



**UNIVERSITY OF WEST FLORIDA**

# **WORK ZONE TRAFFIC CONTROL**

**Based on Elements of  
State of Florida Department of Transportation  
and OSHA General Industry Standards**

**DEPARTMENT OF ENVIRONMENTAL HEALTH AND SAFETY  
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**File Name: Workzone  
ENACTED 12-2001**

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University of West Florida

Department of Environmental Health and Safety

## **WORK ZONE TRAFFIC CONTROL POLICY**

### **Purpose**

The public roads and thoroughfares on the University of West Florida campus are designed to allow staff, students, visitors and support employees to travel safely to their destinations. Occasionally, construction or maintenance work may temporarily block or reduce access to the full use of these thoroughfares. In cases where workers must control traffic flow and/or perform work in close proximity to road traffic, certain procedures must be followed to maintain the highest degree of safety to the worker as well as vehicle drivers and pedestrians.

In order to provide safe work zones, the following basic standards must be followed on all Work Zone projects:

1. The onsite supervisor (foreman, project manager, lead worker, etc.) must demonstrate a clear understanding of the UWF Work Zone requirements and assure that his/her employees are correctly complying with the requirements.
2. The traffic controllers must be properly trained, demonstrate a clear understand the UWF Work Zone requirements, and perform the necessary tasks correctly, complying with the requirements.
3. The onsite supervisor and traffic controllers must assure that proper and compliant signs, markings, barriers, lighting, and traffic controllers signals are in place, being effectively used, and will continue to be used until the project is finished.

4. All Work Zone employees (workers, supervisors, inspectors, observers, etc.) who will, or may, come within 12 feet of moving motor vehicle traffic will wear a highly visible traffic safety vest.
5. Where any part of the project is done within 6 feet of moving traffic, a Work Zone perimeter will be established.
6. All Work Zone tasks will be done inside a perimeter marked with proper cones, traffic barriers, and proper signs. No employee may enter into the area between the perimeter demarcation and the path of traffic.
7. Vehicles associated with the Work Zone project must be parked on the same side of the thoroughfare as the work area. The area designated by signs, markings, and demarcation for the work zone activity must be large enough to include vehicle parking. Everything possible must be done to eliminate the need for workers to cross the path of normal traffic.

## **Work Zone Traffic Safety**

Work that must be done on or near roads, streets, thoroughfares, and any other type of vehicle pathway presents hazards to workers, drivers, pedestrians, equipment and property. The possible number of fatalities, serious injuries, and large amounts of property damage can be greatly reduced by instituting and complying with this work zone traffic safety program.

The unique UWF campus layout presents several challenges to establishing work zone areas. To be most effective, warning signs, channelization devices, and workspaces must have sufficient advanced line-of-sight visibility. The rolling hills and curved roads of our campus reduce distance visibility and may require adjustments to the usual procedures.

Adjustments to standard work zone procedures may also be required for a number of reasons. These reasons might include several close intersections, darkness, rainy or foggy conditions, very heavy traffic, time of year, etc. The number of concurrent construction projects might also affect the design of work zones. These are some of the reasons that a unique written Traffic Control Plan must be designed for the particular project, and the plan be modified, as required, as conditions change.

## **Advanced Warning Area**

Vehicular traffic must be warned that a work zone is ahead, not only to alert the drivers to be aware of hazards, but to also warn them that lane changes, detours, or temporarily blocked streets may appear. Warning signs must be placed in advance of the work zone. One to three signs placed in both directions from the work zone may be required to adequately warn drivers. The first warning sign should be placed 300 to 500 feet from the start of the work zone. Additional signs should be placed every 100 to 250 feet, depending on environmental conditions. On sharp curves, small hills, and very congested areas, signs should be placed closer together.

Signs must clearly indicate the hazard: A “Flagger” (traffic controller) sign must be used if a Flagger is used. A “Lane Closed” or “Merge To One Lane” sign must be used if there is a taper. Reflective and/or lighted signs must be used if the signs are to remain posted after sundown. Warning signs should also be placed at cross streets or intersection inside the traffic control zone. Signs must be visible to drivers over parked vehicles and other obstructions. Signs must always be removed if their message no longer applies to the work control zone.

# Transition Area

Transition areas (moving traffic out of its normal path) are high hazard, causing the most number of accidents involving workers. Transition areas also create potential accident problems for vehicle drivers because of confusion, frustration, and the “stop-and-go” traffic mode. Vehicle traffic flows much better if adequate warning is given and drivers respond to the warnings.

The traffic control plan must provide the proper taper (see choices) and preparation for utilizing it. The taper length must be carefully designed, signage properly posted, geometry checked, and critical clearances maintained. The proper number of cones must be deployed and correctly spaced. It is critical that the taper layout and components be regularly monitored to ensure that signs and cones are replaced after being knocked down or pushed out of place.

## TRAFFIC CHANNELIZATION DEVICES

The function of channelization devices are to warn and alert drivers of hazards created by construction or maintenance activities in or near the path of traffic, to protect workers in the work zone, and to guide and direct drivers and pedestrians safely past the hazards. Channelization devices include but are not limited to: cones, vertical panes, drums, barricades, and barriers.

