



**Washington State
Department of Transportation**

TECHNICAL MANUAL

Traffic Manual

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May 2009

Engineering and Regional Operations

Traffic Operations

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Foreword

The *Traffic Manual* is intended to provide instruction and guidance to department personnel who conduct traffic operations and design activities. This manual identifies state and federal laws and departmental directives, policies and publications that are used to aid in decision making for traffic operations and design issues. It also provides standards to assure uniform application of operational methods and traffic control devices statewide.

Updating the *Traffic Manual* is a continuing process and revisions are issued periodically. Questions, observations and recommendations are invited. The next page is provided to encourage comments.

/s/ Theodore J. Trepanier

Theodore J. Trepanier
State Traffic Engineer
Co-Director,
Maintenance and Operations Programs

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1.1 WSDOT Traffic Functions

Traffic functions within the Washington State Department of Transportation (WSDOT) are administered, supported, and/or monitored by:

- The Headquarters Traffic Operations Office (State Traffic Engineer), Intelligent Transportation Systems (ITS) Office, (State ITS Engineer), and the Highway Maintenance Office (State Maintenance Engineer).
- The six Regional Traffic Offices (Regional Traffic Engineers).
- The six Regional Maintenance and Operations Offices (Regional Maintenance and Operations Engineers).
- The Urban Planning Office (UPO).
- The Transportation Data Office (TDO).
- The Office of Highways and Local Programs.

A WSDOT organization chart showing the relationship between the six regions and the various Headquarters offices is available on the Web at www.wsdot.wa.gov/about/ExecOrgChart.htm.

The following sections explain how each of these work groups accomplishes the goals of the department's traffic program.

1.2 Headquarters Traffic Administration

The Offices of the State Traffic Engineer, the State ITS Engineer, and the State Maintenance Engineer are part of the Headquarters Maintenance and Operations Programs group.

A. **State Traffic Engineer's Office.** Under the direction of the State Traffic Engineer, the Headquarters Traffic Operations Office is responsible for traffic engineering and related safety functions in three fundamental areas:

- **Statewide Policy Development.** To ensure statewide consistency and uniformity, the Traffic Office develops policy and responds to issues and questions on traffic engineering. These tasks often require efforts to research, coordinate, and summarize issues for executive level decision-making. Policies include traffic design and traffic operations standards and procedures.
- **Statewide Resource Development and Deployment.** The resources required to fund the traffic operations for the state highway system, and new and replacement statewide traffic and "spot" safety investments, are pursued through decision packages that require

legislative approval. When approved by the legislature, these funds are allocated to the regions for implementation. Such traffic operations and “spot” safety functions are components of Program Q.

- **Statewide Traffic Expertise.** The Headquarters Traffic Office provides expertise to the regions and other agencies in areas of general traffic operations, traffic analysis, and traffic design activities. The Traffic Office provides technical training, and coordinates statewide traffic activities including: consultation with Attorney General’s Office on legal matters, offering advice or guidance upon request from the regions and other WSDOT offices, and facilitating statewide meetings with regional traffic personnel.

The Headquarters Traffic Operations Office provides specific expertise in the following areas:

- Traffic Design
- Traffic Operations
- Work Zone Traffic Control
- Traffic Engineering Training
- Outdoor Advertising Control

The following subsections describe the functions and services provided by work groups within the Headquarters Traffic Operations Office.

1. **Traffic Design**

- a. Provide statewide contract plan review for traffic signal, illumination, and delineation projects.
- b. Prepare signal system and illumination plans for WSDOT regions.
- c. Maintain operational standards, standard specifications, and standard plans for signals, illumination, ITS systems, and delineation.
- d. Provide guidance and support for the Attorney General’s Office on traffic related tort claim cases.
- e. Assist the Materials Laboratory in the approval process for electrical, delineation, and other traffic items.
- f. Provide technical information to General Administration and WSDOT purchasing personnel involved in the development of procurement contracts for:
 - Materials and equipment for traffic signal systems.
 - Materials and equipment for illumination systems.
 - Materials and equipment for delineation.

- g. Conduct or coordinate statewide training on:
 - Signal and Illumination Design.
 - Fundamental traffic engineering principles.
 - Electrical design portions of contract plan preparation.
 - Signal operations, including optimization of timing and coordination.
- h. Share information with the Materials Laboratory and manufacturers about current trends in materials and equipment used to construct signals, illumination systems, and delineation.
- i. Develop and maintain Operations and Maintenance Time Standards used for budget planning, and for planning preventative maintenance activities of electrical systems and delineation.
- j. Support the Transportation Planning Office and the regions by giving expert review and training in the benefit-cost analysis methodologies used to analyze I2 Safety Improvement Program issues.
- k. Review and research advanced traffic simulation and optimization software models. Distribute this software and pertinent information throughout the department.

2. Traffic Operations

- a. Support regional safety audits that research and evaluate potential operational traffic improvements along existing state highways.
- b. Act as technical consultants to the regions in the design and construction of safety and operations improvement projects.
- c. Develop and implement the Corridor Safety Program. This multi-jurisdictional statewide safety program provides a forum for several traffic safety disciplines to identify low cost enhancements that increase safety on project corridors.
- d. Assist in developing the comprehensive safety planning components of the Washington Transportation Plan.
- e. Work with the Washington Traffic Safety Commission (a consortium of local and state organizations responsible for reducing death, injuries, and economic loss resulting from motor vehicle collisions) not to prevent all traffic collisions, but to make them more survivable.
- f. Administer the WSDOT DUI Victim Memorial Sign Program and Highway Fatality Memorial Program.

- g. Develop and initiate programs as required by the legislature, for example statewide speed limit changes and work zone safety programs.
- h. Operate the statewide Traffic Sign Management System (TSMS), including the statewide sign inventory database. Maintain the *Sign Fabrication Manual M 55-05*.
- i. Serve as technical consultants to the regions regarding sign fabrication. Conduct periodic inspections of sign fabrication shops and develop inspection criteria for sign fabrication inspectors. Evaluate new sign fabrication shops for approval as WSDOT contract fabricators.
- j. Review deviation requests, contract plans, and other WSDOT documents, for the proper application of traffic control devices. Ensure conformance to the MUTCD and other state standards for permanent signing and temporary traffic control.
- k. Serve as technical consultant to the regions on permanent signing issues, challenges, and special applications.
- l. Develop specifications for new or revised signing items to be included in the Standard Specifications, General Special Provisions, and Standard Plans.
- m. Communicate with manufacturers to analyze current trends in materials and equipment used to construct signs and appurtenances.
- n. Provide final approval for byway logo signing on eligible inter-regional scenic and recreational highways.
- o. Develop statewide policies for the implementation of MUTCD principles and guidelines. Maintain operational policies in the *Traffic Manual*, and departmental directives. Provide standards for all traffic control devices used on public roadways.
- p. Recommend approval or denial of traffic regulations for:
 - Permanent speed limits.
 - High occupancy vehicle (HOV) designations.
 - Bicycle prohibitions.
 - Truck restrictions.
 - Angle parking.
 - Parking facilities, including park and ride lots operated by WSDOT.

Evaluate traffic regulations submitted by the regions to ensure that statutory requirements are met, and that engineering support data are complete and accurate.

- q. Interpret the provisions of state law and supporting departmental regulations for billboards and motorist information signs to resolve conflicts between sign owners and the regions. Process billboard permits and the annual permit renewals.
- r. Sanction inter-regional events on state highways, such as running or bicycling events, caravans, or other special events. Provide information to event sponsors about how to safely conduct events on state highways, including all applicable traffic regulations. Provide the regions with support and direction regarding events on state highways in their areas.
- s. Analyze traffic operations or safety-oriented legislation and respond to legislative inquiries on traffic matters. Provide executive management with information necessary to determine appropriate departmental positions.
- t. Conduct quadrennial reviews of traffic related WACs and make related changes to brochures and other items for outdoor advertising control, motorist information signs, and the MUTCD. Respond to AASHTO Ballots, Federal Register notices, and inquiries from the public.

3. Work Zone Traffic Control

- a. Provide statewide guidance and assistance for all work zone traffic control issues, including:
 - Design/PS&E
 - Work Zone Safety
 - Construction, Maintenance, Local Agencies, and Public and Private Roadway Users
 - Public Information
 - Other State Agencies (L&I, WSP)
- b. Develop and conduct training in the following areas:
 - Design Strategies
 - Work Zone Reviews
 - Traffic Control Supervisor (TCS)
 - Maintenance Traffic Control Operations Training (MTCOT)

- Short Duration Work Zones
 - Traffic Control Plan Design (TCP Design)
- c. Research and develop new devices, equipment, and methods by working with industry associations and professional committees such as:
- American Traffic Safety Services Association (ATSSA)
 - Associated General Contractors (AGC)
 - American Association of State Highway and Transportation Officials (AASHTO)
 - New Products Committee
 - Safety Products Team
 - Work Zone Safety Task Force Technical Committee (WZSTF)
- d. Develop departmental policy, specifications, and procedures by working within Headquarters and the regions, and by partnering with:
- Work Zone Safety Task Force
 - Safety Office
 - Labor and Industries
 - Washington State Patrol
 - Traffic Safety Commission
 - Washington Utilities and Transportation Commission
 - FHWA
 - Highway Contracting Industry
- e. Upon request, provide expertise to the regions in the following areas:
- Field Reviews of Work Zones
 - Design Strategies and PS&E Reviews
 - Reduced Work Zone Speed Limits
 - Specifications Review and Comment
 - Applications of WSDOT and Federal (MUTCD) Standards

4. **Traffic Engineering Training.** The Headquarters Traffic Engineering Training team assesses the regions' traffic engineering related training needs and establishes training sessions to meet them. This involves designing and instructing new courses to meet specific needs, and facilitating courses that are conducted by consultants.
 5. **Outdoor Advertising Control.** Administer the department's statewide Outdoor Advertising Control Program under purview of the Scenic Vistas Act (RCW 47.42) and WAC 468-66.
 - Administer permitting process.
 - Provide guidance to regions.
 - Serve as liaison with Attorney General's office regarding legal questions and for illegal sign abatement activities.
 - Carry out rule-making.
 - Coordinate with FHWA.
- B. **State ITS Engineer's Office.** Under the direction of the State ITS Engineer, the Headquarters ITS Office supports traffic administration by:
- Developing policy for ITS operations programs, ITS communication and wireless technology, and truck freight related programs.
 - Developing and implementing statewide procedures for incident response.
 - Maintaining state of the art traffic management center applications for surveillance, control, and traveler information.
 - Developing, implementing, and monitoring highly specialized advanced technology projects.
 - Incorporating ITS communication strategies into ITS operations.
- C. **State Maintenance Engineer's Office.** Under the direction of the State Maintenance Engineer, the Headquarters Highway Maintenance Office is responsible for maintaining traffic control devices, and issuing road approach permits.

The resources required to fund the maintenance of traffic control devices, such as lane markings, signs, safety hardware, electronic traveler information systems, traffic signals, and illumination equipment are pursued through decision packages. When funded by the legislature, these resources are allocated to the regions for implementation. Such traffic maintenance functions are components of Program M.

1.3 Regional Traffic Administration

Approval authority for various traffic considerations has been delegated to the Regional Administrators through Departmental Directives and other documents. This approval authority may be further delegated to senior regional managers. All regions appoint a Regional Traffic Engineer who is responsible for traffic related services. Depending on regional organization, the Traffic Engineer reports to one of the region's senior managers, typically the Regional Maintenance and Operations Engineer.

The responsibilities for regionally administered traffic engineering and safety services can be summarized into six components:

A. Coordinate Traffic Studies, Data Collection, and Analysis

1. Provide traffic data for upcoming projects or planning functions.
2. Conduct accident analyses and provide information to other department work groups, including Planning and Programming, Design, Maintenance, and Project Engineers.

B. Maintain Compliance With Rules and Regulations. Ensure that all traffic control devices are installed in accordance with appropriate portions of the MUTCD, WAC Rules, and WSDOT policies. In addition, ensure that outdoor advertising is in compliance with applicable regulations.

The regional traffic offices develop and process appropriate traffic regulations that ensure safe and efficient operation of the transportation system within the region.

1. Through departmental directives and policies, the Regional Administrators have been delegated the authority to approve:
 - Permits for installation of traffic signals on state highways.
 - Stop control on state highways.
 - Turn prohibitions.
 - Pedestrian prohibitions on partial access controlled highways.
 - Roadside parking restrictions (except angle parking and park and ride restrictions).
 - Prohibitions on fishing from bridges.
 - Temporary reduced regulatory speeds in construction or maintenance areas.
 - Regulatory speeds in rest areas.
 - Transit vehicle stop zone locations.
 - Vehicle weight restrictions.

2. In addition, the Regional Administrator is charged with the following duties that can impact traffic operations:
 - Conduct the Outdoor Advertising Control and Motorist Information Signing programs.
 - Review access permits required under State Access Management legislation.
 - Review development proposals for potential impacts to safety, capacity, and maintenance of the state highway system.

C. Provide Traffic Expertise

1. Ensure that traffic signals and signal systems operate efficiently to meet traffic operation goals.
2. Provide expertise on traffic related items included in project design (signals, illumination, signing, delineation).
3. Review traffic design elements for construction projects.
4. Approve or deny requests to conduct special events or filming operations on state highways within the region.
5. Conduct design and operational reviews for work zone traffic control plans.
6. Perform periodic operational and safety reviews to verify that posted advisory speeds, intersection sight distances, and other roadside features comply with accepted standards.

D. Manage Freeway and Arterial Operations. Manage freeway and arterial operations through:

1. Surveillance, Control, and Traveler Information (SC&TI) systems, including data stations, ramp meters, cameras, signal systems, changeable message signs (CMS), other Intelligent Transportation Systems (ITS), and highway advisory radio (HAR).
2. The HOV system.
3. Incident response methods.
4. Coordinating with local agencies regarding traffic flow management, serving as technical advisor when appropriate.
5. Signing and channelization.

- E. **Coordinate Traffic Information.** Respond to local agency and citizen concerns, and the news media, about traffic related issues. Represent WSDOT at city, county, and other public forums regarding traffic issues.
- F. **Administer Program Q.** Each Region administers its allocation of Program Q funds. This includes identifying safety and efficiency investment priorities and programming low-cost enhancement funds.
- G. **Traffic Control Device Inventories.** Maintain inventories of traffic control devices within the region.

1.4 Urban Planning Office

The Urban Planning Office (UPO) coordinates WSDOT activities within the geographic area covered by the Puget Sound Regional Council (PSRC). PSRC is the Metropolitan Planning Organization (MPO) for King, Kitsap, Pierce, and Snohomish Counties. The UPO recognizes the need to integrate transportation modes and coordinate long-range regional growth management plans to create a balanced transportation system, and works with the Olympic and Northwest Regions, Washington State Ferries, and local officials to accomplish that integration.

A few of the office's activities are:

- **Transit Planning/HOV.** Represent the department in establishing a Regional Transit Plan and promote transportation alternatives through transportation demand management methods. Provide lead responsibility for planning and prioritizing HOV facilities.
- **Regional Coordination.** Work with the PSRC, sub-regional groups, and local jurisdictions in the regions to develop regional transportation plans that maintain accessibility, manage congestion, and are modally balanced and coordinated with land use objectives. Represent the department's interests in regional forums, including programming and prioritization activities.
- **Technical Analysis of Corridor Challenges.** Provide assistance and expertise during the evaluation of alternative proposals for transportation facilities. Activities include travel forecasting, providing modeling expertise to support EIS documentation, and providing guidance on system management and demand management project alternatives.
- **Advocate a Balanced, Multi-modal Transportation System.** Support Washington's Transportation Plan by evaluating and identifying feasible strategies for transportation modes that are state owned, and in which the state is a stakeholder.

1.5 Transportation Data Office (TDO)

The Transportation Data Office (TDO) is part of Headquarters Strategic Planning and Programming. The TDO collects, analyzes, stores, and reports much of the data used by the department to identify and address deficiencies on our highways. This includes information about the type of roadway surface, width of the travel lanes and shoulders, number of vehicles using the highway each day and the location and severity of traffic collisions.

The TDO is responsible for:

- **Statewide Database Development and Support**
 - Traffic, roadway, and collision data reported to various state and federal systems, e.g., HPMS, NHS, PAS, WSPMS, CPMS, SWIBS.
 - Washington’s statewide collision records system. This includes the capture, storage, safeguarding, retrieve and release of collision data as well as copies of the collision reports submitted by citizens and law enforcement officers. The TDO also produces the High Accident Location (HAL), High Accident Corridor (HAC), and Pedestrian Accident Location (PAL) lists.
 - Traffic counting, summarization, and reporting in support of statewide system, projects, and planning studies. Special traffic counts are conducted on request for turning movements and signalization studies. For state highways, the TDO currently maintains 174 permanent traffic-reporting (PTR) sites and conducts approximately 600 short duration traffic counts each year. Depending on the equipment and sensors used, traffic data may include volume, classification, speeds and/or weight of vehicles. The Annual Traffic Report (ATR) is produced by the TDO and lists Annual Average Daily Traffic (AADT), location of PTR sites, Average Weekday Traffic (AWDT), Annual Vehicle Miles Traveled (AVMT), flow map, and a complete set of couplet diagrams for state highways.
 - Traffic forecasting expertise for planning and design projects statewide.
- **Technical Support for Planning Functions.** Providing statewide review of all traffic data and analysis in Environmental Impact Statements, developer submittals, design projects, and prioritization projects. Provides capacity analysis to determine if proposed roadway configurations can adequately accommodate existing and estimated future year traffic volumes. Provides annual tonnage on state routes for the Freight and Goods Transportation System (FGTS). Calculates future travel delay. Maintains a traffic model to provide the official distance and travel time between cities using state routes.

- **Technical Support for Work Zone Functions.** Providing technical support and review expertise for work zone working hours, penalties (liquidated damages), and incentives costing analysis.
- **Video and Digital Imaging of State Highways.** Providing video and digital imagery of the state highway system. This includes products such as video logs, SRView 2.0, and 360 degree panoramic views. Highways are filmed in the North Central, Olympic, and Southwest Regions on even years, and in the Northwest, South Central, and Eastern Regions on odd years.
- **Establish and Maintain a Distance Measuring Instrument/Linear Referencing System (DMI/LRS) Milepost System for all State Highways.** Establishing milepost locations for all existing and proposed state highways using a DMI. This includes collecting, maintaining, and storing roadway geometric data within the Transportation, Information, Planning, and Support (TRIPS) system, and publishing and distributing the annual State Highway Log.
- **Develop and Maintain Global Positioning System/Linear Referencing System (GPS/LRS).** Partnering with the Geographic Services Office to develop a GPS/LRS system (scheduled for completion in 2007) that will provide GPS locations for all highways including ramps. As routes are completed, data is made available for customer use in Geographic Information Systems (GIS) software applications. The completed GPS/LRS routes can be accessed on the Web at www.wsdot.wa.gov/mapsdata/geodatacatalog/.

1.6 Local Agency Traffic Services

Local agency traffic services are a function of the Highways and Local Programs Division. The department's Traffic Services Engineer provides on-call traffic engineering and computer services to local agencies throughout the state, particularly those smaller agencies lacking in professional engineering staff.

1.7 Abbreviations

AADT	Annual Average Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ARM	Accumulated Route Mileage
CADD	Computer Aided Drafting and Design
CMS	Changeable Message Sign
CVISN	Commercial Vehicle Information Systems Network
DMI/LRS	Distance Measuring Instrument/Linear Referencing System
FHWA	Federal Highway Administration
GPS/LRS	Global Positioning System/Linear Referencing System

HAR	Highway Advisory Radio
HAC	High Accident Corridor
HAL	High Accident Location
HOV	High Occupancy Vehicle
HPMS	Highway Performance Monitoring System
HSIS	Highway Safety Information System
ITE	Institute of Traffic Engineers
ITS	Intelligent Transportation Systems
MPO	Metropolitan Planning Organization
MUTCD	Manual on Uniform Traffic Control Devices for Streets and Highways
NHS	National Highway System
PAL	Pedestrian Accident Location
PSRC	Puget Sound Regional Council
PTR	Permanent Traffic Recorder
RCW	Revised Code of Washington
SC&TI	Surveillance, Control, and Traveler Information
SMS	Safety Management System
SP & P	Strategic Planning and Programming
SRMP	State Route Milepost
TEA-21	Transportation Equity Act for the 21st Century
TDO	Transportation Data Office
TRAC	Transportation Research Center (University of Washington)
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation
WSP	Washington State Patrol
WTSC	Washington Traffic Safety Commission

1.8 References

The following reference materials may be useful to regional personnel involved in traffic operations and traffic design duties.

- **Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) and Washington State Modifications to the MUTCD (M 24-01).** RCW 47.36.030 directs WSDOT to adopt a uniform standard for the application and location of traffic control devices installed along public roadways in the state of Washington. The MUTCD, published by FHWA, has been adopted into Chapter 468-95 of the Washington Administrative Code (WAC).

To comply with state laws, certain modifications to the MUTCD have also been adopted into the WAC. A booklet of these modifications, Washington State Modifications to the MUTCD (M 24-01), is available from WSDOT Engineering Publications.

Amendments to the MUTCD are developed by the FHWA through the Federal Register process. These FHWA amendments become effective when the department receives notification of the approved changes from the FHWA and adopts them into WAC 468-95.

- **WSDOT *Design Manual* (M 22-01).** The *Design Manual* provides guidance for the development of traffic features included in design reports and contract plans. Numerous sections contain information on traffic design features. Many of these features may also apply to traffic operations. The *Traffic Manual*, to the extent possible, avoids duplication of *Design Manual* materials, but provides cross-references where appropriate.
- **WSDOT *Sign Fabrication Manual* (M 55-05).** The *Sign Fabrication Manual* provides sign fabricators and designers with the detailed layout information for official traffic signs used in Washington State.
- **WSDOT *Standard Plans for Road, Bridge, and Municipal Construction* (M 21-01).** The Standard Plans for Road and Bridge and Municipal Construction provides standard plans for the following traffic items:
 - Sign Bridges
 - Signing
 - Cantilever Sign Structures
 - Striping (typical layouts)
 - Guide Posts
 - Lane Markers
 - Illumination
 - Signals
 - Concrete Barrier
 - Guardrail
 - Earthberms
- **WSDOT *Standard Specifications for Road, Bridge, and Municipal Construction* (M 41-10).** The Standard Specifications provides detailed requirements and techniques for construction and installation of the following traffic related items:
 - Guide Posts
 - Plastic Traffic Buttons
 - Lane Markers
 - Signing (materials and fabrication)
 - Illumination

- Signals (electrical)
- Pavement Markings (temporary and permanent)
- Work zone traffic control items (flagging, signs, delineation devices, etc.)

Other Documents

The following reference documents may also be helpful in conducting traffic related designs and analyses:

WSDOT Manuals

- *Plans Preparation Manual* (M 22-31)
- *Construction Manual* (M 41-01)
- *Maintenance Manual* (M 51-01)
- *Traffic Control Guidelines for Survey Operations* (M 55-02)
- *Motorist Information Signs* (M 55-94)
- *Scenic Vistas Act of 1971* (M 55-95)
- *Traffic Forecasting Guide*
- *Training Manual*, “Traffic Operations in WSDOT” (class available through Traffic Operations Office)

Many WSDOT publications are available on the Internet. Contact the department’s Engineering Publications Web site at www.wsdot.wa.gov/Publications/Manuals/default.htm.

FHWA (Federal Highway Administration)

- T21 Regulations
- Traffic Control Devices Handbook (TCDH)
- Traffic Control Systems Handbook
- Traffic Monitoring Guide

AASHTO (American Association of State Highway and Transportation Officials)

- A Policy on Geometric Design of Highways and Streets
- Guide for Selecting, Locating, and Designing Traffic Barriers
- Guidelines for Traffic Data Programs

TRB (Transportation Research Board)

- *Highway Capacity Manual*

ITE (Institute of Transportation Engineers)

- Transportation and Traffic Engineering Handbook
- Manual of Traffic Engineering Studies
- Traffic Detector Handbook

Other Reference Sources

The following reference sources may also be helpful in conducting traffic engineering investigations and analyses:

- SR View
- Washington State Highway Video log
- TRIPS — WSDOT corporate mainframe database for transportation data
- Internet information — The WSDOT homepage url is www.wsdot.wa.gov

2.1 General

Effective signing provides clear information and instruction to motor vehicle operators, pedestrians, and bicyclists. Properly installed signing facilitates legal, safe, and orderly progress on public roadways.

State law requires the department to adopt uniform standards for traffic control devices, including signs that are placed along state highways. WAC Chapter 468-95 recognizes the standards of the *Manual on Uniform Traffic Control Devices* (MUTCD). Among the types of signs described in the MUTCD are: (1) **Regulatory**, (2) **Warning**, (3) **Guide**, and (4) **Motorist Information**. The MUTCD provides guidance on the intended use and placement of signs, as well as specific information on the size of standard regulatory and warning signs. Information in this chapter supplements material covered in the MUTCD with specific interpretations and unique applications for signs on the state highway system.

Foreign language signs are not allowed on the state highway system.

Guidelines for the various classifications of official traffic control signs are discussed in the following MUTCD sections:

Sign Type	MUTCD Section
Regulatory Signs	Section 2-B
Warning Signs	Section 2-C
Guide Signs	Sections 2-D, 2-E, and 2-F
Work Zone Signs	Sections 6-B, 6-F*
School Area Signs	Section 7-B

*Refers to MUTCD Part VI, a stand-alone publication.

Table 2-1

- A. **Sign Fabrication Manual (M 55-05)**. Geometric layout details for most signs used by the department are available in the WSDOT *Sign Fabrication Manual*.

