

Oregon Temporary Traffic Control Handbook For Operations of 3 days or Less, May 2006

List of Changes

This list includes changes in the May 2006 version, from the previous versions.

Structure of the book has changed

1. Each section is now numbered such as, Chapter 1 GENERAL STANDARDS AND PRINCIPLES
2. Scope of the handbook has been clarified: *This handbook provides a reference for the principles and standards for temporary traffic control zones in place continuously for three days or less on public roads in Oregon.*
3. All references to night work are contained in Chapter 1.4 and 1.517, rather than separate references for each diagram.
4. Removed “Coordination of Work Zone Authority” section. This language was added to the “Scope”.

Specific Changes

Chapter 1

1. Surveying and short-duration work was moved to Section 1.2.
2. Clarification to the use of bicycle and pedestrian signing, Section 1.3 (6) and the use of Bikes on Roadway signs. Much of the general considerations now combined to one location. *If a significant volume of bicycles can be expected and work requires bicycles to use the travel lanes a “BICYCLES ON ROADWAY” sign should be installed in advance of the work space. “BICYCLES ON ROADWAY” signs are required if the work closes a marked bicycle facility.* If a flagging operation involves removing the bike path, the flaggers must coordinate the safe movement of the bikes through the work zone.
3. Combined Flagging, Pilot Car, Portable Signals and Spotters in Section 1.5
4. Flagger qualifications: Flaggers must be 18 years of age. Section 1.510
5. Flaggers and Advance Flaggers must use a rigid STOP/SLOW paddle. Roll-up STOP/SLOW is for emergency use only. Section 1.513 Mention of Flags was eliminated.
6. Flagger illumination requirements were added in Section 1.517.
7. Clarified the definition of Extended Traffic Queues, Section 1.9.A.2. *Extended traffic queues when the line of vehicles stopped at the beginning of a work zone extend beyond the Be Prepared To Stop signs, requires additional signs.* See also changes on Diagram 001.

Chapter 2

1. The Taper Lengths and Channelization Devices chart, Table 2-1 is the minimum spacing as defined by the MUTCD and based on taper length, lane width and speed.
2. Alternative cone placement, based on 20 'and 40' spacing is described in Section 2.1.
3. Cover, turn, or remove the Flagger Ahead and Be Prepared To Stop signs when flagger is no longer present.
4. Three signs are required for all flagging operations, regardless of speed.
5. New Signs:
 - A) ONE LANE ROAD AHEAD (diagram 320); B) SLOW (page 21); C) Flagger Next Mile symbol sign (diagram 325) ; D) ROADWORK XX MPH (replaces Construction Speed XX MPH, diagram 340); E) YIELD (diagram 350)
6. Sign spacing table change, Table 2-3, for Freeways 1000, 1500, 2640, per MUTCD. Eliminated references to "Expressways" and clarified definition of freeway (See page 99).

Chapter 3 – Equipment Specification

1. Clarified language on non-complying signs. All signs shall be in compliance with MUTCD effective July 2008. Non-retro reflective signs may be used in daylight hours only until July 2008. Non-crashworthy signs (rigid) may be used in only emergency situations; otherwise sign/sign support combinations must be crashworthy.
2. All signs on temporary sign supports shall have two flags.
3. New language describing the shadow vehicle and protection vehicle use in Section 3.2
4. Type D Arrow Panels removed from handbook, Table 3-1.
5. A Portable Changeable Message Signs (PCMS), Errata correction Section 3.42 - Per MUTCD Section 2A.07, PCMS may be used in lieu of required warning signs for frequently changing situations.
6. For mobile operations a PCMS is not required on the freeway.
7. Delineation of PCMS with cones or drums clarified in Section 3.42, "*for greater visibility, the trailer mounted PCMS shall be delineated by a shoulder taper of six cones or drums. If space allows, drums may be used for greater visibility.*"

Chapter 4 – Typical Applications

1. Sign spacing table added to all diagrams.
2. Buffer space location corrected on many diagrams.
3. Sign faces on all diagrams readable from same direction, orientation shown by symbol.
4. ONE LANE ROAD AHEAD sign added to all diagrams with lane closures.
5. Required use of truck-mounted high-intensity rotating, flashing, oscillating, or strobe warning lights on all shadow and protection vehicles.
6. Meaning of Symbols Figure 4-1 added.