The use of channelizing devices is a part of the overall Traffic Control Plan which is developed by the onsite supervisor to maintain the orderly and safe flow of traffic through and around the Work Zone. The placement of channelization devices should provide a smooth and gradual transition in moving traffic from one lane to another, onto a bypass or detour, or in reducing the width of the path of traffic. They should be constructed so as not to inflict any undue damage to a vehicle that inadvertently strikes them.

### Merging Taper

A merging taper is used to close a lane on a multilane roadway and to direct traffic in the closed lane to merge into the adjacent lane. Adequate length must be provided for motorists to locate a gap in the adjacent traffic stream and to move into it. The taper should be long enough so that drivers of vehicles approaching side by side have sufficient length in which to adjust their respective speeds and merge into a single lane before the end of the transition.

## **Shifting Taper**

A shifting taper is used to move traffic into a different travel path when a merge is not required.

## **Two-Way Traffic Taper**

The two-way traffic taper is used in advance of work areas that occupy part of a two-way road in such a way that a portion of the road is used alternately by traffic in each direction. Typically, traffic is controlled at such locations by a Traffic Controller or temporary traffic signal.

On some projects, channelization devices get out of alignment and must be placed back in their correct position. Often, devices are picked up over night and replaced the following day. It may be helpful to mark the placement of devices with chalk or light markings with spray paint.

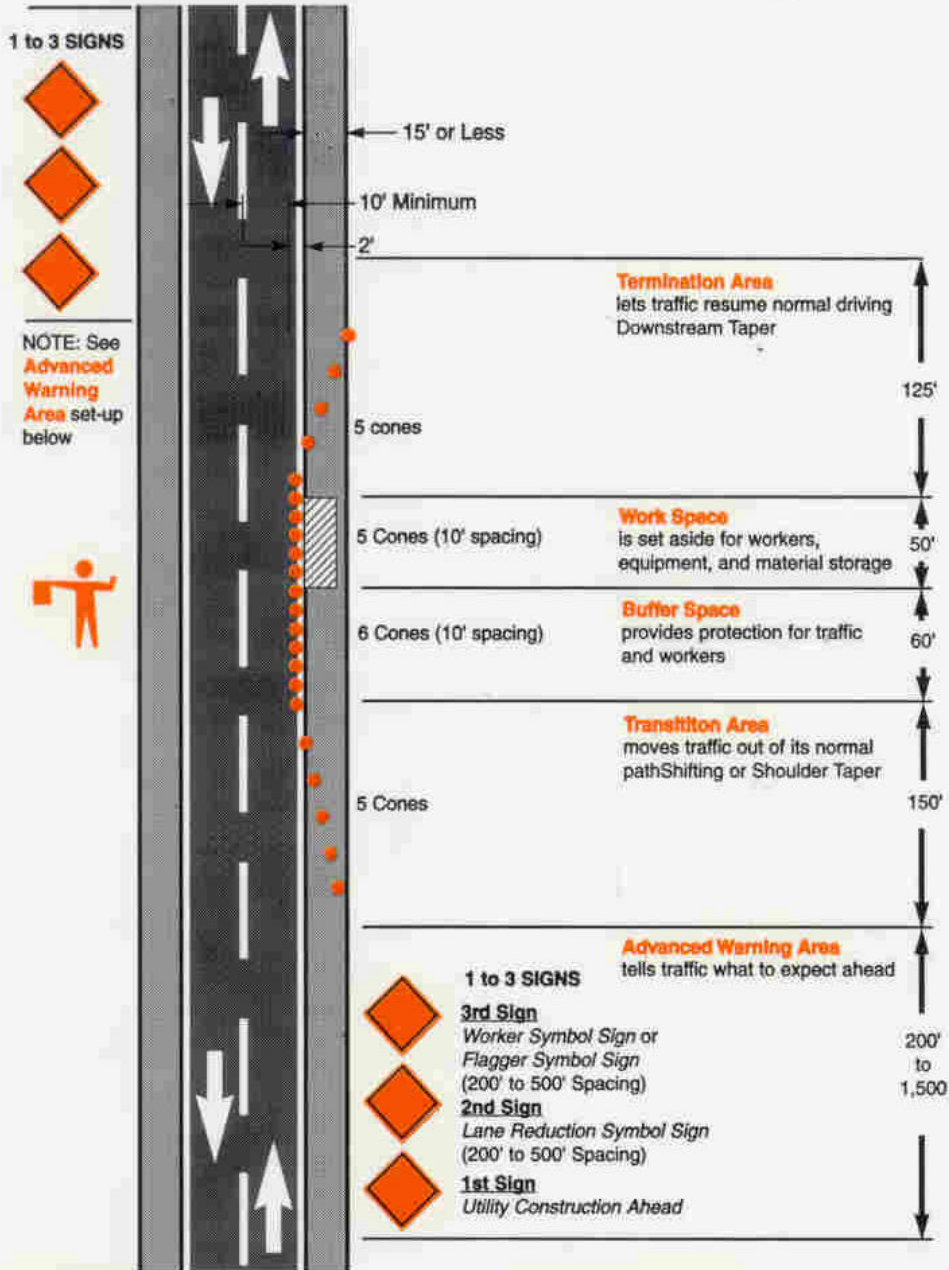
## **Cone Design**

Traffic cones should be a minimum of 18 inches in height with a broadened base and a weighted base for stability. Twenty-eight inches should be the minimum height used in high-speed areas. Orange should be the predominate color of traffic cones.