The sign number codes indicated in the *Sign Fabrication Manual* and other departmental publications are exclusive to WSDOT and may not, in all cases correspond to MUTCD number codes for similar signs.

- B. **Sign Legend Design**. For layout and fabrication of signs that are not covered in the *Sign Fabrication Manual*, use the following information:

Letter Sizing. The letter height used to display messages must be large enough to provide the motorist with an adequate opportunity to read and comprehend the information, and decide whether or not a driving task is required.

Studies indicate the average driver comprehends three words per second after a perception time of up to two seconds. Unique messages require more recognition time than messages that are commonly displayed. The following formula combines this comprehension rate with a given operational speed to determine the desirable letter height for a particular sign:

$$\text{LETTER HEIGHT} = (N/3 + 2) f$$

where:

N = Number of words

f = Legibility Factor. Found by dividing vehicle speed in feet per second by 40 (the legibility distance per inch of letter height)

The following example applies the formula and calculates desirable letter height:

Example 1. "SNOQUALMIE PASS RADIO TRAFFIC INFO 1 MILE"

Speed = 65 mph

N = 7

f = 2.4

Height = $(7/3 + 2) 2.4 = 10.4"$ use 10 inch letters

"f" Values by Speed		
*MPH	(fps)	f
25	37	0.9
30	44	1.1
35	51	1.3
40	59	1.5
45	66	1.7
50	73	1.8
55	81	2.0
60	88	2.2
65	95	2.4
70	103	2.6

*Speed (Legal or 85th Percentile).

Table 2-2

Message Layout and Spacing. Sign message layout and spacing requirements are specified in Appendix A of the *Sign Fabrication Manual*.

Abbreviations. Abbreviations used should be immediately recognizable by the motorist. Abbreviate only to avoid excessively long sign messages. Do not use abbreviations if the controlling message line is long enough to allow using the complete word.

Periods are not necessary in sign abbreviations except for British Columbia (B.C.) and United States (U.S. Customs).

Do not abbreviate names of places.

The OSC Traffic Office must approve abbreviations other than those listed below. Submit a request for consideration as a written or electronic document.

AFB	Air Force Base
Alt	Alternate
Ave	Avenue
B.C.	British Columbia
Bch	Beach
Blvd	Boulevard
Ctr	Center
Coll	College
Comm	Community
Cr	Creek
Co	County
Ct	Court
DNR	Department of Natural Resources (Campground, etc)
Dr	Drive
E	East
Elev	Elevation
Ft	Fort
Fwy	Freeway
Fy	Ferry
Hist	Historic, as in "Nat'l Historic Districts"
HOV	High Occupancy Vehicles
Hts	Heights
Hwy	Highway
Info	Information
Int'l	International
Jct	Junction
km	Kilometers
Lab	Laboratory
Ln	Lane
Lp	Loop
Lt	Left

M	Meters
Max	Maximum
Mi	Mile(s)
Min	Minimum
MPH	Miles Per Hour
Mt	Mount (Rainier)
N	North
NE	North East
NW	North West
NAS	Naval Air Station
Nat'l	National
Ore	Oregon
ORV	Off Road Vehicle
Ped	Pedestrian
Pkwy	Parkway
Pl	Place
Pop	Population
Pt	Port or point
Rd	Road
Rec Area	Recreational Area
RR	Railroad
Rt	Right
RV	Recreational Vehicle
S	South
SE	South East
SW	South West
Sea-Tac Airport	Seattle Tacoma Airport
St	Street
Temp	Temporary
Thru	Through
Univ	University
USA	United States of America
USFS	U.S. Forest Service
U.S.	U.S. (Customs, etc.)
W	West
WSDOT	Washington State Department of Transportation
State Patrol	Washington State Patrol
Xing	Crossing

- C. **Reflective Sign Sheeting Material Requirements.** Several types of reflective sheeting material are used to fabricate traffic control signs. The sheeting types have different reflective properties and different practical applications. The following sheeting types are designated in ASTM Specification D 4956:

- **Type I** – Medium-intensity retroreflective sheeting, referred to as “Engineer Grade.” Service life of seven years
- **Type II** – Medium-high-intensity retroreflective sheeting, referred to as “Super Engineer Grade.” Service life of ten years
- **Type III** – High-intensity retroreflective sheeting, referred to as “High Intensity.” Service life of ten years
- **Type IV** – High-intensity retroreflective sheeting, referred to as “High Performance.” Service life of ten years
- **Type VII** – Super-high-intensity retroreflective sheeting, referred to as “Diamond Grade.” Service life of ten years

Use appropriate sheeting on sign types shown for the general areas, see Table 2-3.

- D. **RCW, WAC Purview.** Criteria for appropriate signing applications on state highways are also described in state rules and regulations. Many Rules of the Road (RCW 46.61) are not enforceable unless appropriate signs are posted.

WAC 468-95 contains rules pertaining to signing which are amendments to the MUTCD. These rules are published in WSDOT *Washington State Modifications to the MUTCD* (M 24-01). See Table 2-4.

- E. **Wood Post Drilling.** To provide necessary breakaway characteristics, drill and notch timber sign posts in accordance with details shown in WSDOT Standard Plan G4-a.
- F. **Temporary Attention Devices.** Attention devices such as flags are used only to draw the motorist’s attention to newly installed warning or regulatory signs. Display these supplemental devices for a minimum of two weeks, and a maximum of one month.
- G. **Sign Storage.** To prevent damage to sign face, store signs properly. Do not expose sign faces to dirt and water during storage.

Never store signs laying flat. Water accumulation between signs will cause sheeting failure. Store packaged signs indoors on edge. If packaged signs become wet, unpack immediately and separate the signs to allow drying. Provide ample space between signs to allow free air circulation and moisture evaporation from the face of each sign. Clothespins work well to provide a separation between the sign faces.

If outdoor storage is required for short periods, remove all packing materials so nothing is against the sign face. Store signs upright on edge in a clean area above the ground.

Sign Type	General Area	Sheeting Type
All red background signs (Stop, Wrong Way, etc.)	All	III or IV
Freeway/Highway Entrance Sign	All	III or IV
Regulatory Signs	Rural Urban	II III or IV
Warning Signs	Rural Urban	II III or IV
School Signs - FYG* (S1-1, S2-1, S4-3, and the "School" portion of S5-1, and S5-101)	All	VII
Route Markers (M Series Signs)	All	II
General Information (I Series)	All	II
Milepost Markers	All	II
Guide Signs (Backgrounds)		
• Ground Mounted	All	II
• Overhead (Lighted)	All	I
• Overhead (Not Lighted)	All	III or IV
• Letters, Border, Symbols	All	III or IV
Blue and Brown Background Signs	All	II
Orange (Construction Signs)	All	I or II
Fluorescent Orange (Construction Signs)	All	IV or VII

*Fluorescent Yellow Green.

Table 2-3

Sign Message	Sign Number	RCW Number
BICYCLES MUST EXIT	R5-601	46.61.160
HITCHIKING PERMITTED	I7-901	46.61.255
HOV FACILITIES	R3-10, 11, 12, 13	46.61.165
LIMITED ACCESS	I2-601 and I2- 701	47.52.110
MINIMUM SPEED LIMIT	R2-4	46.61.425
NO STOPPING RESTRICTIONS	R8- SERIES	46.61.570
PARKING RESTRICTIONS	R7- SERIES	46.61.575
RANGE AREA	I2-401 and I2-501	16.24.060
RESERVED PARKING FOR DISABLED PERSONS	R7-801	46.61.581
SCHOOL SPEED LIMIT	S5-1	46.61.440
SLOW VEHICLES MAY USE SHOULDER	I8-501	46.61.428
SPEED LIMIT	R2-1	46.61.405
SPEED LIMIT, TRUCKS _____	R2-2	46.61.410
STOP & YIELD	R1-1 and R1-2	47. 36.110
WEIGHT RESTRICTIONS, ETC	R12 SERIES	46.61.450

Table 2-4

H. Sign Maintenance Responsibility – City Streets as State Highways.

Responsibility for installing and maintaining signs on city streets that are part of the state highway system can be assigned to the department or to a local agency. This responsibility is based on the population of the city or town, as determined by the Office of Financial Management. On Fully Controlled Limited Access highways, the department is responsible for all traffic control devices, including signs, unless superseded by an agreement with a local jurisdiction. (See RCW 47.42, WAC 468-18-050, and *City Streets as Part of State Highways*, an agreement between the department and the Association of Washington Cities for further direction.)

Sign Type	Population Over 22,500	Population Under 22,500
Regulatory	City	State
Parking	City	City
Warning	City	State
Route Markers	State	State
Guide Directional (Prime)	State	State
Street Name	City	City
School	City	State
MIS Logo	City*	City*
Informational	City	City
DWI Victim Memorial	City	City

*The department may install these signs, based on a specific agreement with a city or town.

Sign Maintenance Responsibility — Non-Limited Access Highways Table 2-5

I. Responsibility for Stop and Stop Ahead Signs

Stop Signs. In accordance with RCW 47.36.100, the state shall install and maintain all stop signs at the intersections of county roads with state highways.

Signs. In accordance with RCW 47.24.020(13), the state shall install and maintain all stop signs at the intersections of city streets with state highways within the corporate limits of cities having populations less than 22,500.

Stop Ahead Signs. Where appropriate, local agencies install and maintain any required STOP AHEAD (W3-1, W3-1a) signs on the local road legs that intersect with state highways (RCW 47.24.020(12&13)).

- J. **Controlling Vegetation Around Signs.** Provide effective sign visibility by clearing away vegetation that grows in front of signs, obscuring full view. The department's maintenance crews do this work. Clear to the following dimensions:

Area Description	Distance	Width
Low Speed Urban	200 feet	Varies
Rural	500 feet	Varies
Freeways and All Guide Signs	800 feet	Varies

Table 2-6

- Distance is measured along the edge of traveled way, back, from the location of the sign
 - Width varies. Clear from the edge of pavement to the edge of the sign that is farthest from the roadway, plus 5 feet; or to right of way
- K. **Sign Placement.** MUTCD Section 2A provides basic information about sign location. Refer to *Design Manual* Chapter 820 guidelines for information on the selection of post dimensions, longitudinal placement, mounting height, and lateral placement of signs on state highways. Design guidelines also provide details for overhead sign installations, including vertical clearance, horizontal location, and service walkways. Installation layout details are contained in WSDOT *Standard Plans*.

2.2 Regulatory Signs

Regulatory signs alert motorists to applicable traffic laws or regulations, and provide information and instructions required for compliance. Place these signs where areas of mandate or prohibition begin and end.

- A. **Bicycle Prohibition Signing.** Bicycle traffic is generally permitted on state highways except where restricted by regulation (see RCW 46.61.160). On highways that transition from permissive to restrictive, identify restricted sections in advance by installing signs that inform bicyclists of the upcoming prohibition, and give exit directions:
- On the mainline, install a BICYCLES MUST EXIT 1/4 MILE (R5-601) sign in advance of the prohibited area.
 - Install a BICYCLE MUST EXIT (R5-601 with arrow) sign at the off-ramp.
 - Install PEDESTRIANS, HITCHHIKERS, BICYCLES PROHIBITED (R5-1002) sign at on-ramp entrances to prohibited areas.

Design Manual Chapter 1020 discusses signing for bikeway facilities.

B. **Signing for Auxiliary Climbing and Passing Lanes.** For sections of state highway that feature *auxiliary climbing* lanes:

- Install a TRUCK LANE XXX FEET (R4-6) sign in advance of the climbing lane.
- Install a SLOWER TRAFFIC KEEP RIGHT (R4-3) sign near the beginning of the climbing lane.
- Where spacing allows, install a RIGHT LANE ENDS (W9-1R) in advance of the climbing lane terminus.
- Install a PAVEMENT WIDTH TRANSITION (W4-2L) sign in advance of the climbing lane terminus.
- (See Appendix 2-1.)

For sections of state highway that feature *auxiliary passing* lanes:

- Install a PASSING LANE XXX MILES (R4-601) sign 1/4 to 1/2 mile in advance of the passing lane. This sign shows the approximate distance to the passing lane, measured to the nearest 1/4 mile.
- Install a KEEP RIGHT EXCEPT TO PASS (R4-301) sign at the beginning of the passing lane.
- Where spacing allows, install a RIGHT LANE ENDS (W9-1R) sign in advance of the passing lane terminus.
- Install a PAVEMENT WIDTH TRANSITION (W4-2L) sign in advance of the passing lane terminus.
- An optional NEXT PASSING LANE XXX MILES (R4-602) sign may be installed up to 500 feet beyond the passing lane terminus. This sign displays the approximate distance to the next passing lane.
- (See Appendix 2-2.)

Guidelines for the design of auxiliary climbing lanes and passing lanes are contained in *Design Manual* Chapter 1010.

C. **Signing for Shoulder Driving.** Shoulder driving is permitted on selected portions of two lane highways in accordance with RCW 46.61.428. Section 7.9 of this manual defines the highway characteristics required to designate a shoulder driving area. For sections of state highways where *shoulder driving* is permitted:

- Install a SLOW VEHICLES MAY USE SHOULDER (I8-501) sign at the beginning of the shoulder driving zone.
- Supplement with a NEXT XXX MILES (I7-702) advisory distance plaque.
- Supplement with a DAYLIGHT HOURS ONLY (I8-701) sign.
- Repeat this signing at a maximum interval of 8 km (5 miles).

- Install an END SHOULDER DRIVING (I8-601) sign at the end of the designated shoulder driving zone.
- (See Appendix 2-3.)

D. **Signing for Slow Vehicle Turnouts.** For sections of state highways that feature slow *vehicle turnouts* as passing opportunities:

- Install a SLOW VEHICLES USE TURNOUTS NEXT XXX MILES (I8-101) sign in advance of the initial turnout.
- Install the DELAY OF 5 VEHICLES ILLEGAL (I8-201) sign in advance of each turnout.
- Install the SLOW VEHICLE TURNOUT XXX FT/MILE (I8-401) sign in advance of each turnout.
- Install a SLOW VEHICLE TURNOUT “arrow” (I8-301) sign at the beginning of each turnout.
- NO PARKING (R8-3) or NO PARKING SYMBOL (R8-3a) signs may be installed within the turnout area when required.
- (See Appendix 2-4.)

Guidelines for the design of slow vehicle turnouts are contained in *Design Manual* Chapter 1010.

E. **Speed Limit Signs.** Install SPEED LIMIT (R2-1) signs to display the maximum allowable speed as established by law or regulation. Where the speed limit is greater than 60 mph, or where a special speed limit is mandated for vehicles over 10,000 pounds gross weight, or vehicles in combination, install TRUCKS XX (R2-2) sign. Mount this sign below the standard speed limit sign. Speed limits signs shall be in multiples of 5 mph. On two-lane highways, locate speed limit signs:

- At urban area entry/exit points.
- At intersections of state highways.
- At major interchanges or intersections.
- At locations having a change in speed limit.
- At entrances to Washington State.

In rural areas, locate speed limit signs at 10 to 20 mile intervals.

In addition to these criteria, where possible on multi-lane highways, locate speed limit signs on the far side of major intersections and 1,500 feet beyond acceleration lanes, in accordance with MUTCD Section 2E-32. Install signs on both sides of the traveled way on multi-lane divided highways. In areas where interchange ramps are closely spaced, conduct a traffic engineering analysis to determine the most effective intervals for posting speed limit signs.

Do not place speed limit signs between curve/turn warning signs and the curve or turn.

- F. **Speed Zone Signing.** Install SPEED ZONE AHEAD (R2-5C) or REDUCED SPEED AHEAD (R2-5A) signs with supplemental speed plaques (R2-501) in advance of speed zone boundaries. This advance sign provides the motorist with an effective opportunity to decelerate to the lower speed with minimal braking. Conduct a traffic engineering analysis to determine the advance placement distance. Consider factors such as roadway geometrics, gravity deceleration, and the mph value of the speed reduction when making this determination.

Install a SPEED LIMIT (R2-1) sign at the speed zone boundary.

For all highways, locate signs for both directions of travel opposite one another at speed zone boundaries. Install signs on both sides of the traveled way on multi-lane divided highways. If existing highway features prohibit opposite installations, the signs may be installed a maximum distance of 300 feet apart, or offset up to 150 feet in either direction from the speed zone boundary. If these distance parameters cannot be met, the speed zone boundary may be changed by authorization of the State Traffic Engineer to allow for sign installation.

Where the speed limit is raised, install SPEED LIMIT (R2-1) sign and when appropriate, TRUCKS XX (R2-2) sign at the speed zone boundary. See Appendix 2-5.

- G. **Two-Way Left Turn Lane Signs.** TWO-WAY LEFT TURN ONLY signs may be installed where a lane in the center of a highway is reserved for the use of left-turning vehicles in either direction and is not to be used for passing or overtaking. The post-mounted (R3-9b) or the overhead mounted (R3-9) sign may be used to supplement pavement markings for the two-way left turn lanes. A plaque indicating BEGIN or END may be mounted above either sign to identify the limits of the two-way left turn area.

Additional WSDOT criteria apply to the use of two-way left turn lane signs:

- Install the initial sign near the beginning of the two-way left turn lane and repeat installation as necessary, based on an analysis of operating conditions.
- BEGIN or END plaques should not be installed where a two-way left turn lane is temporarily interrupted by left turn channelization on either one or both approaches to an intersection.

- H. **Yield Signs on Ramps.** YIELD (R1-2) signs may be installed along on-ramps to freeways or expressways where adequate acceleration lanes are not provided.

Tables in *Design Manual* Chapter 940 are used to determine the appropriate length for the acceleration lane portion of an on ramp connection. This minimum length is based on the design speeds of the mainline and the ramp. Where the acceleration lane meets or exceeds the *Design Manual* minimum length requirements, a yield sign is normally not required.

Conduct a traffic engineering analysis to determine the appropriate application of yield signs for on-ramp connections:

- If the acceleration lane does not meet the *Design Manual* minimum length.
- If ramp conditions, such as sight distance, gradient, etc., inhibit the effective acceleration speed of merging vehicles.

Install the yield sign so that it is not visible to mainline traffic.

- I. **Range Area Signs.** Install the RANGE AREA sign in accordance with RCW 16.24.060, wherever a state highway enters an open range area. Repeat signing at points designated by the governing county commissioners. Install the LEAVING RANGE AREA sign where a state highway leaves an open range area.
- J. **No Pedestrian Crossing Sign.** Install a NO PEDESTRAIN CROSSING sign (R9-3a) at a signalized intersection where pedestrian crossing is prohibited. Locate the sign so that it is visible to all pedestrians who may consider crossing, normally on the opposite side of the roadway in line with the travel path of the pedestrian. If supplemental signing is called for, install USE CROSSWALK, R or L sign (R9-3B) below this sign.
- K. **Lane Use Control Sign.** Install appropriate LANE-USE CONTROL sign (R3-8, R3-801, R3-802, R3-5A) between the applicable traffic signal heads to indicate allowable through/turning movements.
- L. **Unmuffled Compression Brakes Signs.** Under purview of RCW 46.37.390, it is against the law to use unmuffled compression brakes. The department posts signs (R4-605) accordingly, just inside state boundaries at border crossings used by trucks, and along the ramps to or from weigh stations as sign spacing allows. Do not post these signs at other locations.
- M. **Compression Brake Prohibition Sign.** The department does not regulate compression brake use. Compression brake regulations are enacted by local agencies. Local agency compression brake prohibitions are typically noise regulations rather than traffic regulations, intended for environmental purposes rather than traffic safety purposes. Thus, signs prohibiting compression brake use are a local agency issue in which the department becomes a partner through a local regulation that includes state highways.

There is no clear mandate in state law or Department of Ecology (DOE) regulations that assist the regions in responding to local agency requests for compression brake prohibition signs. Further, the DOE noise program was terminated in 1982. Consequently, it is necessary to interpret the limited guidance in a manner that assures highway safety is not compromised, that signs are installed with a reasonable degree of uniformity statewide, and that the desires of local agencies are respectfully considered.

RCW 70.107.060(3) provides that a local government may, upon finding that special conditions necessitate such requirements, control noise sources, or impose noise limits that are different from those adopted or controlled by DOE. Such locally imposed noise limits are invalid unless first approved by DOE. If DOE does not approve or disapprove noise limit standards submitted by local jurisdictions within 90 days, such standards are deemed to be approved. Accordingly, since DOE has no noise program, any local agency noise regulation submitted to DOE is approved by default 90 days past the date of submittal.

Key to the subject is the interpretation of “special conditions,” as required by RCW 70.107.060(3). The department considers highways, residential areas, and commercial areas to be common conditions rather than special conditions. Therefore, the “special conditions” cited in a local agency noise ordinance are evaluated by the regions, in consultation with the Headquarters Traffic Office, prior to the installation of compression brake prohibition signs.

Where special conditions are deemed to exist, and where sign spacing is available, the department will install signs (R4-604) to reflect the nature of the prohibition cited in the local ordinance as follows:

- Along access controlled routes approaching restricted areas, install such signs beyond the junction of major interchanges accessed by trucks. Locate these post-interchange signs between the route marker assembly and the speed limit signs. For locations approaching corporate limits, where these installations would create sign crowding, the signs may be installed below the city entrance marker, on each approach to the corporate limits Signs.
- Along non-access controlled routes outside corporate limits, install such signs upon leaving corporate limits, and beyond the junction of major intersections accessed by trucks, not to exceed one sign every 5 miles.

In addition, the local agency shall agree to partner with the department in the following manner:

- For each situation, the local agency must have a valid noise ordinance (submitted to DOE at least 90 days prior to contacting the department), and must agree to pay the fabrication and installation costs for the original installation and subsequent maintenance installations.
- Along non-access controlled state routes within corporate limits (city streets that are also state highways, RCW 47.24), cities or towns may install the signs at their discretion.

2.3 Warning Signs

Warning signs alert motorists to unexpected conditions on or adjacent to state highways that require extraordinary attention. Install these signs in advance of conditions that require special attention of the motorist. The table for advanced placement of warning signs, located in MUTCD Section 2C, offers guidance by providing minimum advance placement distances, based on vehicle speeds and location specific conditions. Determine appropriate installation of these signs on the basis of MUTCD Section 2C guidelines, traffic engineering analysis, and reasonable judgment.

Minimum *Warning* sign sizes:

Highway Type	Minimum Warning Sign Size
Freeways and Expressways	48"
Multilane Streets	36"
Conventional Roadways	30"

Table 2-7

- A. **Added Lane Sign.** An ADDED LANE (W4-3) sign may be used in advance of a point where two roadways converge and merging movements are not required. The sign should be used at all added lane conditions to eliminate unnecessary mainline lane changes. If the mainline sign is not visible from both roadways, a sign may be installed on the converging side of each roadway.
- B. **Chevron Alignment Signs.** CHEVRON ALIGNMENT (W1-8) signs may be installed on non-illuminated circular interchange ramps, or on other sharply curving alignments where run off the road crashes have demonstrated an operational deficiency. Install signs in series and configure arrays to include a minimum of three signs, with at least two signs visible to the motorist throughout the curve.

- C. **Deer Crossing Sign.** Install DEER CROSSING (W11-3) signs to alert motorists when approaching an area where deer or elk may unexpectedly enter the roadway at random or numerous locations.

Install this sign only in areas where motorist warning is required. Consider information from the following sources when determining appropriate installation:

- The Headquarters Environmental Affairs Office records and compiles deer kill data reported by WSDOT personnel.
- Records of accidents with wildlife which are maintained by the Transportation Data Office, Accident Data Section of the Planning and Programming Service Center.
- The Department of Fish and Wildlife's regional biologists who have additional information on concentrations and migratory routes of deer.

Existing DEER CROSSING sign locations should be reviewed every five years to determine if the location still warrants a sign.

- D. **Exit Advisory Speed Sign.** Install the EXIT ADVISORY SPEED (W13-2) sign at freeway/expressway exit ramps to inform motorists of the recommended speed, based on traffic engineering analysis, for negotiating the alignment. Locate the sign along the right shoulder of the deceleration lane prior to the exit gore or ramp entrance, at a point which allows the motorist time to make a safe slowing and exiting maneuver.

If an advisory speed condition is located on the ramp, well beyond the exit gore, install a standard warning sign with an advisory speed plaque, in accordance with Section 2C-3 of the MUTCD.

- E. **Ramp Advisory Speed Sign.** Install the RAMP ADVISORY SPEED (W13-3) sign to inform motorists of the recommended speed, based on traffic engineering analysis, for negotiating a ramp alignment with curvature or other unexpected conditions. Use this sign on freeway/expressway entrance ramps, and freeway/expressway to freeway/expressway connection ramps. Locate this advance sign at a point which allows the motorist time to make a safe slowing maneuver before entering a turn or curve.

If an advisory speed condition is located well beyond the gore or ramp entrance from surface streets, install a standard turn or curve sign with an advisory speed plaque (W13-1) in accordance with Section 2C-3 of the MUTCD.

- F. **Fire Station Signs.** FIRE STATION (W11-8) signs may be installed at locations where there is limited sight distance to the fire station road approach or where the approach is in an area where a motorist would not normally expect to see a fire truck enter the roadway.

Conduct a traffic engineering analysis at each location to determine appropriate applications for this sign.

Fire station warning signs are not generally used at intersections.