7. 4.001 Detail Drawings – Clarifies when BICYCLES ON ROADWAY sign should be used.
8. Diagram 001 – extended traffic queue RWA signs added and clarified.
9. 4.002 Pedestrian Layout Details – Completely rewritten, simplifies and clarifies Pedestrian details and diversions.
10. Diagram 100 - Mobile Operations on the shoulder – Shadow vehicle requirements clarified and changed. A shadow vehicle should be used when sight distance and visibility is limited. See page 42, note 3.
11. Diagram 110 – Mobile Operations 2-lane, 2-way. A shadow vehicle should be used when limited sight distance, limited visibility, or speed is 45mph or higher. See page 44.
12. Diagram 120 – Mobile Operation on Multi-Lane Road – Shadow vehicle requirements changed, see page 46, Table 4-1
13. Diagram 125 – Rolling Slow Down language clarified, no major changes
14. Diagram 130 – Line Marking on 2-Lane, 2-Way Road, changed diagram to reflect lane width
15. Diagram 135 – Line Marking on Multi-Lane Road (also freeway). Truck Mounted Attenuator (TMA) is required on the freeway. Two shadow vehicles are required and three recommended on the freeway (see diagram 700).
16. Diagram 200 – Shoulder Work – Brief Work is suited for work 15 minutes or less. Simplified, removed bike signing, night operations, and apparel, see chapter 1 and 2.
17. Diagram 210 - Work on the Shoulder – Table 4-2 added to describe the device and sign guidelines for shoulder work. See page 56.
18. Diagram 300 – Shoulder Work with Minor Road Encroachment clarified language and removed references to bikes. Bicycle signing is in Chapter 1.
19. Diagram 310 – 2- Lane Traffic Diversion using Shoulder – diagram and language clarified to indicate cones and appropriate signs for diversion. See page 60, 61.
20. Diagram 320 – Lane Closure with Flagging – changes to reflect typical application of a stationary lane closure. The reference to distance from Flagger Ahead sign to the flagger eliminated and the distance from FA to FA sign is one mile. See page 62, 63. Additional diagram for short duration operations using flagging in Diagram 325.
21. Diagram 325 – Lane Closure for Short-Duration Flagging - this is a new diagram and language for work that move along the road intermittently and involve frequent short stops. This diagram can only be used when the work can move through a one mile segment in three hours or less. See page 64, 65.
22. Diagram 330 – Lane Closure with Signals – this is new language for use of portable signals. The Traffic Engineer for the road jurisdiction must approve in writing the use of portable signals.
23. Diagram 340 – Lane Closure w/ Pilot Car – new language to clarify the control of side accesses, see note 6.
24. Diagram 350 – Self Regulating Lane Closure – only used on low ADT, new signs.

25. Diagram 400 & 410 – 2+1 Travel Lanes - new information, clarifying language and 2 options on each diagram. See pages 74-77
26. Diagram 500 – Right lane Closure on a Multi-lane Road – Flagger option shown in bubble on diagram.
27. Diagram 510 – Interior Lane Closure, non-freeway, signs on median may not be required if there is no room for the truck to safely place signs, additional sign on right should be placed. See Note 3, page 84.
28. Diagram 600 – Intersection Lane Closure – Speed added as criterion: *“When the posted speed is 40 mph or less and work is in place less than 15 minutes, a truck mounted arrow panel or PCMS in arrow mode may be used in place of required signs and cones shown in the diagram.”* See page 87
29. Diagram 605 – Intersection w/Left turn Refuge Closure – Speed added as criterion: *“When the posted speed is 40 mph or less and work is in place less than 15 minutes, a truck mounted arrow panel in caution mode or PCMS with Left Lane (or Right) Lane Closed may be used in place of required signs and cones shown in the diagram.”* See page 89
30. Diagram 610 – Interior Lane Closure – Far Side of Intersection – language on page 90 clarified. The diagram reflects two options, first with left turn allowed (new option) and second, no left turn allowed. See page 91
31. Diagram 630 – Work in Center of Intersection – Simplified language on page 94. Signs are optional if speeds are less than 40 mph and work is in place less than 15 minutes. See page 95
32. Diagram 640 – Roundabouts – A new diagram is shown. However, several possible options may be used depending on the situation. Roundabouts pose unique problems. The traffic control and flagger communications need to be adapted to accommodate each situation.
33. 4.7 Freeways – Expressways have been eliminated from the freeway/expressway description. See paragraph 3 for clarification of traffic control on highways that are not “interstates”, however, have similar characteristics of a freeway. See page 99
34. Diagram 700 - Freeway Mobile Operations – See Diagram 135 for line marking on the freeway. Mobile work, such as sweeping on the shoulder with no encroachment requires one shadow vehicle. Work in the travel lane, requires two shadow vehicles and if room a third shadow vehicle is recommended.
35. Diagram 710 – Freeway Shoulder Work - clarified and simplified when signs and cones are not required. See page 102
36. Diagram 720 – Freeway Lane Closures clarified requirement of signs on the left side, see notes 4 and 5 page 104.
37. Diagram 730 – Work Near an Exit Ramp clarified requirement of signs on the left side, see notes 6 page 106.
38. Diagram 740 – Work on the Exit Ramp - changes the required ramp width to 14’. See page 109.
39. Diagram 750 – Exit Ramp Closure - for work less than one hour, signs on the left are optional.

40. Diagram 760 – Work Near an Entrance Ramp – Combined right side and left side options on one diagram, new information on page 112, to clarify left side option and right side option.

Chapter 5 – Incident Traffic Control

1. Language edited to focus on traffic control requirements and a new section on detours, see page 115-119.
2. Figure 5-1 reflects the Emergency Response Example traffic control plan.

Appendix A – Glossary of Terms

Appendix B – Work Zone Plan – There is no retention requirement. The previous Appendix B, Flagging was moved to the front of the handbook.

Appendix C – Work Zone Checklist

Index - New