## **Night Work Zone Devices**

In situations where the work zone must remain intact during dark (an hour after dawn [sunrise] to an hour before dusk [sundown]), all channelization devices and barricades must be marked with reflective material and, where possible or necessary, lighted. Flashing lights should be added to barricades used singly, and steady burning lights added to series barricades used as channelization devices.

# Work Zone Traffic Control Safety



## APPLICABILITY

This is a benchmark traffic control application and is suitable for:

- Daylight operations
- 2 lane roadway
- Equipment setup close to the travelway
- Several hours of work
- Traffic speed of 35 mph or less
- Low volume traffic
- Straight road
- Good Weather
- Good Visibility

**Adjustments must be made for other traffic situations**

## GENERAL INFORMATION

All work setups on the roadway require a Traffic Control Plan

All ground workers are required to wear safety vest  
The Gulf Power Orange Signing & Coning Book provides details of commonly used TCP setups  
Reflective signs are to be used at night

### FLAGGERS

Usually required when one lane is restricted.  
Need for flaggers is best determined in advance by engineer and planner scheduler

### POLICE SUPPORT & ARROW BOARDS

These items are **always in addition** to other traffic control equipment

## TAPER LENGTHS AND MINIMUM NUMBER OF CONES

Speed Limit	Merging Taper Length / # Cones	Shifting Taper Length / # Cones	Shoulder Taper Length / # Cones
20	80/5	7/5	17/5
25	125/6	11/5	27/5
30	180/7	15/5	40/5
35	245/8	21/5	54/5
40	320/9	27/5	71/5
45	540/13	45/5	120/5
50	600/13	50/5	133/5
55	660/13	55/5	146/5
60	720/13	60/5	160/5
65	780/13	65/5	173/5

**Merging Taper**

used to close a lane of a multi-lane road.

**Shifting Taper**

is used to move traffic into a reduced lane width. Must leave 10 ft of lane open for traffic.

**Shoulder Taper**

used to close an improved shoulder when working off the travel way.

**Two-Way Taper**

used when closing 1 lane of a 2 lane road 100 ft maximum length flaggers are usually necessary.

**NOTES:**

- 1) Industry practice is a minimum of 5 cones for any taper.
- 2) Maximum cone spacing for tapers is equal to a distance in feet equal to the speed limit unless the 5 cone requirement forces a reduced spacing.
- 3) Chart assumes a 2 foot shift for a shifting taper leaving a minimum 10 ft of a lane open.
- 4) Chart assumes a 12 foot shift for a merging taper.
- 5) Chart assumes an 8 foot shoulder closure.

rev 08/05/97

# WORK ZONE TRAFFIC CONTROL INSPECTION FORM

Department: \_\_\_\_\_ Work Date(s): \_\_\_\_\_

Work Location: \_\_\_\_\_

Project Type: \_\_\_\_\_

Day      Night      Both

## ADVANCED SIGNS / WARNINGS

Adequate? Yes      Discrepancy? \_\_\_\_\_      Number Required \_\_\_\_\_

Appropriate? Yes      No      Discrepancy? \_\_\_\_\_

Placement? Correct      Discrepancy? \_\_\_\_\_

Visibility? Correct      Discrepancy? \_\_\_\_\_

Sufficient Advance Warning? Yes      Discrepancy? \_\_\_\_\_

## CHANNELIZATION DEVICES: (Barrels, Drums, Cones, Lights)

Adequate? Yes      Discrepancy? \_\_\_\_\_      Number Required \_\_\_\_\_

Appropriate? Yes      No      Discrepancy? \_\_\_\_\_

Placement? Correct      Discrepancy? \_\_\_\_\_

Visibility? Correct      Discrepancy? \_\_\_\_\_

Sufficient Channelization? Yes      Discrepancy? \_\_\_\_\_

## FLAGGER USE:

Properly Trained? Yes      Discrepancy? \_\_\_\_\_      Number Required \_\_\_\_\_

Safety Equipment? Yes      No      Discrepancy? \_\_\_\_\_

Visibility Placement? Correct      Discrepancy? \_\_\_\_\_

Clear Hand Directions/motions? Correct      Discrepancy? \_\_\_\_\_

## SAFETY AND TRAFFIC CONTROL:

Workers Wearing Vests? Yes      Discrepancy? \_\_\_\_\_

Traffic Lanes Width Adequate? Yes      Discrepancy? \_\_\_\_\_

Vehicle Traffic Properly Flowing? Yes      Discrepancy? \_\_\_\_\_

Adequate Pedestrian Safety? Yes      Discrepancy? \_\_\_\_\_

Workers Not In Traffic Lanes? Yes      Discrepancy? \_\_\_\_\_