- G. **Grated Bridge Deck Sign.** Install the GRATED BRIDGE DECK sign (W8-2101) in advance of bridges with grated decks. Deck grates may affect the handling characteristics of some vehicles, particularly motorcycles and bicycles.
- H. **Grooved Pavement Sign.** Install the GROOVED PAVEMENT sign (W8-2001) in advance of highway sections where the finish of the roadway surface features closely spaced longitudinal grooves. The grooves may affect the handling characteristics of some vehicles, particularly motorcycles and bicycles. Do not use this sign in areas of rutted pavement.
- I. **Hairpin Curve Sign.** WSDOT criteria recommend installing the hairpin curve sign (W1-901L,R) at locations where a horizontal curve alignment contains a central angle of 135 degrees or greater, and:
- A traffic engineering analysis of roadway, geometric, and operating conditions shows the recommended curve speed to be 30 mph or less; or
 - The recommended curve speed is equal to or less than the speed limit established by law or regulation for that section of highway
- To provide additional guidance, the hairpin curve sign may be supplemented with:
- Advisory speed plaque (W13-1).
 - Large arrow sign (W1-6).
 - Chevron alignment signs (W1-8).
- J. **Truck Tipping Signs.** The special TRUCK TIPPING sign may be installed where there is a history of truck tipping accidents. Install this sign in addition to, not in lieu of, standard curve or turn, large arrow, and chevron warning signs. Conduct a traffic engineering analysis to determine the recommended speed at which trucks can negotiate an alignment. Display this recommended speed on an advisory speed plaque (W13-1) below the TRUCK TIPPING sign.
- K. **Intersection Warning Signs.** Install the INTERSECTION WARNING (W2 Series) sign on through highways to indicate the presence of an obscured intersection. Consider installing this sign at locations where traffic entering from the side approach is not continuously visible to traffic on the through highway for the minimum advance distance suggested in the table for advanced placement of warning signs located in MUTCD Section 2C. These signs may be modified to show offset geometrics of intersection or approach curves when necessary. Width of lines used

to show roadways may vary to demonstrate the predominate highway. Intersection warning signs are not normally used at signalized or channelized/illuminated intersections.

- Supplement the INTERSECTION WARNING sign with the black on yellow ROAD NAME (D3-201) sign.
- Install white on green ROAD NAME (D3-302) signs 200 feet or more in advance of intersections where the INTERSECTION WARNING sign is not used (see Section 2.4.F.1 of this manual).

Refer to the MUTCD installation criteria for railroad/intersection signs W10-2, W10-3, and W10-4.

L. **Low Clearance Signing.** The maximum legal vehicle height permitted on state highways is 14' (RCW 46.44.020). At the direction of the MUTCD, and through operational experience, a 15" buffer (including 3" for frost heave) has been added to the 14', creating a minimum threshold of 15'3" for low clearance warning signs.

- For locations where the clearance is 14' or greater, but less than 15'3", install the LOW CLEARANCE (W12-301), or LOW CLEARANCE W/ARROW (W12-302) sign on overhead structure, or install the advance LOW CLEARANCE (W12-2) sign on the right shoulder. Refer to the table for advanced placement of warning signs, located in MUTCD Section 2C for advanced placement distance.
- Where the clearance is less than 14', install the LOW CLEARANCE (W12-301) or LOW CLEARANCE W/ARROW (W12-302) sign on the structure. In addition, install LOW CLEARANCE (W12-2) sign in advance of the closest intersecting road that provides a detour around the low clearance impediment. Supplement this sign with an ADVISORY DISTANCE (W13-501) sign, showing the distance to the impediment. Install an additional advance LOW CLEARANCE (W12-2) sign in accordance with the table for advanced placement of warning signs, located in MUTCD Section 2C.
- In situations where clearance may vary greatly, such as arched structures or tunnels, make a specific determination regarding the number of signs required on the structure to provide effective clearance information. If any portion of the roadway, for example at the edge stripe, does not provide minimum legal clearance, the advance signing should include this information.

Display the low clearance to the nearest inch not exceeding the actual clearance. If surface overlays decrease the overhead clearance, measure the clearance and if necessary, revise sign message accordingly.

Vertical clearance for all overhead signs shall be in accordance with the *Design Manual* Section 820.

- M. **Merge Sign.** Install the MERGE (W4-1) sign to warn motorists of upcoming merging movements, in advance of a point where two roads converge and no turning conflicts occur. Consider installing this sign if the minimum visibility distance for an alignment convergence is less than the *Condition A* value, suggested for the given operating speed in the table for advanced placement of warning signs located in MUTCD Section 2C. Place the sign on the major alignment, in advance of the point where two roads converge. An additional sign may be placed on the entering roadway as a reminder. Do not use this sign where roads converge with added lanes.
- N. **Stop Ahead/Signal Ahead Signs.** STOP AHEAD (W3-1a) and SIGNAL AHEAD (W3-3) signs are generally required only if the stop sign or the traffic signal is not visible in advance of the minimum distances provided in the table for advanced placement of warning signs located in MUTCD Section 2C. Refer to Section 2.1.F of this manual to determine responsibility for installation and maintenance of these signs.
- O. **Turn and Curve Signs and Advisory Speed Plaques.** Install the TURN (W1-1) sign where traffic engineering analysis of roadway, geometric, and operating conditions indicates an advisory speed for a horizontal turn to be 30 mph or less, and:
- This advisory speed is 5 mph or more below the legal speed limit.
 - Install supplemental advisory speed plaque (W13-1) if this advisory speed is 10 mph or more below the legal speed limit, or where traffic engineering analysis indicates the need to advise drivers of the recommended speed.

Install the CURVE (W1-2) sign where traffic engineering analysis of roadway, geometric, and operating conditions indicates an advisory speed for a horizontal curve that ranges from 35 mph to 65 mph, and:

- The advisory speed is 5 mph or more below the legal speed limit.
- Install supplemental advisory speed plaque (W13-1) if the recommended speed is 10 mph or more below the legal speed limit, or where traffic engineering analysis indicates the need to advise drivers of a recommended speed.

Advisory speeds on curves are indicated by ball-banking instrument readings as follows:

Advisory Speed (mph)	Maximum Ball Bank Reading
20 mph or less	14
25 and 30 mph	12
35 mph and greater	10

Table 2-8

- P. **Pavement Ruts Sign.** Install PAVEMENT RUTS signs (W8-2201) in advance of highway sections where longitudinal wheel track ruts may cause unexpected movements when vehicles change lanes or exit the roadway. The Regional Traffic Office should determine appropriate placement of these signs, based on traffic engineering analysis. On multi-lane divided roadways, post signs on both sides of the roadway.
- Q. **Transit Stop Ahead Sign.** Install the TRANSIT STOP AHEAD (W14-1101) symbol sign on state highways in advance of transit vehicle stop zones. In accordance with WAC 468-46, this sign shall be installed when:
- The transit stop has been approved by the Regional Traffic Office.
 - The transit stop is located in an area that is not incorporated.
 - The transit vehicle stops *upon the roadway* to receive and discharge passengers.
 - There is limited sight distance condition.

Install the sign at locations where the transit vehicle, when stopped upon the roadway, is not visible from a minimum advance distance of 500 feet. To locate the sign, use advance distances from the table for advanced placement of warning signs located in MUTCD Section 2C.

- R. **Snowmobile Signs.** Install SNOWMOBILE Warning signs where motorists may encounter snowmobiles in accordance with RCW 46.10.110.
- S. **Bikes on Road Signs.** Install BIKES ON ROAD (W11-101) signs in areas where motorists may encounter bicyclists on the roadway. These signs help mitigate road use conflicts on state routes with narrow paved shoulders. Consider using these signs on sections of state highway where the paved shoulder width is less than 4 feet and one or more of the following conditions are met:
- Average Daily Traffic volume is greater than 1,700 vehicles, based on the most current WSDOT *Annual Traffic Report*.
 - The state highway is part of a recreational or commuter bicycle route that is officially recognized by the department, or a county or regional transportation organization, such as an RTPO or MPO.
 - There is a documented history of complaints and conflicts between bicyclists and motorists.

Use these signs in conjunction with the BICYCLISTS signs (W11-1). Do not install these signs on state highways that have designated bicycle lanes.

- T. **Left Turns Ahead Signs.** The MUTCD does not provide guidance for the use of the LEFT TURNS AHEAD (W2-601) sign. This sign may be used to mitigate conflicts at intersections where traffic engineering analysis indicates that a left turn movement is contributing to operational deficiencies. Install this sign at locations where:
- The intersection is not channelized.
 - Left-turning vehicles may queue in the traveled lane.
 - Approach to intersection does not provide adequate stopping sight distance.

- U. **Object Markers/Lateral Clearance Markers.** Install object markers to identify hazardous objects and conditions located within or adjacent to the roadway. Objects located close enough to the edge of the traveled way to present a hazard require a lateral clearance marker (W12-401 L/R). These hazards may include, but are not limited to underpass bridge piers and abutments, barriers, handrails, and culvert headwalls. Object markers may be installed at some locations where the hazard is not presented by a physical object, but where conditions such as narrow shoulder drop-offs, small traffic islands and abrupt changes make it undesirable for the motorist to leave the roadway. The MUTCD states, “the inside edge of marker (W12-401 R/L) shall be in line with the inner edge of the obstruction.” The mounting height to the bottom of the lateral clearance marker is 4 feet above the lane edge.

Impact Attenuator Markers (W12-501 and W12-502) are used to identify the nose section of an impact attenuator. Install a W12-501 when traffic approaching an attenuator passes only one side of the attenuator; install a W12-502 when approaching traffic passes on both sides of the attenuator.

- V. **Watch for Ice Signs.** The use of WATCH FOR ICE signs to alert motorists to roadway surface conditions caused by weather shall be discontinued, except where there are “intelligent” signs linked to pavement sensors.

“Intelligent” WATCH FOR ICE SIGNS may also be posted where some natural or manmade feature causes the highway to be consistently wet without reference to immediate weather conditions and there is substantial likelihood that cold temperatures will often occur and cause ice on the highway in that specific and limited location. Examples of this limited kind of condition may include, but are not limited to:

- A waterfall or some industrial plant proximate to a highway that consistently causes spray.
- Moisture from vapor on the highway.
- Wetness from drainage problems for which there has been no feasible short or long-term design or maintenance solution.

Any decision to post an Ice sign for these reasons must be reviewed and approved by the State Traffic Engineer, based on traffic engineering analysis, and in consultation with the appropriate Regional Traffic Engineer.

2.4 Guide Signs

Overview. These signs serve as primary navigational tools for the unfamiliar motorist on state highways. Guide signs provide information about route designations, distances and directions to destinations, motorist services, and other geographical, recreational, or cultural points of interest.

Limit the number and spacing of these signs; this allows the driver adequate time to read and respond to the messages. When new signs are being added to highways that serve urban and suburban built up areas, use reasonable judgment to avoid sign proliferation. This may require the removal or relocation of existing signs.

Pursuant to MUTCD Sections 1A-1 and 1A-3.1, sign messages that provide advertising or commercial information are not allowed.

Types of Guide Signs. The guide sign group consists of several types of signs. **Route Markers** clearly display the official highway number and direction of travel. **Primary Guide Signs** (advance guide signs, exit directional signs and destination signs) direct motorists along state highways to exit points for principal destinations served by intersections or interchanges; and to control cities that are located on intersecting state routes. **Distance Signs** display distances to destinations and junctions along state routes. **Supplemental Guide Signs** provide direction to major traffic generators or other points of interest. **Follow-Through** signs provide continued direction, beginning at the point of exit from the state highway, following through to the destination displayed on the guide sign. **General Motorist Information Signs** provide information for the unfamiliar motorist about services available at upcoming intersections and interchanges.

Guide Signs on Conventional Roads. Install guide signs on conventional roadways in accordance with guidelines in MUTCD Section 2D. Advance destination and destination signs should be used on through routes at junctions of state highways and at junctions of county roads or city streets that lead to significant destinations. Include numbered state route markers (D1-501) on the destination signs where appropriate.

Guide Signs on Expressways and Freeways. Install guide signs on expressways and freeways in accordance with guidelines in MUTCD Sections 2E and 2F. Generally, this consists of one or two advance guide signs, an exit directional sign, one supplemental guide sign, and other signs as shown. The minimum spacing is 800 feet between guide signs. Install only one supplemental guide sign, approximately halfway between the advance destination sign and the destination sign.

- A. **Route Marker Signs – General.** The MUTCD requires the use of route markers to identify and mark all numbered highway systems. Each highway system type (e.g., interstate, state route, US) has a uniquely designed route marker. Use the specific route marker only on the appropriate route and approaches to the route. The following criteria are applied when using route markers:
- Install route marker signs at:
 - Entrances to Washington State.
 - Beyond interchanges or on the far side of intersections with other numbered routes, or major local roads.
 - Beyond city limits.
 - Install the cardinal direction sign (M3 series) above route marker sign.
 - Install junction signs where appropriate.

In urban and residential areas, install route markers at intervals that will keep an unfamiliar motorist informed of the route.

- B. **Primary Guide Signs – General.** Advance guide, exit directional, and destination signs provide guidance to destinations served by upcoming exits or intersections. Provide the unfamiliar motorist with the most effective message, and ensure consistency by displaying the same message on all signs installed in series.

MUTCD guidelines define the required and allowable numbers of advance guide signs for various roadway types and interchange classifications. One exit directional or destination sign is located immediately prior to the exit or intersection. The MUTCD guidelines also provide installation location, and letter/legend criteria for these signs.

Display a maximum of two destinations on a single primary guide sign. A sign support having two or more signs may display a maximum of three destinations.

Destination Selection. Display the primary destination(s) served by the upcoming exit or intersection. This could include the name of a city, street, junction with another numbered highway or control city along the intersecting route, or other traffic generator. Use the same destination selection criteria for guide signs on conventional roads, freeways, and expressways.

Control City/Terminal Destination Signing. As provided in the MUTCD guidelines, use a control city or terminal destination on guide signs at junctions with other highways. Choose the primary destination (control city or terminal destination) for selected state routes from those given below:

SR 2

EB from Everett	Wenatchee
EB from Wenatchee	Spokane
EB from Spokane	Newport
WB from Idaho State Line	Spokane
WB from Spokane	Davenport
WB from Davenport	Wenatchee
WB from Wenatchee	Everett

SR 5

NB from Vancouver, WA	Seattle
NB from Seattle	Vancouver, B.C.
SB from Vancouver, B.C.	Seattle
SB from Seattle	Portland

SR 12

EB from Aberdeen	Olympia
EB from Elma	Centralia
EB from Interstate 5	Yakima
EB from Yakima	Richland
EB from Pasco	Walla Walla
EB from Walla Walla	Lewiston
WB from Idaho State Line	Walla Walla
WB from Walla Walla	Pasco
WB from Richland	Yakima
WB from Yakima	Interstate 5
WB from Interstate 5	Aberdeen

SR 14

EB from Vancouver	I-82/Kennewick
WB from I-82	Vancouver

SR 20

EB from Keystone	Anacortes
EB from Anacortes	Burlington
EB from Burlington	Okanogan
EB from Okanogan	Colville
EB from Colville	Newport
WB from Idaho State Line	Colville
WB from Colville	Okanogan
WB from Okanogan	Burlington
WB from Burlington	Anacortes
WB from Anacortes	Coupeville

SR 82

EB from Ellensburg	Yakima
EB from Yakima	Richland
EB from Richland	Pendleton
WB from Oregon State Line	Kennewick
WB from Kennewick	Yakima
WB from Yakima	Ellensburg

SR 90

EB from Seattle	Ellensburg
EB from Ellensburg	Spokane
EB from Spokane	Coeur d'Alene
WB from Idaho State Line	Spokane
WB from Spokane	Ellensburg
WB from Ellensburg	Seattle

SR 97

NB from Oregon State Line	Yakima
NB from Ellensburg	Wenatchee
NB from Wenatchee	Okanogan
NB from Okanogan	Penticton, B.C.
SB from Canadian Border	Wenatchee
SB from Wenatchee	Ellensburg
SB from Yakima	Goldendale

SR 101

NB from Oregon State Line	Aberdeen
NB from Aberdeen	Port Angeles
NB from Olympia	Port Angeles
SB from Port Angeles (East Leg)	Olympia
SB from Port Angeles (West Leg)	Aberdeen
SB from Aberdeen	Astoria

SR 182

EB from SR 82	Richland
EB from Richland	Pasco
WB from Pasco	Richland
WB from Richland	SR 82/Yakima/Pendleton

SR 195

NB from Idaho State Line	Spokane
SB from Spokane	Lewiston

SR 205

NB from Oregon State Line	Seattle
SB from Jct. I-5	Salem

SR 395

NB from Oregon State Line	Kennewick
NB from Pasco	Spokane
NB from Spokane	Colville
NB from Colville	Grand Forks, B.C.
SB from Canadian Border	Spokane
SB from Ritzville	Pasco

SR 405

NB from Jct. I-5 (Southcenter)	Renton
NB from Renton	Bellevue
NB from Bellevue	Everett
SB from Jct I-5 (Lynwood)	Bellevue
SB from Bellevue	Renton

If a terminal destination is not required or if space is available for a second destination, display the destination that will benefit the greatest number of motorists. Consider the following destinations when making this determination:

- A city or town situated at or near a major highway junction; or the major highway junction route marker if junction is located prior to a city or town.
- The name of the cross-road or street.
- A second major city or town on the route.
- Other major destinations such as: Mountain passes on primary highways, National parks, and the Seattle-Tacoma or Spokane International Airports.

C. **Distance Signs – General.** MUTCD guidelines permit distance signs to display up to three destinations. In addition, the following criteria should be observed:

- Locate signs in rural areas at 10 to 15-mile intervals.
- Locate signs beyond city limits or urban boundaries.
- Locate signs beyond intersections and interchanges of numbered routes.
- Locate signs at entrances to Washington State.

Where two or more of these location conditions occur within 10 miles, sign the most effective location.

Destination Selection. Use the top line to identify the next city with services available, or the next intersected route number. The second line can be used to identify communities of general interest and may be varied on successive signs to provide maximum information for the motorist. Display the next control city or terminal destination on the third line.

Use the same destination selection criteria for guide signs on conventional roads, freeways, and expressways.

Determining Mileage Display on Distance Signs. For Freeways and Expressways, display the distance in miles from the sign to the first interchange/intersection that provides motorist services within the destination city corporate limits, or the distance in miles from the sign to the interchange/intersection that provides destination signing to the City Center. For conventional highways, display the distance in miles from the sign to the boundary of the destination city corporate limits. For destinations such as Mt. Rainier National Park, display the distance to the park boundary.

- D. **Supplemental Guide Sign – General.** Supplemental guide signs direct the unfamiliar motorist to destinations that are significant traffic generators, or other points of interest that cannot be displayed on primary guide signs. A supplemental guide sign may display a maximum of two destinations. It may be necessary to replace existing destinations with more important ones as development occurs. MUTCD guidelines define appropriate application and installation location for these signs on expressways and freeways. No more than one supplemental guide sign should be installed on each interchange approach.

Destination Selection. In some cases, essential messages cannot be included on primary guide signs due to space limitations. Place these messages on supplemental guide signs with priority over other supplemental sign messages.

State law requires the department to install and maintain signing to State Parks located within 15 miles of interstate highways (RCW 47.36.290). These destinations have first priority on supplemental guide signs located on interstate highways. State law also requires signing from state highways to regional shopping centers that meet specific criteria (RCW 47.36.270).

The largest category of destinations to consider for supplemental guide signing is traffic generators. Although the department receives numerous requests for these signs, it is not possible to sign for all traffic generators that warrant signing. The following information offers prioritized selection criteria to aid in determining the most appropriate destinations for supplemental guide signs.

Selection Criteria Factors for Supplemental Destinations – Priority Order

1. **Primary Guide Sign Over-Flow Messages.** In some cases, appropriate messages cannot be included on primary guide signs due to space limitations. Place these messages on supplemental guide signs with priority over other supplemental sign messages.

2. **Statutory Selection.** Signing to State Parks from interstate highways and signing to regional shopping centers from state highways has priority over other traffic generators.
3. **Traffic Generator Volume.** This signing should serve an essential traffic control function; traffic generators with the greatest traffic volume should be given priority.
4. **Local Consensus.** Local agency partnership is an important consideration. Routing traffic onto local roadways may impact local traffic patterns. Determine if signing to a traffic generator will impact local roadway traffic operations. Seek local agency concurrence with proposed signing location.
5. **Nearest Interchange/Intersection.** Determine if the sign will be located at the interchange or intersecting road that provides the most direct route to the traffic generator. In general, avoid signing to destinations that require complex navigation on multiple highways, unless the activity is of national significance. Determine if the local agency concurs with proposed signing.
6. **Distance From Route to Destination.** Determine if the traffic generator lies within the prescribed distance criteria for the type of destination being signed (see categories below).
7. **Follow-Through Signing.** Determine if follow-through signing is required to direct the unfamiliar motorist to the traffic generator. The local agency must concur with proposed signing and be willing to assume responsibility for installation and maintenance of follow-through signs. Refer to Section 2.4.E for further information regarding follow-through signing.
8. **AASHTO Guidelines for Selecting Traffic Generators Adjacent to Freeways.** Determine if the traffic generator meets or exceeds criteria contained in this AASHTO publication.
9. **National/Regional/Local.** Establish priority based on scope of recognition. Prioritize traffic generators that are nationally recognized over traffic generators that have state or regional recognition, and regional destinations over local points of interest.

Supplemental Guide Sign Destination Types (Non-Priority)

This non-priority list of traffic generator types may aid in determining the most appropriate destinations for supplemental guide signs. These are general categories, a traffic generator may cross over into several groups.

Multi-Modal

- Airports
- Amtrak/Other Railroad
- Ferries
- Park and Ride Lots

Heritage

- Indian Reservations
- Military Installations
- Natural/Cultural/Historic Attractions Scenic
- Byways

Recreational

- Fairgrounds
- National Parks
- Recreational Areas
- Stadiums (Sports Facilities)
- Colleges/Universities USFS
- (HQ's Facilities/Campground)

Industrial/Commercial

- Business Routes
- Ports/Port Districts
- Industrial Parks

Section 2.4D.11 lists traffic generators that normally **do not** warrant signing. Evaluate the given interchange and select the destinations that provide the most benefit to the motorist.

Destination Selection Criteria and Installation Details for Specific Types of Traffic Generators

To warrant sign messages on supplemental guide signs, traffic generators must meet these criteria. Appendix 2-6 contains these criteria in a table format. Supplemental guide signing for these traffic generators shall be installed according to the following details.

1. State Parks

Overview. The department provides signing along state highways for routes leading to state parks under purview of RCW 47.36.290. The State Parks and Recreation Commission is responsible for any State Park signing route not located on a state highway. Parks within 15 miles of an interstate highway will be signed from the interstate, including follow through signing on any state route that connects the interstate to the park. Do not install mainline signing until all follow through signing is in place.

All signs shall have white letters, symbols, and border on a brown background. The Headquarters Traffic Office maintains an inventory of the recreational symbols to be used at each state park.

Freeways

Mainline. Install supplemental guide signs displaying the name of the state park and a directional message, such as NEXT RIGHT, in advance of the interchange off-ramp. If a park has restricted hours or days of operation, add signs displaying the operating schedule to the supplemental sign assembly.

Ramp. Install directional signs with the message “STATE PARK” and a maximum of four symbol plaques for each sign assembly. Display the mileage to the park from the ramp terminal, using ¼ mile increments if the distance is less than one mile. If the park does not have camping facilities, display the message “NO CAMPING” in place of one of the symbol plaques.

Conventional Roadways

To provide guidance to state parks from conventional roadways, install signs displaying the name of the park, the NEXT RIGHT/LEFT directional message and a maximum of four recreational symbol plaques. If the park does not have camping facilities, display the message “NO CAMPING” in place of one of the symbol plaques. If a park has restricted hours or days of operation, add signs displaying the operating schedule to the directional assembly.

At the intersection of a state route, and a roadway leading to a state park, install a white on brown D1-101 with the message “STATE PARK” and a directional arrow. Display the mileage to the park from the intersection, using 1/4 mile increments if the park is less than one mile from the intersection.

2. **Regional Shopping Centers.** WAC 468-95-025 requires signing to regional shopping centers when all of the following criteria are met:
 - Shopping center has greater than 500,000 square feet of retail space for lease.
 - Shopping center contains at least three major department stores that are owned by a national or regional chain organization.
 - Shopping center is located within 1 mile of a state highway.
 - Shopping center must generate a minimum of 9,000 daily one-way trips.
 - Sign space is available for installation as specified in the MUTCD.

- Supplemental follow-through directional signing is required if the shopping center is not clearly visible at the point of exit from the main traveled way.

All follow-through signing must be in place prior to installing supplemental guide signs. All costs associated with installing and maintaining signs shall be the responsibility of the shopping center.

3. **Airports.** Airports are eligible for signing if they are included in the National Plan of Integrated Airport Systems and classified as air carrier, commuter or reliever, or general aviation airport and meet the following criteria:
 - The airport is associated with an area population of 10,000 or more.
 - The airport is located within 5 miles of interchange or intersection.
 - The airport runway shall be paved, lighted, and 2,500 feet, or more, in length.
 - The airport is municipally owned, or privately owned, and substantially used for commercial enterprise with the following minimum number of regularly scheduled commercial flights per day:
 - 35 flights per day in major metropolitan area (greater than 50,000).
 - 20 flights per day in an urban area (5,000-49,999).
 - 15 flights per day in urban areas.
 - Airports at remote locations serving a smaller population may be signed when their location is not obvious.

Contact WSDOT's Aeronautics Division to determine if a specific airport meets these criteria. Airports that have scheduled flights can be signed with the airport name. All other municipal airports will be signed with the airport symbol or with the word message "Airport."

Existing signs not meeting these criteria may remain in place.

