle" /></td>
</tr>
<tr>
<td>TO ALERT AND SLOW TRAFFIC</td>
</tr>
<tr>
<td>Hold the paddle away from your body with the SLOW sign facing traffic. Slowly raise and lower the free hand with the palm facing down.</td>
</tr>
<tr>
<td><img src="image" alt="SLOW Paddle" /></td>
</tr>
</tbody>
</table>
4.4.3 *Emergency warning signal*
Flaggers must have a pre-established method of warning workers in the Work Zone of danger (e.g., an errant vehicle). This signal may be a whistle or an airhorn. The method of emergency communication must be determined before work commences as part of the Temporary Traffic Control Plan.

4.4.4 *Communication between two flaggers*
Communication between the two flaggers is critical. The flaggers must either be able to see each other clearly or have two-way radio contact with each other. One flagger should be designated as the flagging coordinator in charge.

“All clear” signal
If visual contact is possible, then the “all clear” signal can be given by lifting your hardhat. When you give this signal, you are telling the other flagger that you have traffic stopped and it is okay to release traffic. If visual contact is not possible, flaggers should verbalize “all clear” over the radio to the other flagger.

Releasing traffic in your lane
To release traffic, first ensure that the flagger at the other end of the work zone has stopped traffic and given you the visual and/or verbal “all clear” signal. Check that no traffic is coming from behind you. You may then release your lane of traffic by turning the STOP/SLOW paddle to the SLOW sign and signaling with your free arm for drivers to proceed into the open lane.

Stopping traffic in your lane
Change to the STOP only when the approaching vehicle has plenty of distance to gradually stop. Once traffic is successfully stopped, give the “all clear” signal to the other flagger. In a long Traffic Control Zone, it may also be necessary to describe the final vehicle traveling through.

Normally, after you have stopped the first vehicle, you will remain on the shoulder or off the road in your normal flagging position. If additional vehicles arrive and they cannot clearly see your STOP paddle, then you may walk out to the center of the roadway so the additional traffic can see the STOP paddle. Do not cross the center line and remember to watch out for traffic that may be coming from behind you. Before releasing traffic, move back to the shoulder or off the road with the paddle remaining on STOP. Once back to your normal flagging position, turn the paddle to SLOW and motion traffic into the open lane.
5 TEMPORARY TRAFFIC CONTROL PLAN

A Temporary Traffic Control Plan is a specific plan for a specific site. Its purpose is to communicate to workers the proper placement of traffic control devices.

A Temporary Traffic Control Plan must be developed whenever traffic flow on a University roadway will be affected by work. The plan must address both directions of travel when appropriate. The degree of detail in the Temporary Traffic Control Plan depends entirely on the nature and complexity of the situation.

The supervisor is responsible for preparing and implementing the Temporary Traffic Control Plan. This includes the following:

- Determining when flaggers are to be used, how many are needed, where they are stationed, and the methods of communication between multiple flaggers.
- Providing all necessary instructions to the staff who must undertake the responsibility for traffic control.
- Ensuring that all required traffic control devices, flaggers, and equipment are in place, and that measures to safeguard the public and employees have been taken before work begins.
- Immediately addressing any act that is unsafe and/or contrary to applicable practices.

There are over 40 typical traffic control applications provided in the MUTCD. The most common applications at UAlbany are described below and have been made into the general Temporary Traffic Control Plan forms found in Appendices A and B:

1. Lane closure on two-lane, two-way road: one flagger (Appendix A)
2. Lane closure on two-lane, two-way road: two flaggers (Appendix B)

Other Temporary Traffic Control Plans can be found in the Cornell Local Roads Program’s Work Zone Safety pocket guide.

5.1 Lane closure on two-lane, two-way road: one flagger

Traffic can be controlled by one flagger only when there is low traffic volume (less than 15 cars in either direction in 15 minutes) on a straight roadway and the Traffic Control Zone is sufficiently short to allow the flagger to see from one end to the other.