4. **Rail Passenger Stations.** Install signing to Amtrak and other rail passenger stations as described below. In some cases, Public Transit Authorities may choose to enter into a partnership with the department regarding signing issues. This may include the use of logo signs that have been approved by the Public Transit Authority and the department, as the standard guide sign. Use these guidelines to install signing that directs traffic from state highways to Amtrak and other passenger rail stations:

- **Conventional Roadways.** Use Amtrak symbols or approved logo signs in the trailblazer format with the appropriate directional arrows.
- **Multilane Highways:**
 - If there is enough space to install an individual feature sign, the Amtrak symbol plaque or approved logo sign may be placed alone on a green background sign panel with either of these messages: “NEXT RIGHT” or “EXIT XXX” (see Appendix 2-7a)
 - When there is not enough space to install an individual feature sign, the Amtrak symbol plaque or approved logo sign may be installed below the advance exit or the exit directional sign on the post closest to the traveled way (see Appendix 2-7b).
 - If the sign cannot be installed in accordance with the details above, the Amtrak symbol plaque or approved logo sign may be installed below the supplemental guide sign, on the post closest to the traveled way (see Appendix 2-7c).
 - Install Amtrak trailblazer signs or approved logo signs along freeway ramps or at ramp terminals. All trailblazer signs must be in place before any mainline signs are installed.
 - The Amtrak symbol plaque or approved logo sign may be installed as part of a multi-modal transportation logo board, along with approved symbols for other modes of transportation.

If none of the above is possible, the sign shall not be installed.

5. **Colleges and Universities.** Provide signing along interstate and state highways to colleges, universities, and public technical schools in accordance with the following criteria:

Interstate Highways

- Install signing if the main campuses of state colleges and universities are located within 5 miles of an interstate highway. Where two interstate highways are within the 5 miles limit, sign from the nearest one.
- Signing to state college and university satellite campuses, other public or private colleges and universities, and technical schools is the same as above. Where two or more colleges or universities share a common campus, enrollments may be combined to meet enrollment criteria. If this and all other criteria are met, multiple facilities may be displayed on guide signs. In addition, the institution:
 - Must be a regional institution.

- Must have total enrollment (including part time and full time) of:
 - 4,500 students in a major metropolitan area (50,000 or greater).
 - 2,500 students in an urban area (5,000-49,999).
 - 1,000 students in a rural area.
- Must have accreditation. To determine if a Washington state institution of higher education is duly accredited, contact the Council on Colleges of the Northwest Association of Schools and Colleges. A list of Washington's accredited schools is available on line at the agency Web site www.cocnasc.org. This agency also has accurate enrollment data. The agency can be contacted by phone at (425) 827-2005 for information about a school accredited outside the northwest region which operates a satellite campus in Washington.

Other State Highways

- Install signing if the main campuses of state colleges and universities are located within 5 miles of a state highway. Where two state highways are within the 5 miles limit, sign from the nearest one.

All other criteria are the same as those for interstate highways.

6. **Event Venues – Arenas, Auditoriums, Convention Halls, Fairgrounds, Stadiums.** Event venues may be signed with white on green supplemental guide signs if the following requirements are met and sign space is available.
 - **Major Metropolitan Area (population 50,000 or greater).** The venue must be within 2 miles of the state highway, and the annual attendance at the facility must be at least 300,000.
 - **Urban Area (population 5,000-49,999).** The venue must be within 2 miles of the state highway, and the annual attendance at the facility must be at least 250,000.
 - **Rural Area.** The venue must be within 5 miles of the state highway, and the annual attendance at the facility must be at least 200,000.
7. **Industrial Parks.** Signing to industrial parks may be installed if:
 - The area has at least 500,000 square feet of space available for lease (may include a mix of manufacturing, service, warehouse facilities).
 - The area is within 5 miles of the state highway.

8. **Ports/Port Districts.** Signing to activities located on properties owned and operated by Ports or Port Districts may be installed if the facility is served by two or more modes of transportation (Water, Highway, Rail, of Air).
9. **Major Recreation Areas.** Signing to major recreation areas may be installed if the facility is open to the public and has annual attendance of at least:
 - Major Metropolitan Area – 300,000
 - Urban Area – 250,000
 - Rural Area – 100,000
10. **United States Forest Service Facilities.** Signing to facilities of the USFS, including campgrounds and Headquarters buildings may be installed if the facility is located within 1 mile of an interchange in major metropolitan or urban areas, and within 10 miles in a rural area.
11. **Unwarranted Traffic Generators.** Signing to ventures operated by private entities for profit, and other areas or ventures not of general interest to the traveling public are not permitted on state highways. Traffic generators that do not normally warrant guide signing include:

Businesses

TV/Radio Stations
Theaters

Cemeteries

Local or State
Private/Public
Military (*A National Cemetery, as designated by the U.S. Dept. of Veteran Affairs, that is located within 5 miles of the nearest intersection or interchange may be signed*)

Communities

Convention Centers
Civil Centers
Libraries
Churches
Subdivisions

Governmental

- Research/Experimental
- County Facilities
- Courthouses
- Vehicle Emissions Testing Facilities
- Driver's and Vehicle License Centers
- Highway Buildings
- Jails/Prisons
- Civil Defense Facilities
- Maintenance Facilities
- Power Plants

Schools

- Grade/High
- Seminaries

Medical

- Mental Facilities
- Research Facilities
- Sanitariums
- Infirmaries or Treatment Centers
- County, Fraternal, or Nursing Homes
- Retirement Facilities
- Humane Facilities

Military Sites or Detachments

- Armories
- Arsenals
- Recreational/Conservation
- Tree Nurseries/Arboretums
- Points of Interest
- Camps: Scout, Church, 4-H, Youth, and YMCA/YWCA

- E. **Follow-Through Signing.** Follow-through signing provides guidance along local roadways to locations off the state highway system. They are installed and maintained by the agency responsible for the local roadway.

Regional traffic personnel coordinate the signing plan with the appropriate local agency and ensure that all the follow-through signing is in place before any directional signs are installed on state highways. Periodic reviews will determine the effectiveness and ongoing need for follow-through signing.

Use 6-inch D series letters on follow-through signs in high traffic volume areas. Use 5-inch C series letters as a minimum on other follow-through signs. Directional information or arrows should be part of the legend.

Install these signs in advance of decision points where route changes are required. Do not install these signs in combination with regulatory or warning signs. Additional signs may be placed at mandatory stop locations. Placing these signs on the far-side of the intersection allows the motorist time to read the sign message while stopped, then continue driving in the proper direction.

F. Other Essential Guide Signs

1. **Street Name Signs.** Install street name signs and advance name street signs according MUTCD guidelines. The use of a chevron on the street sign, as in sign D3-302 is acceptable.

Use this table to determine appropriate letter size:

Lane Type	Single	Single/Multi-lane	Single/Multi-Lane
Speed Limit (mph)	25-30 mph	35-45 mph	50 + mph
Sign Street Sign Letter Size	4"	6"	6"
Advance Sign Letter Size	NA	6"	8"
Fabrication Number	D3-101* D3-102*	D3-101* D3-102* D3-301* D3-302* (Advance Only)	D3-101 D3-102 D3-301 D3-302 (Advance Only)**

*The 8", and 6" D letter size combination is for signs mounted on traffic signal mast arms or advance sign installations.

**Modify to use 8" D letters and increase sign height to 18" for one line, or to 30" for two lines.

Table 2-9

For street name signs installed above a stop sign; in cases where using 6" letters would create a sign message that exceeds 60", 5" letters may be used.

White on green advance street name signs may be installed for critical and significant cross streets where the intersection is not obscured. A critical or significant cross street is classified as a minor collector or higher, or one which may serve a unique traffic generator or possess other comparable physical or traffic characteristics deemed to be critical or significant.

On city streets that are part of state highways, the local agency shall install and maintain street signs within their corporate limits.

Where county roads intersect state highways, the counties shall install street signs above state installed stop signs. By agreement, the department maintains these signs.

2. **Canadian Customs.** For Canadian Customs stations with limited hours of operation, display the hours of operation on an advance sign. Install these signs in advance of the last exit before the border, where overnight boarding is available.

Canadian Customs at 24-hour crossings need no signing in advance of the last exit before the border.

3. **Highway and Freeway Entrance Signs.** Install the HIGHWAY ENTRANCE sign (E12-1) on undivided two-lane two-way highways where interchanges are provided at intersecting crossroads. Install signs on both sides of the on-ramp, facing approaching traffic to clearly identify the entrance to the on-ramp.

Install the FREEWAY ENTRANCE sign (E12-2) on both sides of the freeway or expressway on-ramp, facing approaching traffic to clearly identify the entrance to the ramp.

4. **Milepost Signs.** Install MILEPOST signs on all state highways. The D10-1/2/3 are single faced signs used on multilane highways. They are placed on the right side of the traveled way. The D10-101/102/103 signs are double-faced signs that are placed on the right side of the roadway in the direction of increasing milepost. Refer to Directive D 32-20 for detailed and complete rules regarding milepost sign installation.

5. **Indian Reservations.** Upon request, a Regional Administrator may provide signs identifying Indian Reservations under the following policy:

If sign space is available, ENTERING _____ INDIAN RESERVATION signs may be installed where a state highway crosses a reservation boundary. The boundary shall be the original treaty boundary. These signs shall have white letters on a green background.

Where there is an official tribal or community center, a directional sign may be installed to provide guidance from the nearest state highway intersection if the center is within 5 miles. These signs have white letters on a brown background.

6. **General Motorist Services (Generic Signs).** Install motorist service signs where the services are not visible, or readily apparent to the motorist.

Periodic reviews by regional personnel ensure that these signs are provided only for services and facilities that meet eligibility criteria, and that signs are removed or covered when the service or facility is no longer in operation, or is closed for the season.

Do not combine motorist service (general service) signing and motorist information (logo) signing on one installation at an interchange or intersection. Services should be signed under the logo sign program wherever possible.

The following motorist service signs may be installed on interstate and non-interstate highways:

Sign Symbol	Sign Fabrication Number
Gas	D9-11
Food	D9-8
Lodging	D9-9
Phone	D9-1
Hospital	D9-2
Emergency Medical Care Facility	D9-13
Camping	D9-3
Recreational Vehicle Park (text)	D9-301

Table 2-10

In the vicinity of an interchange or intersection, install only one sign array per approach, with up to four signs per array. Use symbol signs in lieu of word messages where applicable.

Signs for motorist services are reflectorized and have white symbols or letters on a blue background. Do not intermix word messages, symbols, or logo signs on the same sign panel. The sign legend for the recreational vehicle park panel consists of the words; RV PARK, and for a visitor information sign; VISITOR INFO.

These motorist service signs may be installed in conjunction with other guide signs. On ground mount signs, install the panel below the guide sign on either post (Appendix 2-7 b, c). If more than two signs are required, they may be placed on a bracket below the guide sign, provided it does not interfere with the breakaway characteristics of the sign structure. On overhead signs, a service sign may be installed above the guide sign.

Where appropriate, install signs D9-101, D9-102, or D9-103. These signs combine the motorist service message with a directional message such as NEXT RIGHT, SECOND RIGHT, or the exit number. The NEXT SERVICES ___ MILES (D9-1601) sign may be placed below the motorist services sign if the services are 20 miles or more away.

When services are not readily visible from an interchange, install directional follow-through signs at ramp terminals. Install the same type of legend or symbol on the follow through and main line signs. If the services are located more than 1 mile from the interchange, display the distance to the services on the follow through signs.

The following criteria must be met prior to installing each type of sign. The State Traffic Engineer can approve minor deviations to these criteria on a case-by-case basis.

Gas, Diesel, and/or L-P Gas

- Vehicle services must including fuel, oil, and water.
- Shall feature free public rest room facilities with appropriate locks for the security of the occupants. In addition, these facilities shall contain sink with running water for hand washing, a flush toilet, toilet tissue, and sanitary towels or other hand-drying devices.
- Shall provide free potable water drinking fountain and free cups as necessary for public use.
- The facility must operate for at least 16 uninterrupted hours per day, 7 days per week.
- Telephone service must be available and visible from the facility.
- The facility must be within 1 mile of an interstate highway interchange or within 5 miles, and not readily visible from a non-interstate highway.

Food

- The facility must be licensed or approved by the appropriate county health agency.
- The facility must operate for at least 12 uninterrupted hours per day, 6 days per week, and serve breakfast, lunch, and dinner.
- Shall feature free public rest room facilities with appropriate locks for the security of the occupants. In addition, these facilities shall contain sink with running water for hand washing, a flush toilet, toilet tissue, and sanitary towels or other hand-drying devices.
- Telephone service shall be available to the public.
- Seating capacity for a minimum of 20 patrons or parking and drive-in service facilities for a minimum of ten vehicles must be provided.
- The facility must be within 1 mile of an interstate highway interchange or within 5 miles, and not readily visible from a non-interstate highway.

Lodging

- The facility must be licensed or approved by the Washington State Department of Social and Health Services (Bed and Breakfast facilities exempt from DSHS licensing requirements must have a letter of approval from the appropriate county health authority).

- Facilities signed from an interstate highway must have 12 units or more.
- Facilities signed from non-interstate highways must have 6 units or more.
- Telephone service must be available at the facility.
- The facility must be within 1 mile of an interstate highway interchange or within 5 miles, and not readily visible from a non-interstate highway.

Phone

- Phone service must be available 24 hours per day, 7 days per week.
- The phone must be located within 1 mile of an interstate highway interchange.
- Phone signing is not required if another service in the vicinity of the interchange has met the phone criteria as part of qualification.

Hospital

- Continuous emergency care service must be provided with a doctor on duty, or on immediate call 24 hours per day, 7 days per week.
- Availability of emergency care service must be certified to WSDOT by the Washington State Department of Health.
- The hospital must be located within a reasonable distance of the highway, but, when operating at legal speeds, not more than 20 minutes driving time away.
- For an area with two or more qualifying hospitals, provide signs to the closest facility (by approach direction) located within a reasonable travel time.

Emergency Medical Services Facility

- The facility must operate continuously 24 hours per day, 7 days per week.
- Availability of emergency care services must be certified to WSDOT by the Washington State Department of Health.
- The facility must at all times have:
 - a Physician on duty, or
 - a Registered Nurse on duty, or
 - a Paramedic on duty, or

- an Emergency Medical Technician on duty, plus:
 - a Physician on call, or
 - a Registered Nurse on call, or
 - a Paramedic on call.
- Emergency transportation capabilities must be available.
- The emergency care facility must be located within a reasonable distance of the highway, but, when operating at legal speeds, not more than 20 minutes driving time away.
- For an area with two or more qualifying hospitals, provide signs to the closest facility (by approach direction), located within a reasonable travel time.
- Do not use this sign if a hospital sign is installed.

Police (Local or State)

- The law enforcement agency must have an officer on the premises at all times, or a dispatcher on duty with an officer within radio or local telephone contact.
- The law enforcement agency must be located within a reasonable distance from the state highway.

Visitor Information Centers

- Must be a service facility whose sole function is to provide tourist information, and must operate a minimum of 8 hours per day, 7 days per week from Memorial Day through Labor Day, or during the months that visitors customarily visit the area. If the Visitor Center operators can document to the Regional Traffic Engineer that a variance to these hours is both reasonable and justified, the Regional Traffic Engineer may approve different operating hours.
- The facility must be operated by a nonprofit organization; however, the center may be sponsored by a commercial enterprise. For example, the Visitor Information Center could be located within a commercial establishment such as a mall or shopping center provided the visitor center is visibly separate from the commercial activity.
- Literature and information on visitor attractions must be free of charge to the public.
- A full-time attendant, whose primary duty is to disseminate visitor information must be on duty during the hours of operation unless there is electronic means available to answer visitor questions.
- There must be adequate floor space to accommodate the anticipated number of visitors and provide necessary display space for material of local and statewide interest.

- The operators must demonstrate to the Regional Traffic Engineer that the number of parking accommodations, for both cars and travel trailer units, will accommodate the expected number of visitors.
- The availability of a telephone for public use is encouraged. If no public phone is on site, the nearest public phone must be within a reasonable distance.
- The facility must be within 1 mile of an interstate highway interchange or within 5 miles, and not readily visible from a non-interstate highway. Follow-through signing is required if the visitor center is not directly adjacent to the roadway.
- During hours of operation, shall feature free public rest room facilities with appropriate locks for the security of the occupants. In addition, these facilities shall contain sink with running water for hand washing, a flush toilet, toilet tissue, and sanitary towels or other hand-drying devices.
- The facility must also be approved by the Department of Community, Trade and Economic Development's (CTED) Tourism Division.
- If the Visitor Information Center is operated seasonally, the signs must be removed or covered with a "CLOSED" plaque during the off season.

Camping

- Facilities must accommodate tent camping on half the available sites.
- Facilities that are accessed from interstate routes must have at least 20 camping sites.
- Shall feature free public rest room facilities with appropriate locks for the security of the occupants. In addition, these facilities shall contain sink with running water for hand washing, a flush toilet, toilet tissue, and sanitary towels or other hand-drying devices.
- Shall provide free potable water drinking fountain and free cups as necessary for public use.
- A full-time attendant must be on duty during operating hours.
- Camp area facilities must be available 24 hours per day.
- Campground facilities must be within 5 miles of an interstate highway interchange or within 8 miles of, and not readily visible from a non-interstate highway.
- For seasonal operations, signs must be removed or covered with a "CLOSED" plaque during the off season.

Recreational Vehicle Park

- Recreational vehicle parks must be licensed or approved by the appropriate county health office.
 - Adequate parking must be provided for not less than 10 recreational vehicles (camper truck, motor home, or recreational trailer).
 - Shall feature free public rest room facilities with appropriate locks for the security of the occupants. In addition, these facilities shall contain sink with running water for hand washing, a flush toilet, toilet tissue, and sanitary towels or other hand-drying devices.
 - Shall provide free potable water drinking fountain and free cups as necessary for public use.
 - All park facilities and use areas, including telephone, must be available 24 hours per day.
 - The park must be within 5 miles of either an interstate highway interchange or a non-interstate highway.
 - For seasonal operations, signs must be removed or covered with a “CLOSED” plaque during the off season.
7. **Natural, Historic, and Cultural Attractions.** Install signing to natural, historic, and cultural attractions if it does not interfere with normal interchange or intersection signing. The attraction must have a regional or national significance and be of interest to a majority of the traveling public. Do not sign attractions that are primarily of local interest. Attractions of this type that charge an admission or entrance fee are included as part of the Motorist Information Sign (TOD) program.

Conduct periodic reviews to ensure that signing is displayed only for facilities that meet eligibility criteria. These reviews may identify new attractions that meet eligibility criteria, or identify signing that leads to attractions that are no longer in operation, or no longer meet criteria.

Apply the following criteria to signing of natural, historic, and cultural attractions:

- Do not provide signing if the attraction is readily visible and has direct access to the state highway.
- Signing may be provided along access-controlled highways in urban areas, or within city limits. On highways without access control and within incorporated cities or towns having populations over 22,500, such signing is under the jurisdiction of the local agency.

- The attraction must be located within 10 miles of the interchange or intersection being signed. Any required follow-through signing shall be in place prior to installing signs on state highway.
- For attractions located more than 1 mile from the interchange or intersection, display mileage information on the ramp terminal or direction signs. The hours of operation may also be shown on the ramp terminal or direction signs.
- Provide signing only on the state highway nearest to the attraction. The signs shall be white letters on a brown background.
- The attraction must be open without appointment to all segments of the motoring public.
- The signs must be removed or covered with a “CLOSED” plaque during the off season.
- Attractions must be served by at least a two-lane, all-weather road.
- The attraction may be operated by a private or public organization. If the activity is privately operated, the private business/organization must pay the fabrication, installation, and replacement costs for the signs. Execute a co-signed agreement to pay letter with private business, showing regional account charge number and estimated cost of sign prior to ordering signs. If the activity is operated by a governmental agency, the department will install the signs at no cost to that agency.
- The attraction must be maintained in good repair and presented in a professional manner.

The following additional criteria also apply:

Watchable Wildlife. Consider signing to Watchable Wildlife sites if they are accessible to the motoring public and located within 10 miles of the interchange or intersection being signed. Use the WILDLIFE VIEWING sign on the interstate highway exit nearest the viewing area. Post the WILDLIFE VIEWING AREA sign at the state highway intersection nearest the viewing site. Use the Binoculars logo sign for a trailblazer and for site identification if no other signing is posted. (The FHWA has adopted the binoculars logo as the international wildlife viewing symbol, and it will be added to the MUTCD.)

All lettering, arrows, borders, and figures shall be in white; and all sign backgrounds in brown.

Interpretive signing at the site may explain the features and management practices at the site. It can be simple or elaborate, and is generally provided by the landowner or manager of the site.

Natural Attractions. Consider signing to natural attractions if they are unique or few locations are accessible to the motoring public. Examples of natural attractions are the Palisades Rock Formation, Ice Caves west of Trout Lake, Hurricane Ridge, and the Snake River Canyon.

Historic Attractions. Requests from the public for signing to historic attractions should be routed through the Regional Traffic Office (see form, Appendix 2-8). Consider signing to historic attractions if:

- They are included in the *Washington Heritage Register*, as designated and maintained by the State Historic Preservation Officer.
- They have been approved by the Heritage Resource Center of the Washington State Historical Society.
- The attraction also includes one or more of the following features at the site:
 - An interpretive center and/or a guided tour.
 - Visible historic buildings, features, or ruins with an interpretive marker.

Examples of historic attractions are the Whitman Mission, Steptoe Battlefield, Jackson House, Fort Simcoe, and the Monticello Convention Site.

To determine if the attraction is included on the Washington Heritage Register, contact the State Historic Preservation Officer at:

Washington State Office of Archaeology and Historic Preservation
(CTED) State Historic Preservation Officer
420 Golf Club Road SE, Suite 201
Mail Stop 48343
Lacey, WA 98504-8343
(360) 407-0826

To check for approval by the Heritage Resource Center of the Washington State Historical Society, contact the director of the Heritage Resource Center at:

Director, Heritage Resource Center
211 West 21st Avenue
Mail Stop 40950
Olympia, WA 98501
(360) 586-0219

Cultural Attractions. Consider signing to cultural attractions if they are similar to, or are defined by one of the following categories:

- **Museums.** Approved by the Heritage Resource Center of the Washington State Historical Society. For applications, see Appendix 2-8.
- **Religious.** Sites, shrines, etc., that are of a unique religious nature and provide visitor facilities or tours.
- **Educational.** Centers (other than public or private schools, vocational schools, or colleges and universities) that are of outstanding educational value and provide visitor facilities or tours.
- **Scientific.** Places used for research or scientific advancement that provide visitor facilities or tours.

Examples of cultural attractions are the Maryhill Museum, and St. Mary's Mission.

Heritage Marker Signs. Install HERITAGE MARKER (15-103/104) signs to guide motorists to historical or heritage interpretive features located along state highways. These signs replace existing historic markers and roadside attraction signs. Do not use this sign to direct motorists to historical sites on a National or state registers. Examples of these interpretive sites include Willy Keil's Grave or the Bridge of the Gods.

8. **Recreational Activities.** Guide motorists to recreational activities by installing a RECREATION AREA NEXT RIGHT (D7-7701) sign. The components of the sign message: RECREATION AREA, and NEXT RIGHT or NEXT LEFT are displayed on two separate lines. For conventional highways, below the RECREATION AREA and direction message, the sign may display a maximum of four recreational activity symbol plaques, such as:

Activity	Sign Fabrication Number
Picnic Area	D7-2201
Fishing	D7-1301
Trailer Camping	D9-3a
Boat Launch	D7-1101
Swimming	D7-1401
Hiking*	D7-501
Skiing	D7-2001
Snowmobile Area	D7-2101
Public Golf Course	D7-701
Public Beach Area	D7-1402

Table 2-11

The signs shall be a white on brown trail symbol with the trail name (white on brown) below. Provide additional arrows and/or distance information as necessary.

For public recreation areas, the sign may identify the name of the area in lieu of the RECREATION AREA message.

Identify multiple agency recreation areas by naming the area and displaying each agency's logo. Do not include recreational activity symbols on these multi-agency signs. Requesting agencies shall coordinate installation of follow-through signing with local road jurisdictions. Do not install mainline signs until all follow-through signing is in place.

The following specific criteria also applies to signing of recreational activities:

- Provide signing if the activity is not readily visible from the highway, and has no direct access to the highway.
- The activity may be operated by a public or private organization. If the facility is operated by another governmental agency, the department will install the signs at no cost to that agency.
- Privately owned recreational activities should be signed under the Motorist Information Signing Program, described in Section 2-6 of this manual.
- Recreational activity signing is not permitted along interstate highways or along access controlled highways in urban areas or within city limits. On highways without access control and within incorporated cities or towns having populations over 22,500, such signing is under the local agency's jurisdiction.
- The activity must be located within 10 miles of the interchange or intersection being signed. Before signing is installed on a state highway, necessary follow-through signs on local roads and streets must be in place.
- For activities located more than 1 mile from the interchange or intersection, distance information may be shown on the ramp terminal or direction signs.
- Provide signing only on the state highway nearest to the activity
- The activity must be open to all segments of the motoring public, without appointment, at least eight hours a day, five days a week including a Saturday and/or a Sunday.
- Signs must be removed or covered for seasonal closures.
- Activities must be served by at least a two-lane all-weather road.

- The destination facility must be maintained in good repair and presented in a professional manner.
9. **Signing to Other Agencies.** Provide signing to facilities of other federal, state and local agencies in accordance with guidelines contained in the MUTCD, this manual, and any Memorandums of Understanding or agreements between the department and the agency. Install this signing in accordance with criteria for supplemental guide signing.

When space is available, install signing to:

- State parks (per Section 2.6.D.1, this manual).
 - National parks.
 - U.S. Forest Service facilities.
 - Department of Natural Resources campgrounds.
 - State Patrol.
 - State public fishing areas.
 - State and national fish hatcheries.
 - Department of Corrections facilities.
10. **City and County Entrance Signs.** CITY and COUNTY ENTRANCE signs (I2-201/301) may be placed at city/county limits in accordance with RCW 47.36.120. The department is responsible for installing all entrance signs on state highways. If the city or county elects to provide a sign with a political jurisdiction logo per the MUTCD, the standard sign will not be installed. The local agency is responsible for purchasing and supplying this sign.
11. **Unincorporated Places.** The department may install a “Community Entrance” sign (I2-301) on each state highway approach if an unincorporated place features:
- An office of the United States Postal Service.
 - At least two motorist services. May be gas, food, or lodging (e.g., two gas stations, a gas station and a motel, etc.).
12. **Business Routes.** Business route signing, using business route shields, can direct motorists to alternate routes passing through the business portion of a city or through districts of continuous business development. Approval by the Executive Committee of the American Association of State Highway Officials is required prior to adding or deleting a business route as part of the Interstate or US highway system. Proposals to add or delete such routes should be sent to OSC Planning and Program Service Center.

Provide business route signing in accordance with the following criteria:

- Install only after evaluating and approving a request submitted by a local agency.
- Install only if the business route passes adequately and logically through a business district.
- The local agency having jurisdiction over the business route must agree, in writing, to install and maintain BUSINESS LOOP (M12 or 3) trailblazers along the route.

Business route signing is not permitted where motorist service signing is installed.

13. **Signing to City Center.** Historically, the department has provided “City Center” signs for the purpose of directing motorists to local government buildings (i.e., City Hall, Courthouse, etc.). Currently, Regional offices are receiving requests from local business communities for “City Center” signs that direct motorists to business areas within a city.

When such requests are received, recommend that the appropriate city take the lead and submit a letter of request to the department. This letter of request should include the following information:

- Description of where the city center exists within the corporate limits.
- Proposed sign location – interchange or intersection name.
- Verification that representatives of local government and area chamber of commerce mutually agree on the location of the city center.

Upon verification of information contained in this letter of request, the department may give formal consideration to sign installation.

2.5 Miscellaneous Signing

A. School Areas

Reduced School Zone Speed Limit Signs. In accordance with RCW 46.61.440, install SCHOOL SPEED LIMIT signs (S4-1, S4-2, S4-3, S4-4) where a reduced school zone speed limit has been established at a crosswalk, on a state highway. Locate these signs 300 feet in advance of the school crosswalk. This sign consists of three sections. The top portion is a black on fluorescent yellow green SCHOOL legend. The middle portion is a black on white posted SPEED LIMIT. The bottom portion contains one of several black on white legends that define a window of enforcement. The school district determines which legend is used:

- S5-1 SCHOOL + SPEED LIMIT + WHEN FLASHING – This sign is used in conjunction with a speed limit sign beacon, as described in MUTCD Section 7D-24.
- S5-101 SCHOOL + SPEED LIMIT + WHEN CHILDREN ARE PRESENT – This sign is used in conjunction with definitions provided in WAC 392-151-035 and WAC 468-95-060.
- S5-102 SCHOOL + SPEED LIMIT + WHEN FLAGGED – This sign is used in conjunction with warning flags or plaques that are installed on the sign during the window of enforcement.
- S5-103 SCHOOL + SPEED LIMIT + 8:30 A.M. TO 5:30 PM – This sign displays the specific hours of the window of enforcement.

Mark the end of the reduced school zone speed limit with a standard SPEED LIMIT sign (R2-1) displaying the posted speed limit for the section of highway that follows, or an END SCHOOL ZONE sign (S5-2). Provide signing as shown in Appendix 2-9.

School Crossing Signs. School zone cross walks may be established at locations that are not controlled by a stop sign or traffic signal. Install the SCHOOL CROSSING sign (S2-1) and a SCHOOL ADVANCE sign (S1-1) where appropriate.

Overhead School Crosswalk Sign. The OVERHEAD SCHOOL CROSSWALK SIGN is an extraordinary traffic control device, not mentioned in the MUTCD. Consider installing this sign on state highways where school authorities request supplemental traffic control for marked school crosswalks, and traffic engineering analysis has determined that conventional traffic control measures are not adequate. Do not use this sign in lieu of standard school crosswalk signs.

The signs should include flashing lights that are activated when school children are present. The school district should ensure that these lights are activated only during times when the crosswalk is occupied by school children. Generally, costs associated with installing and maintaining this extraordinary traffic control device are the responsibility of the school district. However, on a case-by-case basis, the department may choose to partner with the school district regarding installation costs. On state highways that are part of city streets, consider installing this sign only if the School District and Local Agency agree to assume responsibility for maintenance.

- B. **Closure Plaques for State Parks.** During winter closures, install CLOSED plaques on guide signs that lead to state parks, in lieu of removing or turning existing signs. Mount the plaque diagonally on the face of the existing sign, selecting a panel size that is large enough to

effectively cover the sign legend, from lower leftcorner to upper right corner. Provide letter size that is greater than or equal to the upper case letters in the sign message. See Appendix 2-10.

- C. **City/Community Entrance Markers.** WSDOT allows cities or communities, either by permit or agreement, to construct and maintain city/community entrance beautification areas that are of mutual benefit and are in the public interest. A marker may be installed on state highway right of way under the following conditions:

	Incorporated Cities/Towns	Unincorporated Communities
Limited Access-Interstate	Yes	No
Limited Access-Non-Interstate	Yes	No
Non-Limited Access	Yes	Yes

Table 2-12

One entrance marker may be installed for each direction of travel on a major state highway as it passes through a city or community. For example, if Interstate 5 passes through a city, one marker may be installed for the northbound approach, and one marker may be installed for the southbound approach. Any landscaping associated with the marker shall be in compliance with the WSDOT *Roadside Classification Plan*.

An entrance marker for a neighborhood community that lies within the corporate limits of a city or town may be allowed if that city or town having jurisdiction over the neighborhood approves and recognizes the neighborhood's marker. This marker will count against the total number of entrance markers (two per city) allowed on a state route.

Entrance Markers on Limited Access Highways

All Markers installed on Interstate highway rights of way require FHWA approval.

Non-Profit Service Club Plaques (i.e., Kiwanis, Lions, Rotary, etc.) are not to be installed on City Entrance Markers along limited access highways. These plaques are considered to be Type (1)(b) signs under purview of the Scenic Vistas Act, RCW 47.42, and WAC 468-66.

Interstate. On behalf of the local agency, the State Traffic Engineer must submit all Interstate City Marker requests to the FHWA for approval. The marker must meet the following guidelines:

- Be simple, dignified, and devoid of any advertising.
- Be placed in the terminal area of the interchange ramp with the connecting city street, between the ramp and the right of way line.

- Be positioned so that the marker is not a roadside safety hazard, not likely to be struck by an errant vehicle, and is not a sight obstruction.
- Be oriented so the marker can be read by the motorist leaving the ramp and entering the city street system and not by the motorist on the limited access highway mainline.
- Shall not interfere with, nor distract from any existing or future traffic control or safety device. Any lighting associated with the marker shall be in compliance with RCW 47.36.180.
- The total marker area shall not exceed 100 square feet, and the message area shall not exceed approximately 60 square feet 47.36.180.
- It must be sponsored by the city in which the marker is located.
- The State Traffic Engineer must review the design and placement of the marker before recommending the marker to FHWA.
- The local authority is responsible for relocating and/or removing any markers displaced as a result of highway improvement projects, such as roadway widening. Markers not relocated by the local authority shall be removed by WSDOT, with removal costs billed to the local authority.
- The city or community group is responsible for maintenance of the marker and any associated landscaping. Inadequate maintenance of marker and/or landscaping, as determined by WSDOT, will be grounds for marker removal.

Non-Interstate (Limited Access). The Regional Traffic Engineer shall approve the design and placement of the marker. If there are any deviations from these guidelines, the design must be submitted to the State Traffic Engineer for approval.

Non-Profit Service Club Plaques (i.e., Kiwanis, Lions, Rotary, etc.) are not to be installed on City Entrance Markers along limited access highways. These plaques are considered to be Type (1)(b) signs under purview of the Scenic Vistas Act, RCW 47.42, and WAC 468-66.

The marker must meet the following guidelines:

- Be simple, dignified, and devoid of any advertising.
- For divided highways with interchanges, the marker is to be placed in the terminal area of the interchange ramp with the connecting city street or county road, between the ramp and the right of way line. For undivided highways, the marker may be placed just inside corporate limits, or at the far side of an intersection located inside corporate limits.
- Be positioned so that the marker is not a roadside safety hazard, not likely to be struck by an errant vehicle, and is not a sight obstruction.

- Be oriented so the marker can be read by the motorist leaving the ramp and entering the city street system and not by the motorist on the limited access highway mainline. This only applies for divided highways with interchanges.
- Shall not interfere with, nor distract from any existing or future traffic control or safety device. Any lighting associated with the marker shall be in compliance with RCW 47.36.180.
- The total marker area shall not exceed 100 square feet, and the message area shall not exceed approximately 60 square feet.
- It must be sponsored by the city in which the marker is located.
- The local authority is responsible for relocating and/or removing any markers displaced as a result of highway improvement projects, such as roadway widening. Markers not relocated by the local authority shall be removed by WSDOT, with removal costs billed to the local authority.
- The city or community group is responsible for maintenance of the marker and any associated landscaping. Inadequate maintenance of marker and/or landscaping, as determined by WSDOT, will be grounds for marker removal.

Entrance Markers on Non-Limited Access Highways

The Regional Traffic Engineer shall approve the design and placement of the marker. If there are any deviations from the guidelines, the design and placement must be submitted to the State Traffic Engineer for approval.

Non-Profit Service Club Plaques (i.e., Kiwanis, Lions, Rotary, etc.) may be installed on a City Entrance Marker along a state highway if the marker is located within corporate limits and is not within a limited access area. These plaques are considered to be Type (1)(b) signs under purview of the Scenic Vistas Act, RCW 47.42, and WAC 468-66. The marker must meet the following guidelines:

- Be simple, dignified, and devoid of any advertising.
- Be placed inside corporate city limits, beyond curb line or outside edge of highway purposes.
- Be positioned so that the marker is not a roadside safety hazard, not likely to be struck by an errant vehicle, and is not a sight obstruction.
- Shall not interfere with, nor distract from any existing or future traffic control or safety device. Any lighting associated with the marker shall be in compliance with RCW 47.36.180.

- The total marker size shall not exceed 150 square feet, including the border and trim, and service club plaques. The service club plaque area of the sign shall not be disproportional to the marker message. The maximum size for each service club plaque is 24" x 24".
- It must be sponsored and approved by the city in which the marker is located.
- The local authority is responsible for relocating and/or removing any markers displaced as a result of highway improvement projects, such as roadway widening. Markers not relocated by the local authority shall be removed by WSDOT, with removal costs billed to the local authority
- The community group is responsible for maintenance of the marker and any associated landscaping. Inadequate maintenance of marker and/or landscaping, as determined by WSDOT, will be grounds for marker removal.

Entrance Markers for Unincorporated Communities (Non-Limited Access Highways Only)

The department may receive requests from unincorporated communities to install community entrance markers on state highway right of way. The Regional Traffic Engineer shall approve the design and placement of the marker. If there are any deviations from these guidelines, the design and placement must be submitted to the State Traffic Engineer for approval. The marker must meet the following guidelines:

- Be simple, dignified, and devoid of any advertising.
- Be positioned so that the marker is not a roadside safety hazard, not likely to be struck by an errant vehicle, and is not a sight obstruction.
- Shall not interfere with, nor distract from any existing or future traffic control or safety device. Any lighting associated with the marker shall be in compliance with RCW 47.36.180.
- The total marker size shall not exceed 150 square feet, including the border and trim, and service club plaques. The service club plaques shall not be disproportional to the marker message. The maximum size for each service club plaque is 24" x 24".
- It must be sponsored and approved by the county in which the marker is located.
- The community group is responsible for relocating and/or removing any markers displaced as a result of highway improvement projects, such as roadway widening. Markers not relocated by the community group shall be removed by WSDOT, with removal costs billed to the community group.

- The community group is responsible for maintenance of the marker and any associated landscaping. Inadequate maintenance of marker and/or landscaping, as determined by WSDOT, will be grounds for marker removal.

- D. **Limited Access Signs.** For state highways that operate with intermittent access control, in accordance with RCW 47.52.110, install ENTERING LIMITED ACCESS AREA (I2-601) and LEAVING LIMITED ACCESS AREA (I2-701) signs where appropriate. Facilities operating with fully controlled limited access need not be signed unless deemed necessary by the Regional Administrator.
- E. **Carpool Information Signs.** CARPOOL INFORMATION signs (D12-201/202) may be installed along conventional roads and on-ramps to multilane highways where appropriate. These signs should not be placed on the mainline of multilane facilities. Transit logos may be included in the sign design in accordance with MUTCD Section 2D-41.
- F. **DNR Fire Danger Signs.** DNR fire danger signs may be placed on non-Interstate right of way, outside the clear zone. When space does not allow, signs with appropriate breakaway features may be placed within the clear zone.

DNR shall be responsible for the installation, daily message changes, and maintenance of the signs.

- G. **Adopt-A-Highway Signs.** Adopt-A-Highway (AHA) participant recognition signs are installed for volunteer groups and privately sponsored contractors that perform litter pick up and/or other roadside enhancement activities. Adoptions are assigned for a minimum two center line miles, but may extend up to a maximum of ten center line miles, and may occur on outside shoulders and medians. Typically, the signs are placed at or near the beginning of each adopted section for each effected direction of travel. If an adoption includes both shoulders of a two-lane highway or a median on a divided highway, signs should be placed for both directions of travel. No more than two signs shall be installed per adoption, with one sign for each direction of travel. Signs on the same shoulder or median shall be no closer than 2 miles apart in a given direction of travel. Where conditions dictate, the lateral placement of the AAH signs may be as much as 50 feet from the edge of traveled lane, if right-of-way is available and the signs are still visible from the traveled lanes.

These signs are secondary to existing highway signing and shall not be installed within 300 feet of any existing highway signs, excluding milepost markers. The signs should be installed as close as practicable to the beginning of the adoption section. If the AAH signs cannot be installed

within a reasonable distance of the beginning of the assigned section without conflicting with existing signing, the section limits should be adjusted to accommodate the sign locations. AAH signs should normally be installed in the median on divided highways.

There are two sizes of AAH recognition signs (see the *Sign Fabrication Manual*). Use the larger sign along divided highways, the smaller sign along conventional roadways (see Appendix 2-11). In some cases, recognition signs may also be installed for special enhancement projects such as landscaping at interchanges, or other special areas. In these cases, the smaller sign shall be used and the Regional Traffic Engineer shall determine sign placement on a case-by-case basis. It may not be possible to accommodate recognition signs for all such adoptions.

- H. **DUI Victim Memorial Signs.** Install PLEASE DON'T DRINK AND DRIVE (I20-201) sign accompanied by the IN MEMORY OF (I20-203) or SPONSORED BY (I20-204) plaque at locations approved by Headquarters Traffic Office. Install signs in accordance with MUTCD Section 2A. Place signs for both directions of travel along state highways, or on interstate freeway on-ramps.
- I. **Private Road Signing.** WSDOT does not furnish, install, or maintain stop signs or street name signs for private roadways that intersect with state highways. Pending approval of the department's area maintenance superintendent, citizens may install their own signs at such intersections, in accordance with the MUTCD.

Unless otherwise directed by a local jurisdiction, private road name signs (D3-104) shall be fabricated in accordance with the *Sign Fabrication Manual*. Maintenance for private road signs is the responsibility of the citizens installing the signs. If a stop sign is necessary for a private approach, the citizen requesting the sign must secure an access permit from the appropriate regional office. The permit holder must coordinate details of work alongside the state highway with the area maintenance superintendent prior to beginning any operations.

- J. **Fire District Boundary Signs.** The ENTERING FIRE DISTRICT sign (I8-804) may be installed along state highways at Fire District boundaries. Apply these general guidelines for this sign:
- Under regional sanction, signs shall be installed and maintained by the jurisdiction requesting the sign.
 - Signs may be placed on state right of way as far away from the roadway as possible and shall not constitute a hazard by their physical location or by obstructing drivers vision.
 - Mounting posts shall be no larger than 4"x4". Mounting height shall be 7 feet.

- The sign color shall be white letters on blue background.
- The word LEAVING may be substituted for ENTERING.

- K. **Fire Hydrant Marker Signs.** FIRE HYDRANT MARKER /SYMBOL (I7-401) signs may be installed on limited access highways to help local fire department personnel locate fire hydrants that are outside of the right of way. The sign shall be placed parallel to, and facing the roadway. The sign shall be visible from the shoulder, mounted either on the right of way fence or on a post, and shall state the distance from the edge of traveled way to the fire hydrant. An additional (24 inch) wide plaque may be added below the sign to indicate the nearest street or intersection if requested by the fire department.

The Regional Traffic Engineer shall contact local fire departments to determine signing needs for fire hydrants located near limited access highways. State forces will maintain the signs.

- L. **Litter Control Signs.** Install litter control signs in areas where littering is a common problem.
- M. **Post Offices.** Post offices may be signed from state highways in unincorporated areas if the post office is not visible from the state highway and there is a demonstrated need for the sign. The sign shall be a D1-101. Cities or towns may sign for post offices inside incorporated areas.
- N. **Signing for Highway Advisory Radio and Traveler Information Station.** Highway Advisory Radio (HAR) allows traffic operations organizations to communicate traffic and travel related information to the motoring public via AM radio. HAR installations shall comply with the Federal Communications Commission's (FCC) requirements and must be approved by and coordinated through the WSDOT State Radio Engineer.

The department uses HAR to broadcast messages in several general categories; *construction information*, which may include work zone locations, lane closures, route diversions, and lane or road restrictions, and *traffic control or roadway condition information*, which may include airport or special event parking control, and mountain pass inclement weather advisories.

Color combinations for HAR signs on state highways are as follows: *Traffic Alert/Traffic Advisory or Mountain Pass Information/Road Conditions* shall be black non-reflective legend on yellow reflective background; *Traffic Information/Motorist Service Information* shall be white reflective legend on blue reflective background.

For tourist information and recreational purposes, *Travelers Information Station* (TIS) signing may be installed on state highway right of way under the following criteria:

- The requesting agency (non-commercial) will submit a written request for TIS signing to the Regional Traffic Office. The request should include broadcast signal boundaries along the highway(s) to help establish sign locations. The Regional Traffic Engineer's approval is required before signs are fabricated. Permits will be issued on a "first come - first served" basis. There will be no radio signal overlap allowed.
- The FCC recognizes Highway Advisory Radio transmitters as "Travelers Information Stations." The broadcast messages for this type of TIS sign shall be noncommercial in nature and consistent with FCC Regulation, CFR 47, Section 90.242(a)(7) which specifies the content of HAR messages per the following paragraph.

"Travelers Information Stations shall transmit only noncommercial voice information pertaining to traffic and road conditions, traffic hazards and travel advisories, directions, availability of lodging, rest stops and service stations, descriptions of local points of interest. It is not permissible to identify the commercial name of any business establishment whose service may be available within or outside the coverage area of a Travelers Information Station. However, to facilitate announcements concerning departures/arrivals and parking areas at air, train, and bus terminals, the trade name identification of carriers is permitted."
- The requesting agency is responsible for funding all TIS sign fabrication, installation, and future maintenance costs. Signs will be fabricated to WSDOT standards and will be installed by WSDOT workforce only. The TIS signs for tourist information purposes shall be white reflective legend on blue reflective background. TIS signs for recreational purposes (National Parks, National Forests, and National Historic Reserves **ONLY**) may be white reflective legend on brown reflective background. These federal agencies may also incorporate their official agency logo on the TIS sign.
- All TIS transmitters shall be accessible to federal, state, or local incident response agencies to broadcast public safety or traffic management messages in the event of natural or civil emergencies. The Regional Traffic Engineer, or his/her representative will monitor broadcasts occasionally to determine compliance with FCC regulations. If the broadcasts are not in compliance with paragraph 2 of this policy, the party responsible for TIS sign will be notified by certified letter and given 30 days to comply. If the broadcast is not in compliance after 30 days the signs will be removed and the agency reported to the FCC by the Regional Traffic Engineer. Additionally, signs will be removed if the agency's FCC permit is terminated.

- When a preemptive message “EMERGENCY INFO WHEN FLASHING” is included with the TIS sign, this portion of sign shall be black non-reflective legend on yellow reflective background. This will provide the department and other public agencies with the ability to transmit emergency traffic information to motorists. TIS signs will be erected only when there is adequate space available along the highway, per MUTCD and WSDOT sign spacing requirements. HAR and TIS signing are secondary to official traffic control signs (i.e., regulatory and warning signs, primary guide signs, supplement guide signs, etc.).
- In the future, WSDOT will be developing an Intelligence Traffic System (ITS), and as part of the ITS, will include HAR signing elements. WSDOT may require exclusive rights to certain radio frequencies now available for tourist information format broadcasts, thereby eliminating their access to those frequencies. The requesting agency will be notified that their signs are being removed, if this situation does occur.
- The requesting agency must discontinue TIS broadcasting if there is interference with Highway Advisory Radio transmitters installed by the department for construction and maintenance purposes. The department will consider providing a portable TIS at an alternate site if requested, in exchange for use of the requesting agency’s HAR during construction and maintenance operations. The department will relocate signing in these circumstances.

References for HAR include:

- Code of Federal Regulations, Title 47, Chapter 1.
- FHWA Technical Report (FHWA/RD-82/059), “Highway Advisory Radio Message Development Guide,” October 1982.
- FHWA Technical Report (FHWA/RD-80/167), “Highway Advisory Radio Systems Design Guidelines,” May 1981.
- M 24-01, *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD).
- WAC 468-66, “Highway Advertising Control Act”

O. Changeable Message Signs on State Highways

Introduction. The Changable Message Sign (CMS) system is part of WSDOT’s Traffic Management System and is operated by staff at the region’s office or area traffic service management center. Depending on the specific location, a CMS system may provide information about: lane use control, regulatory information such as variable speed limits, or information about unusual traffic conditions. The system may also be used for other traffic-related purposes on a limited basis.

Operation of CMS System and Coordinating Organizations. The WSDOT Regional Traffic Offices are responsible for operation of the CMS system, however, this operational responsibility may vary from area to area. Each region should designate a CMS specialist(s) to schedule CMS messages and answer questions from the public and private sector about CMS operations. The CMS specialist may coordinate CMS operations with WSDOT entities, and other Coordinating Organizations. Coordinating Organizations may include, but are not limited to: WSP, WSDOT Incident Response, WSDOT maintenance or construction, cities and counties, Oregon Department of Transportation, or Oregon State Patrol.

Requests for Messages. Consider message requests in one of the categories below; direct message request to appropriate personnel:

- Requests from outside the Regional Traffic Office for messages in Emergency situations should be routed through the Regional Radio Operations office. In addition, route any requests made after normal business hours to Radio Operations.
- Requests for messages relating to Maintenance or Construction activities should be routed through the Regional Traffic Office (work zone specialist, or construction traffic coordination officer) in advance of the requested service.
- Requests for Public Service Announcements should be routed through the Regional Traffic Office, to the attention of the CMS specialist.

Traffic office staff shall develop the message and display sequencing. No more than two displays should be used within any message cycle. Each display should convey a single thought. The entire message cycle should be readable at least twice by drivers traveling at the posted speed, the off peak 85th percentile speed, or the (anticipated) operating speed. Message request information should include:

- Justification for using the CMS.
- Location/Geographical coverage required.
- Description of the Activity.
- Intended times and dates of the Activity.

Documentation of CMS Usage. Documenting CMS operations provides important backup information that supports regulatory enforcement, possible tort defense, and safety operations. Maintain a log of CMS message operations for traffic restrictions, incidents, construction and maintenance activities, and Public Service Announcements.

CMS System Priorities. The first priority is safety. The department's primary goal in deploying CMS messages is to ensure and enhance safety in traffic operations.

Dedicated Traffic Control CMS Systems. CMS systems dedicated to specific traffic control functions must first display messages intended for the primary purpose, such as lane use designation or regulatory speed limit. In addition to the dedicated message, some signs can simultaneously display alternate messages. Use the following priority list to determine the most appropriate alternate message.

1. **Safety-related.** Messages that are directly related to safety are given first priority for display. Examples of this type of message may include traction requirements, mountain pass information, or flammable restrictions for tunnels.
2. **Roadway Closures.** The CMS system should display road or ramp closures, regardless of the reason for the closures (accident, construction, weather etc.). This can be important navigational information, even for the familiar motorist.
3. **Minor Traffic Impacts.** The CMS system should display information about minor traffic impacts. Minor traffic impacts include construction lane closures, blocking incidents, and delay information.
4. **Public Service Announcements.** The last priority for the CMS system is Public Service Announcements (PSAs). These messages do not directly impact drivers, and therefore are not critical to the safe and efficient operation of the transportation system.
5. **Test Messages.** Test messages may be used to perform sign operation/maintenance checks, and to ensure proper operation of new signs.

Traffic Conditions for CMS Usage. Demands on CMS system messages may change, depending on traffic conditions. Required traffic control, and various traffic conditions are described below, along with specific information on the appropriate use of the CMS system.