In such situations, the flagger is stationed on the shoulder or off the road opposite the work area. The flagger must wait until one direction of traffic has stopped before releasing the other direction.

Appendix A provides a general Temporary Traffic Control Plan form for this scenario.
5.2 Lane closure on two-lane, two-way road: two flaggers
When the flow of traffic is controlled by two flaggers, one flagger is stationed at each end of the work area. This is the most common flagging operation.

The flaggers must be in constant communication, as described above in Section 4.4.4 above.

Appendix B provides a general Temporary Traffic Control Plan form for this scenario.

6 TRAFFIC CONTROL AT NIGHT
Work on or near roadways should be performed during daylight whenever possible.

When work must be performed at night, additional requirements must be added to the Temporary Traffic Control Plan:

- All traffic control devices, including traffic cones and the flagger’s STOP/SLOW paddle, must be retro-reflectorized.

- Except in emergency situations, flagger stations must be illuminated. When a flagger station is not illuminated during hours of darkness, a flashlight with a red glow cone shall be used to supplement the retro-reflectorized STOP/SLOW paddle (or a red flag in an emergency situation).

  o To stop traffic: sweep the light back and forth across the path of the approaching vehicle. Never shine the light directly into the eyes of the driver.

  o To allow traffic to proceed: Lower the light and use the daytime hand motion. Do not wave the flashlight; this may confuse drivers.
7 REFERENCES

American National Standards Institute, Standard 107-2015, *High Visibility Safety Apparel*


New York State Department of Transportation, *New York State Supplement to the Manual of Uniform Traffic Control Devices*

New York State Department of Transportation, *Work Zone Traffic Control*

Occupational Safety and Health Administration, 29 CFR 654, *Duties of employers and employees* (General Duty Clause)
[https://www.osha.gov/laws-regs/oshact/section5-duties](https://www.osha.gov/laws-regs/oshact/section5-duties)

Occupational Safety and Health Administration, 29 CFR 1926.201, *Signaling*

8 APPENDICES

**Appendix A** – Temporary Traffic Control Plan: Lane closure on two-lane, two-way road: one flagger

**Appendix B** – Temporary Traffic Control Plan: Lane closure on two-lane, two-way road: two flaggers

**Appendix C** – Blank Temporary Traffic Control Plan

This procedure comes into effect on June 1, 2023 and will be reviewed by EH&S annually thereafter.
Appendix A
Temporary Traffic Control Plan:
Lane closure on two-lane, two-way road: one flagger
Temporary Traffic Control Plan:
Lane closure on two-lane, two-way road: one flagger

DATE: 
START TIME: 
END TIME: 
LOCATION: 
WORK DESCRIPTION: 

FLAGGER: 1. 
EMPLOYEES IN WORK ZONE: 1. 2. 3. 4. 5. 6. 7. 8. 
NOTES:
Appendix B
Temporary Traffic Control Plan:
Lane closure on two-lane, two-way road: two flaggers
## Temporary Traffic Control Plan:
### Lane closure on two-lane, two-way road: two flaggers

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<th>FLAGGERS:</th>
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<th>EMPLOYEES IN WORK ZONE:</th>
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<tr>
<th>NOTES:</th>
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**Diagram:**
- **Road Work Ahead:** 100 ft
- **One Lane Road Ahead:** 100 ft
- **Flagger Ahead:** 100 ft
- **Flagger:** 200 ft

**Termination Area**
- **Work Area**
- **Activity Area**
- **Buffer Area**
- **Transition Area**
- **Advance Warning Area**

**Cone Spacing:**
- No more than 40 ft apart
- No more than 25 ft apart
Appendix C
Blank Temporary Traffic Control Plan
### Temporary Traffic Control Plan

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</table>
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| **EMPLOYEES IN WORK ZONE:** | 1.  
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| | 8.  |
| **NOTES:** |  |

![Diagram of traffic control plan](image)