1. **Regulatory and Lane Control.** Some CMS systems are dedicated to long term traffic control, such as lane designation near the entrance to an express lane. Because these changeable signs are not reinforced with fixed signing, CMS message use is limited to display of dedicated purpose messages. Other CMS systems have been installed to display variable speed limits (VSL) in areas that have approved traffic regulations. Because roadside speed limit signs are not installed in these areas, these changeable signs serve as the only source of regulatory speed information for the motorist. Additional space on these changeable signs can be used for messages in accordance with the CMS system priorities.
2. **Traffic Restrictions.** For purposes of this section, traffic restrictions refer to the prohibition of vehicles from using any or all portions of a roadway. These restrictions may be planned or unplanned,

short or long duration, and specific or general. Requests for traffic restriction messages generally come from WSDOT or local agency maintenance offices.

- **Road Closures.** CMS can provide advance warning of road closures for either emergencies or for scheduled maintenance operations. Message request initiated by a maintenance or construction office.
- **Bridge Draw Span Openings.** Usually SR 520 Evergreen Pt., SR 104 Hood Canal, or I-5 Interstate Bridge openings for boat traffic or weather conditions.
- **Flammable Restrictions.** Message displayed when SR 5 Convention Center, SR 90 Mt. Baker Tunnel, or SR 90 Mercer Island Lid fire control systems are inoperable.
- **Weight, Height, Width Restrictions.** CMS use is only appropriate in emergency situations (e.g., earthquake damaged bridge), or short term use (e.g., construction-related height restriction).

Incidents. The use of the CMS system for incident information requires close monitoring by personnel operating the signs. Displaying incident response information is the most dynamic uses of the CMS system. Accurate and timely CMS messages will increase both the credibility of the signs, and the public's confidence in using the signs as navigational tools.

Disabled Vehicles and Accidents. CMS is used only when incident is visually confirmed or when requested by Coordinating Organizations, in this case usually WSDOT Incident Response Team (IRT) or Washington State Patrol (WSP).

- Communication with Coordinating Organizations should take place by way of Radio Operations office.
- Messages are to be removed once the incident is no longer blocking.
- Messages shall describe the general nature of the situation (e.g., Accident At Mercer) and traffic impacts (e.g., Congestion from Northgate to Ship Canal Bridge).
- Specific alternate routes included only if alternate is a state route, or if approved by the appropriate jurisdiction.
- Messages describing severe incident-related traffic conditions may be continued at the discretion of the operator (e.g., Congestion from Northgate to Ship Canal Bridge Due to Earlier Accident), however, CMS should not be used to describe recurrent congestion (e.g., normal day to day backups).

Road and Driving Condition. CMS should not be used to display weather conditions or driving conditions (e.g., icy roadway under near-freezing temperatures).

The Travel Aid Project, across Snoqualmie Pass, is allowed an exemption to this guideline due to the experimental nature of the operation.

Special Events. CMS may be used to manage freeway traffic destined for high impact special events (e.g., Seahawks game at Husky stadium) when traffic conditions warrant.

Special event related CMS messages for freeway management should be coordinated prior to the event with the Regional CMA specialist. Message information is limited to description of event-related traffic impacts and their duration.

Construction and Maintenance Information. The CMS system can be an effective *supplement* to construction traffic control, but should not be used in lieu of adequate traffic control planning. Anticipated CMS use for construction and maintenance should be included in traffic control plans and scheduled in advance with the Regional CMS specialist. The CMS system should be used when construction activities require drivers to perform complex or unusual maneuvers, or in cases where traditional signing methods are impractical.

WSDOT

- CMS system may be used to display information on lane, ramp, or road closures; detours; and advanced notice for high impact closures.
- Construction-related CMS use should be coordinated with Regional CMS specialist.
- Message information should be limited to the nature of the construction impact and the effect on drivers (e.g., *Left Lane Closed Ahead; Exit 116 Closed; Use Caution; Use Alternate Route; Follow Detour* (only if detour signing is in place); *Expect Delays*).

Non-WSDOT

- CMS use should be coordinated with the Regional CMS specialist.
- Establish a method of maintaining communication with Coordinating Agency.
- Messages shall follow same guidelines as above.

Public Service Announcements. Normally, the CMS system will only be used for Public Service Announcements (PSAs) that are directly related to transportation (e.g., carpool or transit information). These messages should be used sparingly so that the warning impact of the sign will not be degraded. Operational limitations of some CMS signs, such as overheating and degradation, may be considered when scheduling PSAs.

Commuter Info Line

- CMS may be used to display the phone number(s) of the WSDOT Commuter Info Line. This message informs commuters of alternate resources that are available.
- CMS may be used to display phone number for carpool matching or public transit information or phone numbers. CMS may also be used to display the phone number(s) of privately sponsored commuter information lines, provided the firm has a written agreement or contract with WSDOT. The PSA shall be generic and not include any private company names, trade-mark indications, etc.
- Display PSA's on a rotating schedule, with no beacons, in accordance with the CMS system priorities.

Approved Rideshare Promotions

- The Oil Smart Wednesdays and Rideshare Week promotions are approved for statewide CMS usage. These messages, which encourage regional participation in rideshare/ transit usage, may be displayed on consecutive Wednesdays in March.
- Messages of this type may be unique for the particular event, but should focus on long-term traveler behavior (e.g., *Upgrade Your Commute The Oil Smart Way - Call METRO Ridematch 625-4500*). While this message does not specify the name or date of the event, it displays the contact phone number for the alternate commute resource. These messages are intended to benefit the transportation system by encouraging drivers to use alternate modes of transportation.
- Encourages travelers to utilize alternative modes of transportation; strong tie to usage of the freeway HOV system.
- Messages displayed on selected signs, with no beacons, and in accordance with the CMS system priorities.

Messages other than those related to traffic operations should be avoided.

Test Messages. It may be necessary to run test messages on a CMS sign in order to ensure correct operations or to “burn-in” a new sign. These messages shall not confuse or misdirect traffic. Use *non-message*, or appropriate public service announcements as test messages. Acceptable *non-message* test messages may contain the legend: “TEST MESSAGE”, display a portion of the alphabet or a sequence of numbers, or non-message test patterns such as moving columns or rows, etc. The Regional Traffic Office should approve other test messages.

- P. **Commercial Dump Prohibition Signing.** Some rest areas along state highways provide RV dump stations for use by noncommercial vehicles. Install the COMMERCIAL VEHICLE USE PROHIBITED (I8-704) sign at these RV dump sites. This is the only valid application for this sign on state highways.

Design Manual Chapter 1030 discusses RV Dump Stations.

2.6 Motorist Information Signs

Motorist information signs guide travelers, people of all ages, to activities essential to their journey. The resultant advertising medium for business is a program by-product. Motorist information sign assemblies consist of motorist information sign panels, on which individual business signs may be displayed (see Appendix 2-13).

RCW 47.36.310 authorizes the department to install motorist information sign panels, where space is available on Interstate highway rights of way, to display individual business signs for gas, food, lodging, camping, and tourist-oriented activities. RCW 47.36.320 authorizes the department to install motorist information sign panels where space is available on primary and scenic rights of way, to display individual business signs for gas, food, lodging, and recreation (includes camping), and tourist-oriented activities. These statutes also require that the department charge reasonable fees for installing and maintaining the individual business signs; and, authorize the department to charge reasonable fees for erecting and maintaining the motorist information sign panels.

To support and enhance state law, official regulations for motorist information signs are provided in Chapter 468-70 of the Washington Administrative Code (WAC). WAC 468-70 is divided into nine sections, which are:

- 468-70-010, General
- 468-70-020, Definitions
- 468-70-030, Location of panels and signs
- 468-70-040, Interchange and intersection selection for motorist information sign panels

- 468-70-050, Business eligibility
- 468-70-060, Signing details
- 468-70-070, Permits and procedure
- 468-70-080, Fee schedule
- 468-70-085, Maintenance replacement of pictorial business signs manufactured by the department prior to January 1, 1987

From the traffic engineering perspective, and for procedural efficiency, it is obvious that the regions need to apply the provisions of WAC 468-70 uniformly. It is only fair that travelers unfamiliar with any given area receive information about services, in the same manner, regardless of where they travel within the state. Likewise, applying the regulations uniformly results in equitable treatment for the business community.

The discussions in the following portion of the *Traffic Manual* clarify specific parts of the WAC to assure that the motorist information sign program is administered statewide as uniformly as possible.

A. WAC 468-70-030, Location of Panels and Signs

1. **Interchanges.** WAC 468-70-030(1)(a) provides that, “For freeways and expressways the motorist information sign panels shall be erected between the previous interchange and at least 800 feet in advance of the exit direction sign at the interchange from which the services are available.” The WAC is silent in providing regulation about where motorist information sign panels are placed “beyond the previous interchange,” or if placement between the crossing structure and the on-ramp merge point is permissible.

The Headquarters Traffic interprets the WAC to mean that motorist information sign panels are intended to be erected beyond the on-ramp merge point. Locate the panels far enough downstream so that mainline and on-ramp traffic, both approaching the merge area and within the merge area, can focus on the driving task without distraction.

It is possible that locations exist where panels can be placed, for an upcoming interchange, between the crossing structure of the previous interchange and its on-ramp merge point. Installations at these locations are extraordinary. Conduct an on-site review to assure that a motorist information sign panel will not block the on-ramp traffic’s view of upstream traffic approaching the merge area, and to assure that a panel installation will not overload the immediate area with signs. Before installation, the regions are requested to consult with the State Traffic Engineer’s Office about candidate locations.

2. **Intersections.** WAC 468-70-030(1)(b) provides in part that “For conventional roads the panels shall be erected between the previous intersection and at least 300 feet in advance of the intersection from which the services are available.” Neither the WAC nor the MUTCD recommends spacing guidelines to apply between panels where more than one type of motorist service activity is available from a particular intersection. However, the panels may be spaced, based on the speed limit of the roadway, in accordance with the following table.

MIS Signing Spacing (Feet)		
Posted Speed (MPH)	Minimum	Desirable
25	160	200
30	190	235
35	220	270
40	255	315
45	285	350
50	315	390
55	350	430
60	380	470
65	410	510

Table 2-13

B. WAC 468-70-040, Interchange and Intersection Selection for Motorist Information Sign Panels

1. **City Streets That Are Part of State Highways.** WAC 468-70-040(2) provides general regulations about locating motorist information sign panels within the corporate limits of cities towns, with regard to limited access highways.

WAC 468-70 provides limited regulations about erecting and maintaining panels within corporate limits along city streets that are also state highways (non-access controlled routes). WAC 468-70-050(4) provides that “Within cities and towns having a population greater than 22,500, the department shall obtain concurrence from the municipality of locations for installing panels, and may request that the municipality install the panels.” This regulation cannot be interpreted to mean that the department has blanket authority for motorist information signs in cities and town having a population of 22,500 or less.

In April, 1997, the department entered into a written agreement with the Association of Washington Cities which in part sets forth the maintenance responsibility for various roadway appurtenances

including traffic control devices. The basis in law for this agreement is RCW Chapter 47.24, City Streets as Part of State Highways. Unfortunately, neither the agreement nor the law clearly establish the responsibility for motorist information signs along non-access controlled routes within corporate limits.

Some cities and towns have established ordinances to include motorist information signs, while some have not. Further, some cities and towns declare motorist information signs to be a form of billboard and prohibit them. The Headquarters suggests that the regions encourage cities and towns, regardless of population, to be lead agency in motorist information sign matters. However, the regions can install and maintain the signs at the request of a city or town, through a written agreement.

2. **Signing From State Highways.** WAC 468-70-040(3) provides in part that signing will be provided from the nearest interchange or intersection from the nearest freeway/expressway or conventional highway to the activity. There may be situations where two exits are nearly equidistant to a business, and signing from either exit is convenient for the motorist. In these situations, it is appropriate to sign from either exit, or to “split” the signing directionally since the business is equally accessible by either exit.

WAC 468-70-040(3) also provides in part that signing will not be provided from a freeway or expressway to another freeway or expressway. The intent of this regulation is to assure that signs are not provided along a major route, where tourists typically travel, to direct motorists to another major route where tourists typically travel. However, the regulation does not preclude signing from a freeway or expressway to a conventional state highway in circumstances where the conventional highway is used primarily by local traffic. In these cases, the regions can consider the conventional highway to serve travelers more in the nature of a county road or a city street.

- C. **WAC 468-70-050, Business Eligibility.** WAC 468-70-050 provides the minimum eligibility criteria that businesses must meet to qualify for the display of individual business signs on motorist information sign panels. The regions may use the following interpretative information to assist with eligibility analysis of the nuances that arise.

1. **Gas Activities.** WAC 468-70-050(1)(a) specifies the minimum eligibility requirements for the display of gas activity business signs on motorist information sign panels.

Within the WAC, restroom facilities available to patrons are an eligibility requirement. Some gas activities may utilize portable toilets, while others keep the doors locked and signed for customer use only.

Travelers expect indoor restrooms, and a sink for clean-up, when they stop for fuel. Portable toilets are acceptable only for temporary use when the indoor facilities are temporarily out of order for repair or remodel. It is acceptable for a gas activity to keep the restroom doors locked, provided that patrons may use the services.

2. **Food Activities.** WAC 468-70-050(1)(b) requires that food activities be open at least 12 hours per day and serve breakfast, lunch, and dinner. With regard to specialty food services, such as pizza houses, questions often arise about what constitutes breakfast and what are reasonable morning hours for food activities to open.

Historically, the department has been unsuccessful in establishing a prescribed regulation to address these two questions. A popular dictionary defines breakfast as the first meal of the day, without reference to specific food arrangements. Thus, it is not appropriate to require that food activities serve traditional breakfast items. Also, the business signs depicting specialty houses provide travelers with a pretty good idea of what to expect.

The department normally does not receive complaints from traveling motorists provided that specialty houses are open by 11:00 a.m. and the menu offers items that are typically associated with lunch and dinner. Opening hours are not normally an issue for food activities that offer the full complement of menu items typically associated with breakfast, lunch, and dinner, because they usually open fairly early in the morning.

WAC 468-70-050(1)(b)(i) provides that food activities must be licensed or approved by the county health office. For casino restaurants on Indian lands, there is no county jurisdiction over health interests at casinos. The Federal Department of Health and Human Services has an Indian Health Service Office at its District Offices around the state. The regions can ask the casino restaurant for a copy of the Indian Health Service inspection report as a means to meet the health eligibility criteria.

WAC 468-70-050(1)(b)(iii) provides that food activities must have parking facilities for a minimum of 10 vehicles. This Rule was written prior to 1985, when legislature authorized motorist information signs within urban areas. In urban areas, notably downtown business districts, there are food activities having on-street parking only but that meet the other eligibility criteria. Rather than amend the WAC to address this nuance, the Headquarters interprets on-street parking to meet the specified parking requirements for these food activities.

Bar and grill type food activities may qualify for business signs provided that minors are allowed in the food area. If patronage of the grill requires that visitors access through the bar, then minors would not be allowed and the business is not eligible.

3. **Lodging Activities.** WAC 468-70-050(c)(i) provides that lodging activities must be licensed and approved by the Washington Department of Health. Bed and Breakfast facilities having less than three rooms for rent are exempt from the Department of Health licensing requirements, thus an approval letter from the county health authority fulfills the eligibility requirement.

The regions are occasionally asked to approve youth hostels for business signs. Typically youth hostels fail to pass the lodging eligibility criteria because they have dormitory type sleeping arrangements. The Headquarters Traffic Office interprets the language in RCW 47.36.340(2) and WAC 468-70-050(1)(c)(ii), “provide adequate sleeping ... accommodations”, to mean individual sleeping rooms must be available. As a signing alternative, there is an international youth hostel symbol that can be used, in the manner of the generic motorist service signs discussed in section 2.F.6 of this chapter.

4. **Tourist-oriented Activities.** The minimum eligibility requirements for the display of business signs on tourist-oriented directional signs (TODs) are provided in WAC 468-70-050(1)(f). WAC 468-70-020(11) defines a tourist-oriented business as a “lawful cultural, historical, recreational, educational, or entertaining activity or a unique or unusual commercial or nonprofit activity, the major portion of whose income or visitors are derived during its normal business season from motorists not residing in the immediate area of the activity.”

These are businesses that could not exist without tourists, and other tourist-oriented businesses, such as wineries and factory outlet complexes, having tourists comprise a majority of their visitors. Other traditional historic and cultural attractions described earlier in this chapter may be eligible for TODs. Where possible, TODs are the recommended sign medium for these attractions.

The types of businesses not intended for display on TODs are those offering commonly available retail goods and services, and catering to local residents. Accordingly, the regions should review applying businesses on a case-by-case basis to determine their eligibility for the TODs program. For questionable businesses, the regions should contact the State Traffic Engineer’s Office prior to final approval, to avoid the possibility of setting an undesirable precedent.

5. **Multiple Business Activities.** WAC 468-70-050(6) provides that for businesses which qualify for business sign placement on more than one type of motorist information sign panel, placement will be made on the type of panel, determined by the department, which best describes the main product or service.

This subsection further provides that business signs for such businesses may be placed on more than one type of motorist information sign panel, provided that sign space is available and that a qualifying single business activity that submits an application in the future will not be precluded from receiving business signs. Under these circumstances, the department will remove, without refund of any fees, the second set of business signs for a multiple business activity to accommodate business signs for a single business activity. Before approving the second set of business signs, obtain the business owner's written acknowledgment and concurrence with this stipulation.

A newly evolving motorist service industry joins together previously independent businesses, such as a food activity and a mini-mart, into one combined business activity. An example is a McDonald's combined with a Chevron mini-mart. Accordingly, the regions may be asked to approve logos for both the food activity and the gas activity and to display the activities on their respective back panels. Applicable to the question is the word "qualifying." If each activity qualifies for business signs under its own merit, then each can be signed for under WAC 468-70-050(6). However, it is inappropriate to sign for both activities on one business sign if only one of the activities qualifies. An interesting nuance to this situation is where two food activities, such as Taco Bell and Pizza Hut, are combined either under one roof or together with a gas activity. In this situation, review the combined food activity as if it were one activity, and if it qualifies use one business sign that displays both food activities.

6. **Qualifying Business With the Same Name.** There are a few locations where more than one business with the same name, e.g., Union 76, will be accessible to travelers from a particular interchange or intersection. Because travelers do not need redundant information on mainline back panels at these locations, some level of interaction between the two businesses will most likely be required.

If both businesses are located on the same side of an interchange or intersection, an agreement between the competing businesses may be needed to direct the department as to which activity will be the permit holder for the signing. Where the two activities are located on opposite sides of the mainline, it may be possible to place both activities under permit, and sign each activity from one direction of travel using a right

arrow on the off-ramp follow-through sign. As an option, provided both businesses agree both a right and left arrow may be used on each ramp sign.

D. **WAC 468-70-070, Permits and Procedure.** The regional offices are responsible for processing permits, and applications for permits (Appendices 2-14 and 2-15), determining business eligibility, and assisting the Headquarters Accounting Office with the process for billing and collecting annual maintenance fees. WAC 468-70-070, Permits and Procedure, provides the general requirements and procedures for the information contents on permit applications, ineligible business grievance hearings, fabrication and installation of business signs, business sign maintenance and replacement fees, and revocation and expiration of permits.

1. **New Applications.** The MIS status worksheet (Appendix 2-16) may be used to assist the Regional Outdoor Advertising Representatives with pending applications. Applications for logo sign permits, together with the accompanying fees, are accepted at the regional offices. The steps below are followed to process the applications:

- The Regional Mail Receptionist opens the application envelope and, if a check is enclosed, records the date received and other information about the check onto the Mailroom Cash Receipt Log. An application not accompanied by a check is forwarded to the Regional Outdoor Advertising Representative, for return to the submitter together with a request for the application fee.
- The application and check is sent to the Regional Accounting Office, where the TRAINS Cash Receipt document is completed.
- The Regional Accounting Office sends the original application to the Regional Outdoor Advertising Representative for a permit number assignment.
- The Regional Outdoor Advertising Representative assigns the permit number, documents the state route number and milepost, the type of highway, and the type of business. A copy of the original application is then sent from the Regional Outdoor Advertising Representative back to the Regional Accounting Office.
- The Regional Accounting Office enters the required information into TRAINS and then sends a copy of the application to the Headquarters Accounting Office.
- The Regional Outdoor Advertising Representative visits the business within 30 days to review compliance with the eligibility requirements and to verify that sign space is available.

- Qualifying businesses receive an approval letter (see Appendix 2-17), whereas nonqualifying businesses receive a non-approved explanatory letter (see Appendix 2-18).

Note: New applicants have priority, over existing permit holders requesting business sign revisions, if a backlog develops in application processing.

A business may apply for a location having a full complement of business signs on a back panel. At the request of an applying business that otherwise qualifies for signs, a copy of the application may be retained on a waiting list maintained by the Regional Outdoor Advertising Representative. The original application and a refund check for the application fees are then returned to the submitter.

A business under construction may apply for a permit. Although the motorist information sign program is intended for operating businesses, the regions may consider holding an application in a pending status where there is less than a full complement of business signs on a back panel. The application fee is remitted after the business becomes operational and just prior to regional review for eligibility compliance. Should available space on a back panel be limited, an operating business that applies during the “pending” period, receives a higher priority for signs than the business under construction. Thus, before accepting an application from a business under construction, the Regional Outdoor Advertising Representative obtains written concurrence from the prospective permit holder acknowledging the signing priority.

2. **Business Sign Messages.** WAC 468-70-070(5) provides that business signs may not display messages advertising products or services incidental to the qualifying motorist service activity. The WAC also provides that the department has final approval authority of the designs.

WAC 468-70-050(1)(a)(vi) discusses eligibility criteria for card-lock gas activities. Business signs for and eligible card-lock gas activity are to incorporate the message CREDIT CARDS only if cash is not accepted at the activity.

Over time, businesses have proposed an array of incidental messages on business signs for the Regional Outdoor Advertising Representatives to consider. A few guidelines will help the regions with the assessment.

The business sign may duplicate the on-premise sign which is helpful in assessing business signs for food activities, such as having “Bar and Grill” as part of an on-premise sign. Otherwise, in this case, references to bar, lounge, spirits, etc., are not appropriate on business signs.

Another tool for use in evaluating incidental business sign messages is whether or not the messages provide useful information to travelers concerning service availability. For example, an “Open 24 Hours,” “Food Mart” (if part of the business name), or a “Closed Sundays” (for food activities open 6 days per week) supplemental message on a business sign provides useful information for travelers. Whereas, incidental messages such as “ATM, Postage Stamps, Car Wash, Casino (not open to minors), and Drive-Thru Espresso” do not. (The message Casino Cafe may be displayed on food business signs to provide drivers with a clear picture about what they will find. However, food activities affiliated with casinos are only eligible for business signs if they serve minors.)

Corporate logos are allowed on business signs, reflecting the provisions of RCW 47.36.005(7). This statute in part provides that “Nationally, regionally, or locally known commercial symbols or trademarks for service stations, restaurants, and motels shall be used when applicable.”

The primary message on a business sign needs to be more conspicuous than the supplemental message. Accordingly, it is recommended that supplemental messages be incorporated into the overall business sign message with a letter height no taller than 75 percent of the primary message. Refer to Section (C)(5) of this part for additional guidance to assist with business sign messaging for multiple business activities.

Directional information, except for arrows and mileage information on ramp or conventional highway business signs is not acceptable. Follow-through signs are the appropriate medium for route direction.

3. **Fabrication and Installation of Business Signs.**

WAC 468-70-070(8)(a) provides in part that “Once an application is approved, the department will request the business to provide the signs ...”. It is preferable that the signs not be pre-drilled by the fabricator. WAC 468-70-070(8)(b) provides the circumstances under which the department will manufacture the business signs. In either case, the business signs are considered to be the property of the business.

4. **Business Sign Maintenance and Replacement.**

WAC 468-70-070(9)(a) and (b) provide general regulations for maintaining and replacing business signs due to weather-wear. However, the WAC is silent on replacing business signs prematurely due to vandalism or vehicle impact. The department will replace signs irreparably vandalized, only once. Subsequent replacements will be the business’ responsibility. The department always replaces business signs that are irreparably damaged due to vehicle impact, although this is an infrequent occurrence. Costs for replacing business signs

damaged by vandalism or vehicle impact are appropriately charged against Program M, although Program Q funds may be used at the region's discretion.

5. **Annual Maintenance Fees and Permit Expiration for Failure to Pay.** The Headquarters Accounting Office mails the annual maintenance fee billings about 30 days prior to the anniversary date of permit issue. About a month before that, the Headquarters Accounting Office provides the Regional Outdoor Advertising Representative with a Scheduled Billing Report of impending renewals (see Appendix 2-19) for the upcoming month, to review, update, and return. The regions use the Motorist Information Signing Customer Change Form (see Appendix 2-20) to notify the Service Center Accounting Office about changes needed on the billing report.

WAC 468-70-070 requires that annual maintenance fees be paid within 30 calendar days of the anniversary of the permit issue, and also specifies that failure to pay by that date causes the permit to expire and the business signs to be removed from the motorist information sign panel. The name of a business, delinquent in fee payment by the due date, is provided from the Headquarters Accounting Office to the Regional Outdoor Advertising Representative. The region then sends the business a certified letter (Appendix 2-21) requesting the payment.

If the annual fees remain unpaid 30 days after the business receives the certified letter, the permit is expired and the business signs removed. The Regional Outdoor Advertising Representative notifies the Headquarters Accounting Office, using the Motorist Information Signing Customer Change Form, when permits have expired for non-payment of the annual fees.

6. **Prorated Maintenance Fees.** WAC 468-70-070(9)(d) provides in part that annual maintenance fees will not be prorated for fractions of the year in the event of business sign removal or coverage. This regulation is intended to support WAC 468-70-050(8) regarding seasonal business operations, and maintenance activities, severe storms, vehicle impact, and changes of ownership or operation. The WAC is not intended to consider business sign removal due to construction activities.

Typically, when long-term projects are planned, temporary motorist information signing is developed as part of the sign plan. For some projects, however, temporary motorist information signs cannot be installed due to construction logistics. For these projects, during the design stage, the regions contact the businesses impacted by the project and also make arrangements through the Headquarters Accounting Office to suspend the annual maintenance fees until such time as the permanent motorist information signs are reinstalled. The time frame for fee suspension is rounded to the nearest year.

7. **Reassigning Valid Permits.** WAC 468-70-070(10) provides that the department shall reassign valid permits, effective only after receiving notice from the permit holder, when an activity changes ownership or an activity changes operation, such as temporary closures for remodel or repair. In either case the eligibility requirements must still be met, and such reassignments have preference over applications on a regional waiting list. The Regional Outdoor Advertising Representative should also notify the Headquarters Accounting Office about the reassignment using the Motorist Information Signing Customer Change Form (see Appendix 2-20).

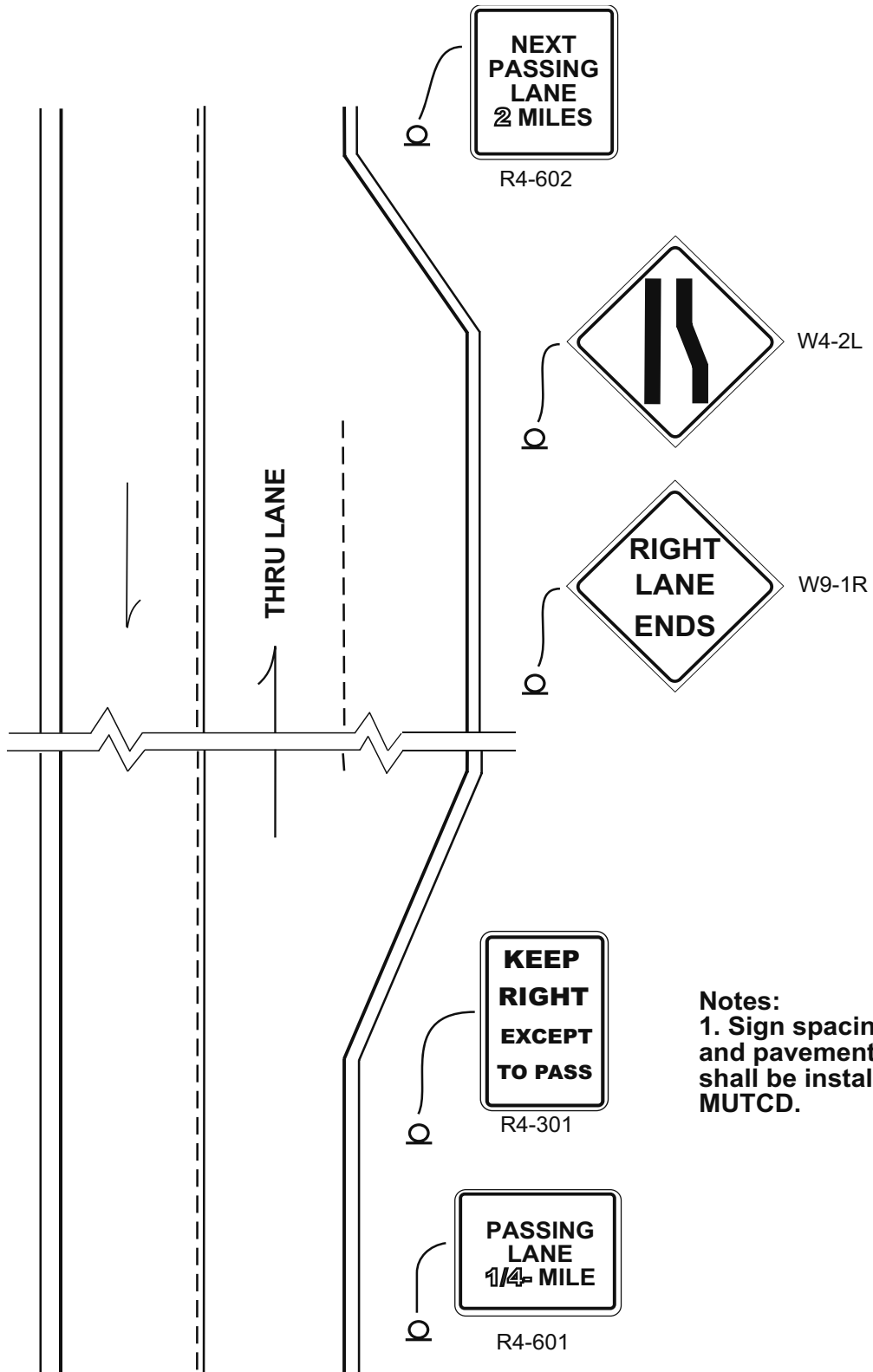
The WAC does not allow permit reassignment for businesses having simultaneous changes in both ownership and operation, or where businesses have closed for reasons other than change of ownership or operation. For either of these reasons, a new application and permit is necessary, giving preference to applications at the top of a regional waiting list.

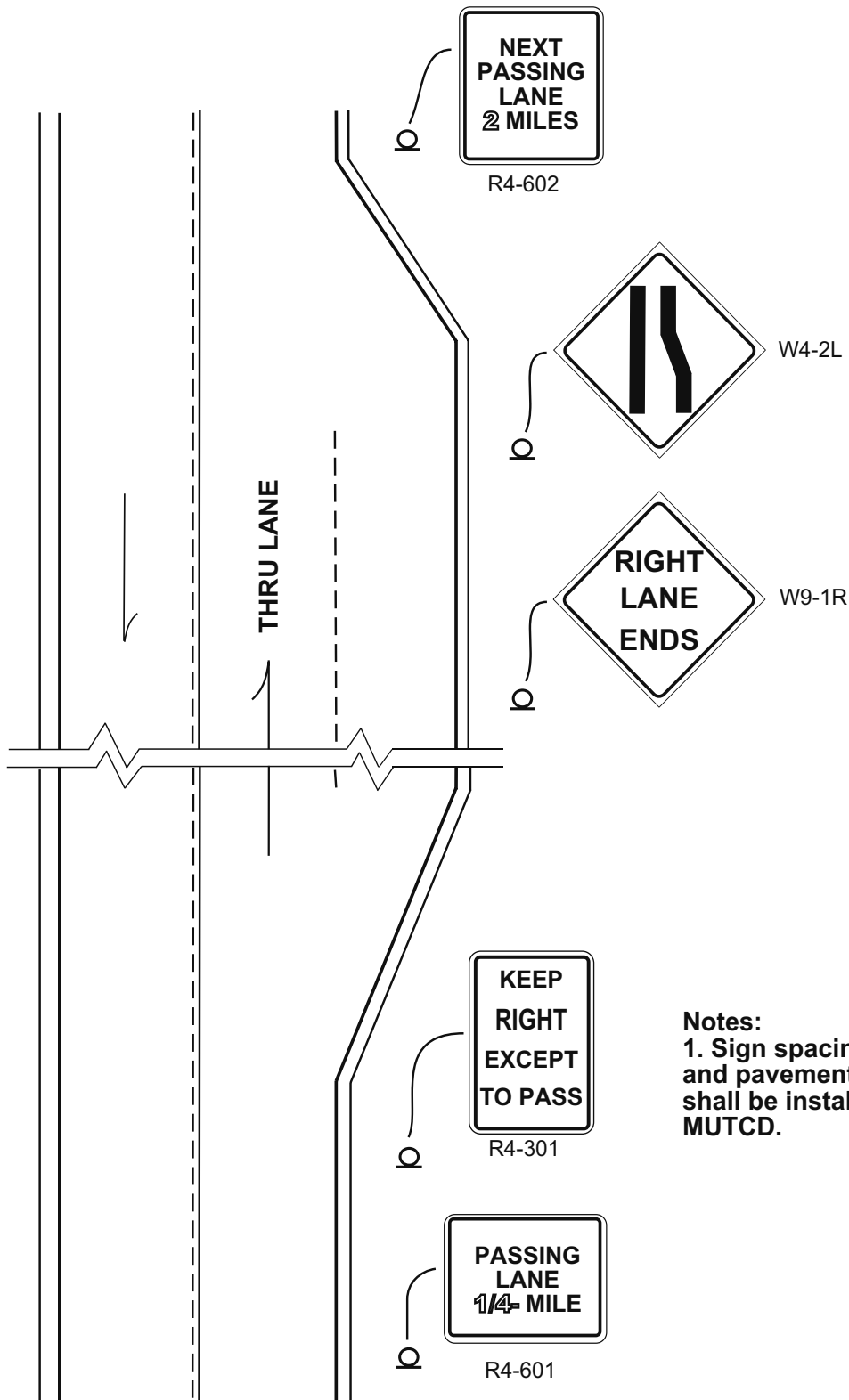
8. **Surveillance and Permit Revocation for non-Compliance.** Occasionally, the regions will learn through field review or motorist complaints that participating businesses are not operating within the eligibility requirements. When this occurs, a certified letter is sent to the business (Appendix 2-22), followed up with a field review for compliance verification.

Business signs may be removed and permits revoked 30 days after the written notification for businesses not yet in compliance. However, before permit revocation and sign removal, a hearing in accordance with the Administrative Procedures Act is required by WAC 468-70-070(11).

9. **Program Documentation.** It is recommended that the regions document expenditures associated with motorist information signs, so that cost information is available to support requested levels of funding during upcoming budget cycles.

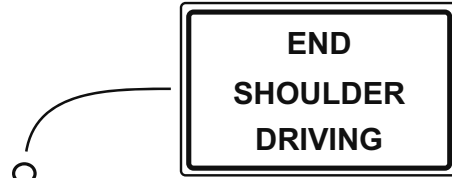
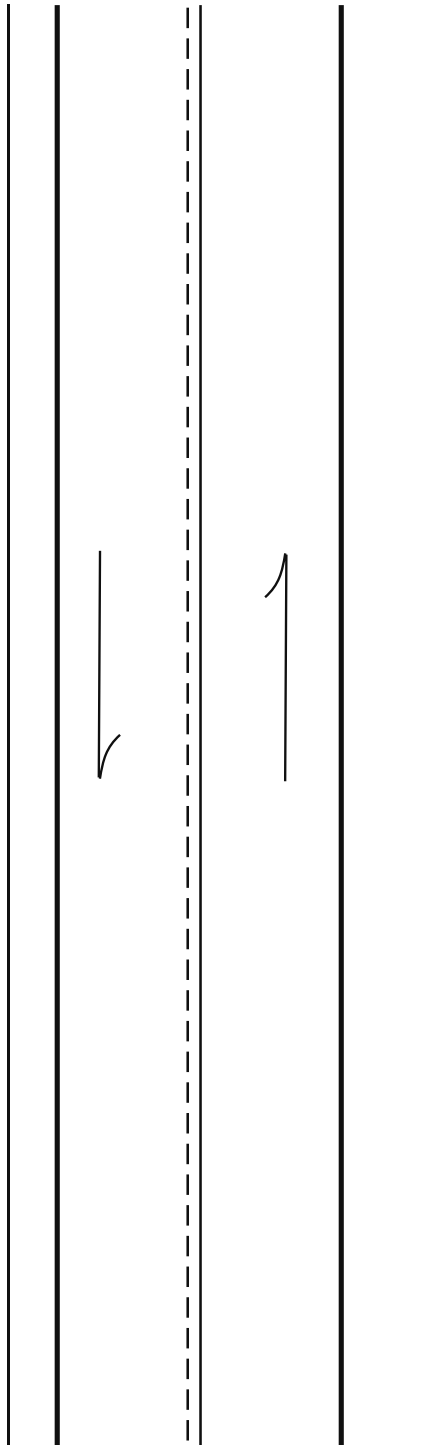
Labor for the program administration is paid for under Program Q, Operations, whereas labor and materials associated with sign installation are paid for under Program Q, Minor Enhancements. (**Note:** See Section (D)(4) of this part for business signs replacements due to vandalism or vehicle impact.) Refer to the *Chart of Accounts*, M 13-02, for the correct work operation codes.





Notes:
1. Sign spacing and pavement markings shall be installed per MUTCD.

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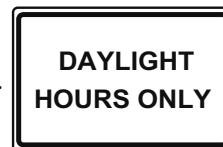
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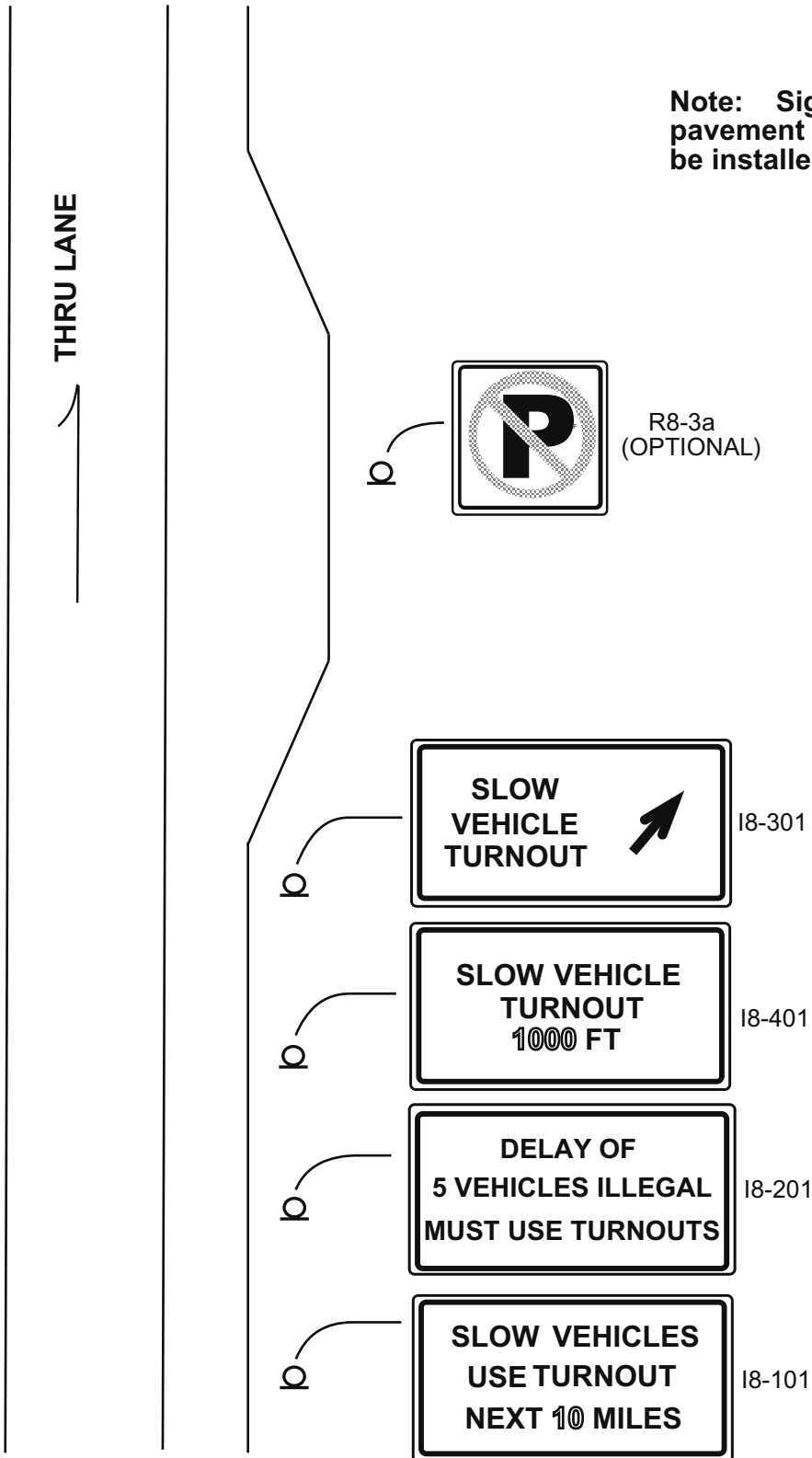


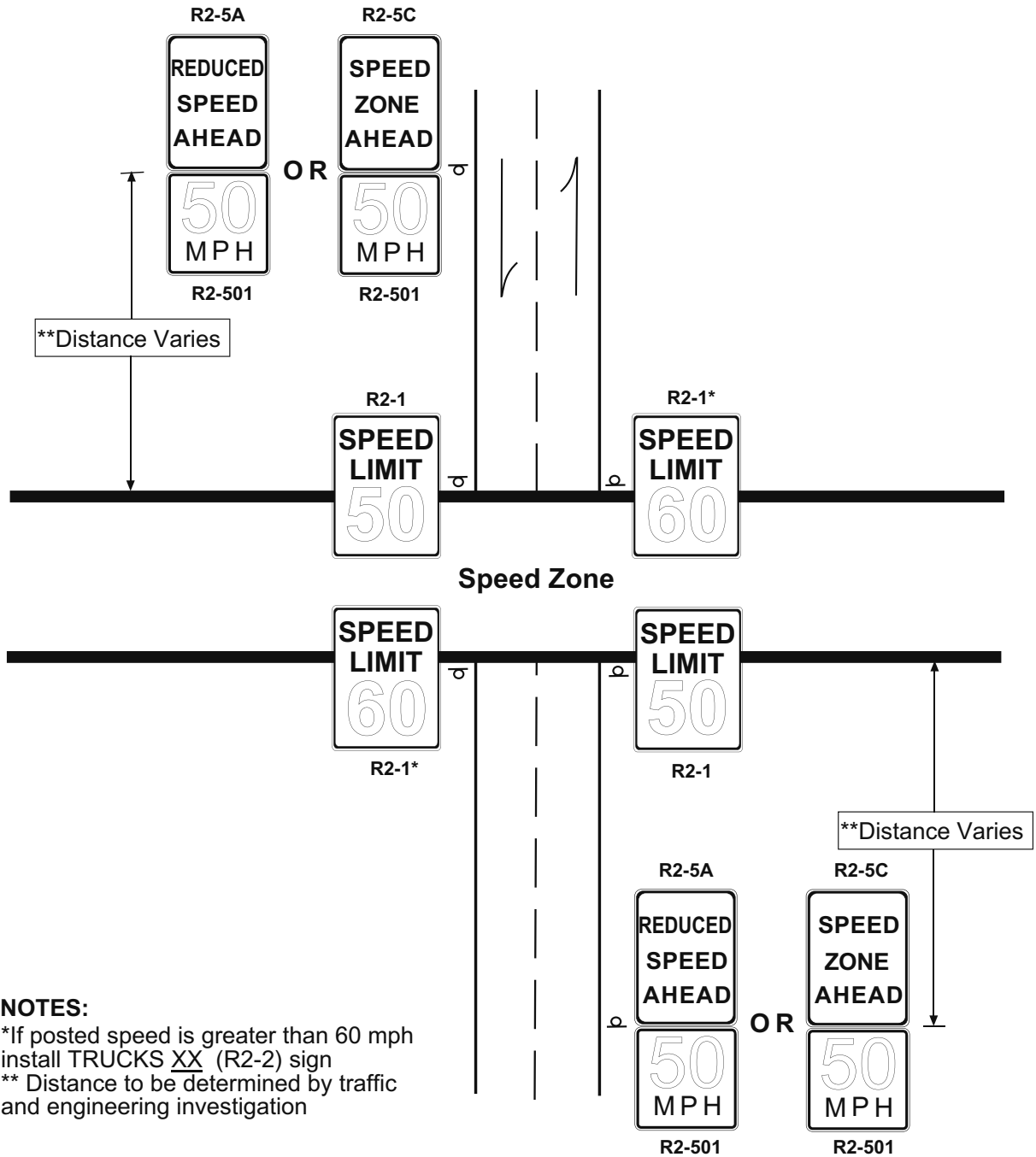
17-702



18-701

Note: Sign spacing and pavement markings shall be installed per MUTCD





NOTES:

*If posted speed is greater than 60 mph install TRUCKS XX (R2-2) sign

** Distance to be determined by traffic and engineering investigation

Install signs on both sides of traveled way for each direction of multi-lane divided highways

**Selection Criteria for Supplemental Guide Sign Destinations
for Full Access Control Freeways**

Type of Generator	Specific Criteria	Major Metro Area ¹	Urban Area ²	Rural Area
Airports (Destination name only, not symbol)	Regularly scheduled commercial flights per day.	35	20	15
	Distance from Interchange (miles).	5	5	5
	Paved and lighted runway ≥ 2,500 ft long ³ .	–	–	–
Colleges, Universities, and Branch Campuses	Must be accredited. Total enrollment, full and part time students.	4,500	2,500	1,000
	Distance from Interchange (miles).	5	5	5
Regional Shopping Centers	3 major department stores; 500,000 sq ft of leasable space; minimum 9,000 daily one way trips ⁴ .	–	–	–
	Distance from Interchange (miles).	1	1	1
Industrial Parks	500,000 sq ft of leasable space ⁵ .	–	–	–
	Distance from Interchange.	5	5	5
Ports/Port Districts	Served by two or more Transportation Modes (Water, Highway, Rail, Air).			
	Distance from Interchange.	5	5	5
Event Venues	Annual attendance.	300,000	250,000	200,000
	Distance from Interchange (miles).	2	2	2
Major Recreation Areas	Annual attendance (open to public).	300,000	250,000	100,000
National Parks	Sign from major junctions; case by case.			
State Parks⁶	Distance from Interchange (miles).	15	15	15
USFS Facilities (Campgrounds, HQs)	Distance from Interchange (miles).	1	1	10

¹Population greater than 50,000.

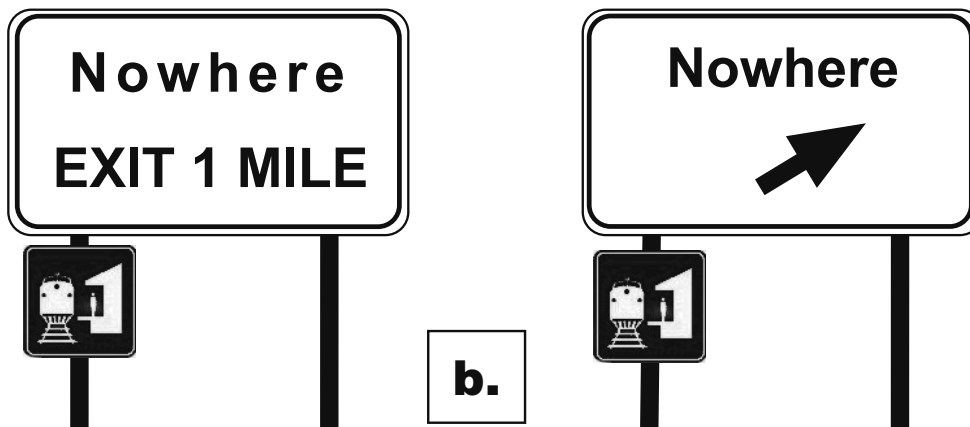
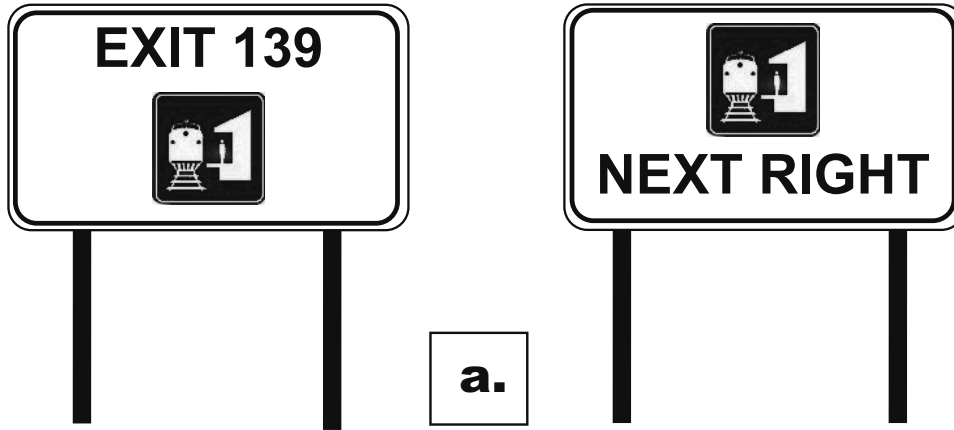
²Population 5,000-49,999.

³See Section 2.4.D.3 for additional criteria.

⁴See WAC 468-95-025 for additional criteria.

⁵Leasable space can be a mix of manufacturing, service, and warehouse facilities.

⁶Per RCW 47.36.290.



- Notes:
1. The Amtrak symbol is used to show typical installation. Sign logo will vary with transit or rail agency.
 2. These typical installations may also be used for motorist services signs (Police, Food, Gas, etc).
 3. Install signs per MUTCD spacing requirements.

Appendix 2-8

Application for Historic/Cultural Sign

Organization Address

Mailing Address (if different)

Name of authorizing Official (Include title, e.g., Director, Trustee, etc.)

Address of Authorizing Official Telephone #

email address

Has your organization been granted *non-profit* status (IRS 501 (c)(3)) Yes No

Please provide the following information about your organization:

- What are your visitation hours and when are you open to the general public (note any seasonal variations to schedule of operation)?

- Is the facility easily accessible to all visitors, including ADA features? Yes No
- Is the facility readily visible from the highway? Yes No
- If not, how far is your facility from the state highway on which the sign is being requested

- Is the road serving your facility a two-lane, all-weather road? Yes No
- Please indicate the name or number of the road, street or highway serving your facility

- Please describe where you would like the sign to be located. Be specific, include the state highway number and milepost, or distance to the nearest important intersection or junction

For Official Use Only

Historical Attractions

- OAHP – Is attraction included on the Heritage Register? Yes No
- HRC – Does site include IC? Yes No
- Are there historic buildings, features, or ruins w/ interpretive marker? Yes No
- HRC approval? Yes No by _____

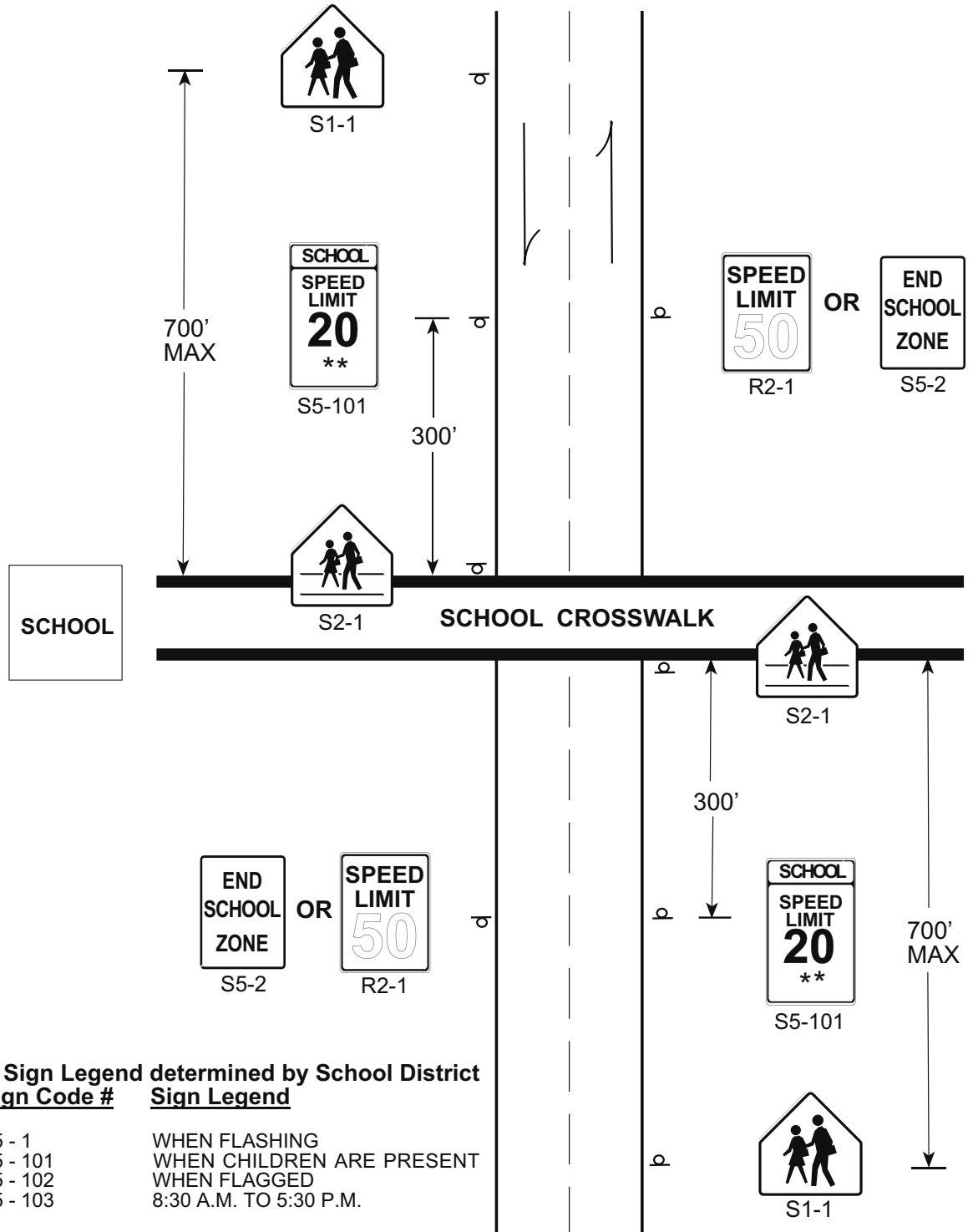
Cultural Attractions

- Museums –HRC approval? Yes No by _____
- Religious – Shrine, or unique religious nature w/ visitor facility or tour? Yes No
- Educational – Outstanding educational value w/ visitor facility or tour? Yes No
- Scientific – Used for scientific advancement w/ visitor facility or tour? Yes No

Sign approved Sign disapproved Reason for disapproval _____

 Regional Traffic Engineer

 Date

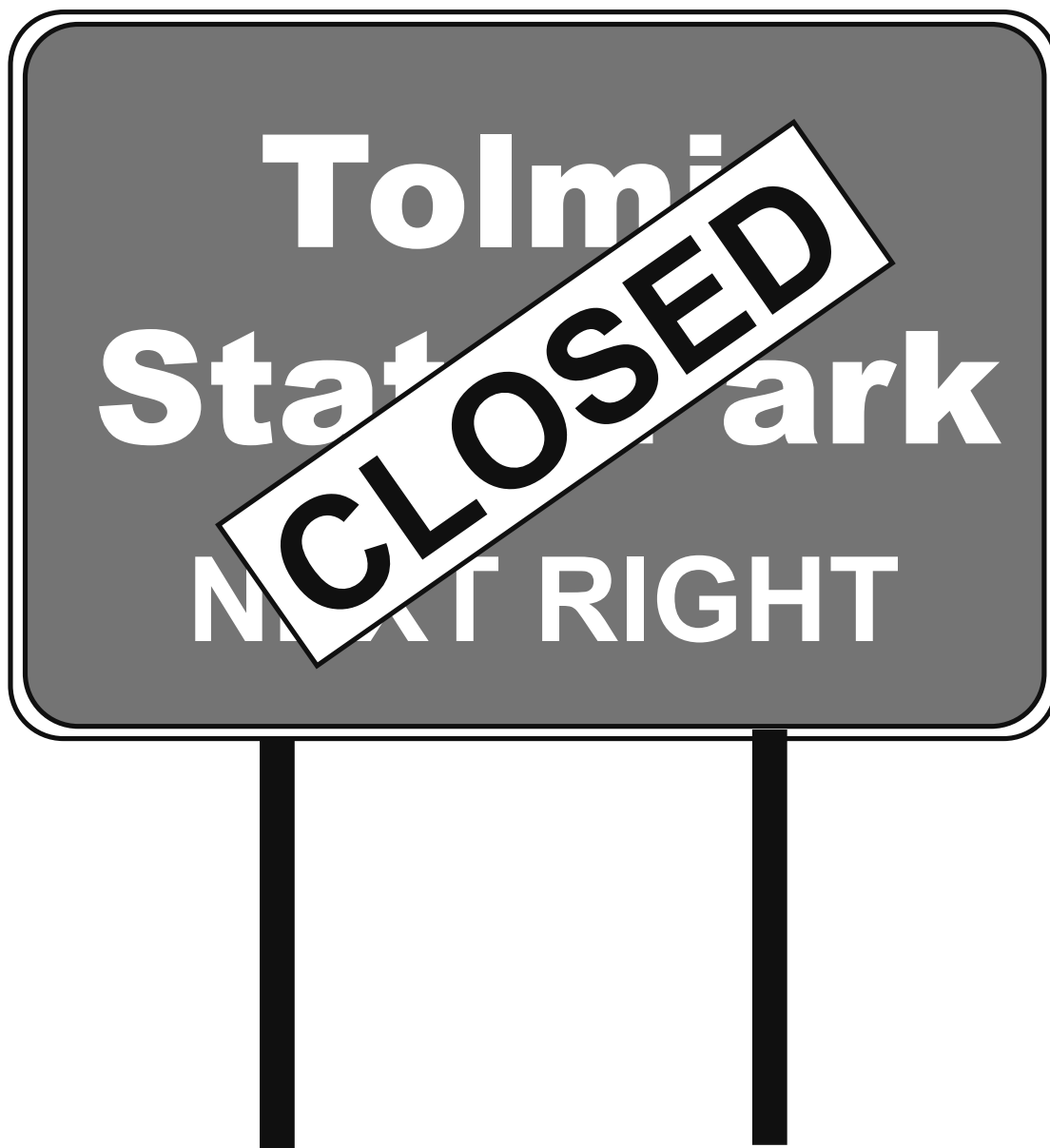


**** Sign Legend determined by School District**
Sign Code # Sign Legend

- S5 - 1 WHEN FLASHING
- S5 - 101 WHEN CHILDREN ARE PRESENT
- S5 - 102 WHEN FLAGGED
- S5 - 103 8:30 A.M. TO 5:30 P.M.

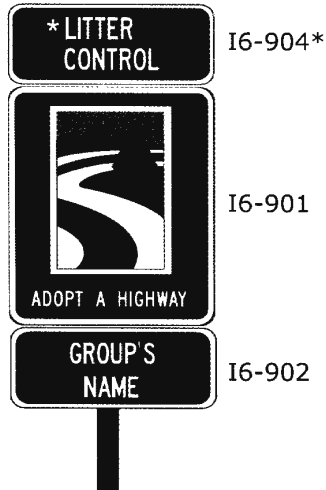
See MUTCD Section "Traffic Control for School Areas" for sign spacing

Appendix 2-10 Closed Plaques for Signs to State Parks



Appendix 2-11 Adopt-A-Highway Sign Configurations

Two Lane Highway (All speeds)
Multi-lane Highway (50 mph or less)



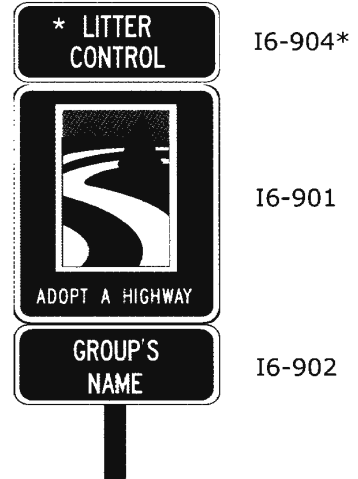
Multi-lane Highway
(55 mph or greater)



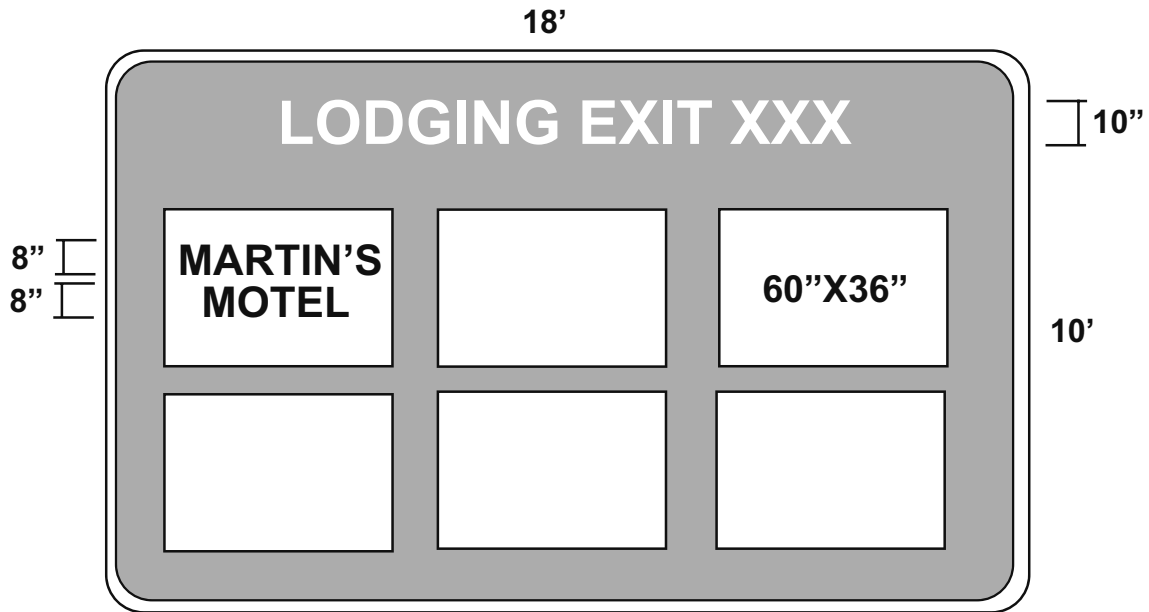
Highway Median Sections



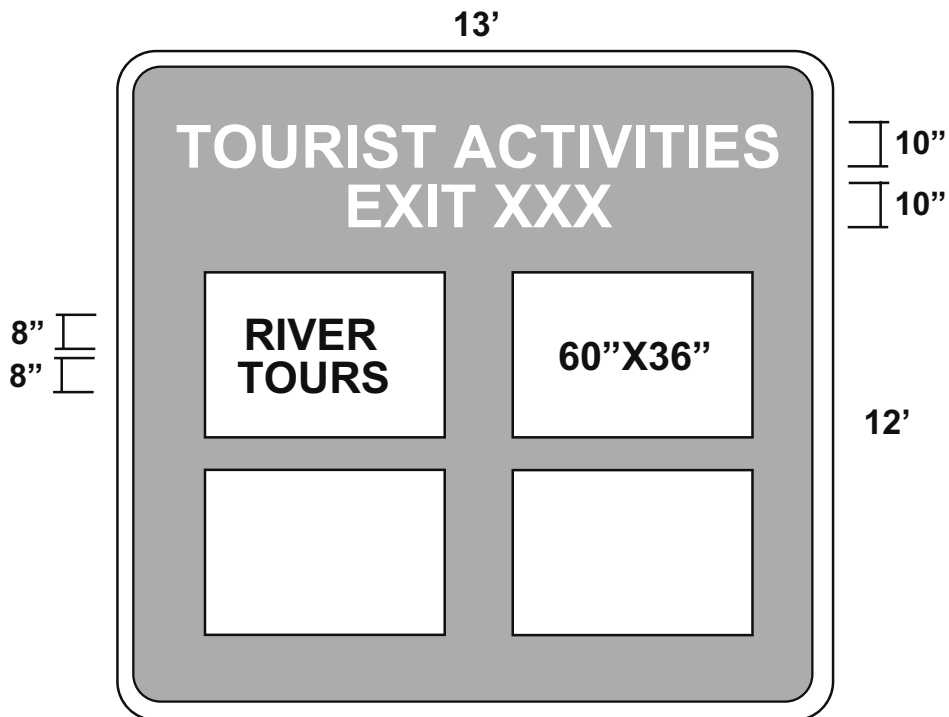
Ramp Sections



*Message may be modified to read:
WILDFLOWERS, TREE PLANTING,
or as specified.



LOGO SIGN PANEL



TOD SIGN PANEL



Washington State
Department of Transportation

Permit for Motorist Information Signing
or Tourist-Oriented Directional Signing

Permit No.	Check One		Payee No.
	<input type="checkbox"/> MIS	<input type="checkbox"/> TODS	

In accordance with RCW 47.42 and Washington Administrative Code 468.70, and subject to all terms, conditions, and provisions written below or on any part of this form, PERMISSION IS HEREBY GRANTED TO:

Business Name _____
Physical Address _____

for the privilege to have motorist information signing or tourist-oriented directional signing installed by the Department of Transportation. Such signing is to be installed on SR _____, at an intersection or interchange located at State Route Milepost _____.

Dated At _____ This _____ day of _____, _____

I, the undersigned, hereby accept this permit subject to the terms and conditions as herein set forth.

This _____ day of _____, _____

Company Representative Signature _____	WSDOT Representative _____
--	----------------------------

Billing Name	Billing Phone
Billing Address	RE Location (22-Character TRAINS Field)
	Federal Tax ID
	Bill Code 811

General Provisions

This permit is expressly conditioned and subject to Permittees:

1. Agreement to limit the height of any on-premise signs to no greater than 15 feet higher than the roof of the main building of the business (applicable to businesses located within one mile of the interchange or intersection, and further applicable to on-premise signs visible from interstate highways, RCW 47.42.046 and RCW 47.42.047.
2. Agreement to provide for and maintain adequate follow-through signing.
3. Payment of a manufacturing and/or installation fee of _____ for:
(Rev. Source 0902-02)
_____ Mainline _____ Ramp _____ Conventional
4. Agreement to and payment of an annual maintenance fee within 30 calendar days after the anniversary date of the permit issue.
5. Acknowledgement that the annual maintenance fee is set at _____ subject to change by the Department of Transportation.
(Rev. Source 0902-02)
6. Acknowledgement that assignment of this permit shall be effective only upon receipt of assignments by the Department of Transportation.
7. Acknowledgement that this permit may be revoked for failure to provide any of these general provisions or for failure to provide the services and/or facilities required by section 468.70.050 and 468.70.070 of the Washington Administrative Code.

DOT Form 224-042 EF
Revised 6/2006



**Permit Application -
One or More Business Signs**

Permit Application - One or More Business Signs to be affixed to Information Panels.

Business Name <hr/> Physical Address <hr/> Federal Tax ID <hr/> Interchange or Intersection Name or Number <hr/>	<p align="center">For WSDOT Use Only</p> Permit Number _____ Region _____ Payee Number _____ SR Mile Post _____ Highway Type <input type="checkbox"/> 1 - Interstate <input type="checkbox"/> 3 - Scenic <input type="checkbox"/> 2 - Non-Interstate Type of Business <input type="checkbox"/> 1 - Gas <input type="checkbox"/> 4 - Camping <input type="checkbox"/> 7 - Pharmacy <input type="checkbox"/> 2 - Food <input type="checkbox"/> 5 - Recreation <input type="checkbox"/> 3 - Lodging <input type="checkbox"/> 6 - TOD Bill Code 811 _____
--	---

Brief Description of Business/Services Offered

This application is subject to RCW 47.42, Washington Administrative Code 468-70 and provisions contained on the back hereof.

Applicant indicates willingness to enter formal agreement to limit the height of any on-premise signs to no greater than 15 feet higher than the roof of the main building of the business. (Applicable to businesses located within one mile of the interchange or intersection, and further applicable to on-premise signs visible from interstate highways, RCW 47342-046 and RCW 47.42.047). Applicant further agrees to provide for and maintain follow through signing if required by the department. Applicant expressly understands that failure to limit the height of the on-premise signs or to provide for or maintain follow through signing if required or to pay annual maintenance fees may result in the revocation of business signing.

Billing Name <hr/> Billing Address <hr/> Billing Phone Number <hr/>	Dated this _____ day of _____, _____ <hr/> (Print Name) <hr/> (Signature) <hr/> (Title)
--	--

DOT Form 224-041 EF
Revised 6/2006

Instructions

Send a picture, drawing or sketch of the business signs you desire along with the application. The Department will have final approval on any design of a business sign. If a permit is approved, a copy will be sent to you for signing and return. At that time we will request payment of fees to cover the expenses of installation. Mail this application to the appropriate Region Administrator. The Region Addresses are shown below.



Northwest Region
 Traffic Engineer
 15700 Dayton Avenue North
 PO Box 330310
 Seattle, WA 98133-9710

North Central Region
 Traffic Engineer
 1551 North Wenatchee Avenue
 PO Box 98
 Wenatchee, WA 98807-0098

Olympic Region
 Traffic Engineer
 5720 Capitol Blvd. (Tumwater)
 PO Box 47440
 Olympia, WA 98504-7440

Southwest Region
 Traffic Engineer
 11018 NE 51st Circle
 Vancouver, WA
 98682-6686

South Central Region
 Traffic Engineer
 2809 Rudkin Road (Union Gap)
 PO Box 12560
 Yakima, WA 98909-2560

Eastern Region
 Traffic Engineer
 2714 North Mayfair Street
 Spokane, WA 99207-2090

DOT Form 224-041 EF
 Revised 6/2006

MIS STATUS WORKSHEET

SR: _____

MP: _____

Permit #: _____

Business type and name: _____

Date and summary of initial contact: _____

Information package and application sent: _____

Completed application and application fees received: _____

Review business eligibility and highway location (order backboards if needed): _____

___ Approved (Backboard order date): _____

___ Denied (sent letter giving reasons and refund fees): _____

Issue sign specifications, information sheet: _____

Inspect logo signs, issue permit, collect installation fees: _____

Install signs: _____

Telephone contacts: _____



**Washington State
Department of Transportation**
Paula J. Hammond, P.E.
Secretary of Transportation

Transportation Building
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P.O. Box 47300
Olympia, WA 98504-7300
360-705-7000
TTY: 1-800-833-6388
www.wsdot.wa.gov

Date

Inside Address

Re: MIS Signing

Dear _____:

Your application for Motorist Information Signing has been approved. Since you will be providing your own pictorial logo sign, your cost will be \$____.00 per sign for the installation fee or a total cost of \$____.00. Your annual renewal fee will be \$____.00 per sign permit each year, beginning in 20__.

As soon as we receive your \$____ fee, we will order your background signs. Installation should follow in approximately 90 days.

Enclosed are your sign specification sheets and a "Permit for Motorist Information Signs." Please review them. If everything is satisfactory, please sign the permit and return it to me along with two copies of your sign design (for approval). Send your sign specification sheets to the sign manufacturer of your choice.

If you have any questions, please call _____ of my staff at _____.

Sincerely,

Regional Traffic Engineer

Enclosures



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TTY: 1-800-833-6388
www.wsdot.wa.gov

Date

Inside Address

Re: MIS Signing Application

Dear _____:

The Department of Transportation is not able to approve your application for a Motorist Information Sign on SR ___ at milepost ___.

(A new intersection is being constructed in this vicinity beginning next month. The new intersection will prohibit installation of any new motorist information signs due to sign spacing restrictions described in WAC 468-70-030).

Since this information was not provided to you at the time of your initial inquiry, your application fee of \$ _____ is being refunded in accordance with WAC 468-70-070(6).

Please contact _____ of my staff at _____ with any questions regarding this issue.

Sincerely,

Regional Traffic Engineer

Appendix 2-19

MIS Scheduled Billing Report

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION										PAGE:
MOTORIST INFORMATION SIGN SCHEDULED BILLING REPORT FOR 02/01										RUN DATE: 12/29/00
BILL CODE: 8110	PERMIT LOCATION (DESC)	EFF DATE	EXP DATE	FUND AGY	REV SRC	RATE	UNITS	UOM	AMOUNT	STATUS MESSAGE
DOT-RAM1118-AA	REGION : 1 NORTHWEST									
CUSTOMER ID: 230371610 W	ARCO - MIS PROGRAM	02/04/99	99/99/99	108	405	029930	1	EACH	50.00	*** OPEN RECEIVABLES EXIST FOR CUSTOMER ***
1018041	AUBURN #5784	02/04/94	99/99/99	108	405	029930	1	EACH	50.00	
1167051	AUBURN FAC#5926								100.00	CUSTOMER TOTAL
CUSTOMER ID: 534320409	RIDGEWAY BED & BREAKFAST	02/27/95	99/99/99	108	405	029930	1	EACH	50.00	
1005635	MOUNT VERNON									
CUSTOMER ID: 760294760 4	TEXACO FOOD MART	02/01/94	99/99/99	108	405	029930	1	EACH	50.00	*** OPEN RECEIVABLES EXIST FOR CUSTOMER ***
1005146	BELLINGHAM #076-0056									
CUSTOMER ID: 910441095	TIME OIL CO	02/13/98	99/99/99	108	405	029930	1	EACH	50.00	*** OPEN RECEIVABLES EXIST FOR CUSTOMER ***
1005764	BELLINGHAM SUNSET JP									
CUSTOMER ID: 910504583	HAGGEN INC CORPORATE OFFICE	02/03/99	99/99/99	108	405	029930	1	EACH	50.00	
1005785	BELLINGHAM SR5/255									
CUSTOMER ID: 910834525 1	TACO TIME	02/01/94	99/99/99	108	405	029930	1	EACH	50.00	
1405103	KIRKLAND									
CUSTOMER ID: 911006746	COUPEVILLE INN	02/01/92	99/99/99	108	405	029930	1	EACH	100.00	
1020009	COUPEVILLE									
CUSTOMER ID: 911069437	COUNTY DELI	02/01/93	99/99/99	108	405	029930	1	EACH	50.00	
1020028	COUPEVILLE SR20/21.8									
CUSTOMER ID: 911117022	BURGER KING #3627	02/01/92	99/99/99	108	405	029930	1	EACH	50.00	*** OPEN RECEIVABLES EXIST FOR CUSTOMER ***
1005080	EVERETT									
CUSTOMER ID: 911143532	MCDONALDS RESTAURANTS	02/21/96	99/99/99	108	405	029930	1	EACH	50.00	*** OPEN RECEIVABLES EXIST FOR CUSTOMER ***
1005698	FERDALE SR5/262									
CUSTOMER ID: 911255186	CENTURY MOTEL	02/01/92	99/99/99	108	405	029930	1	EACH	50.00	
1005077	KENT									
CUSTOMER ID: 911257518	COLLECTORS CHOICE RESTAURANT	02/01/92	99/99/99	108	405	029930	1	EACH	50.00	
1009003	SNOHOMISH									
CUSTOMER ID: 911261458	CABBAGE PATCH RESTAURANT & INN	02/01/92	99/99/99	108	405	029930	1	EACH	50.00	
1002114	SNOHOMISH									
CUSTOMER ID: 911261458 1	CABBAGE PATCH BED & BREAKFAST	02/01/92	99/99/99	108	405	029930	1	EACH	50.00	*** OPEN RECEIVABLES EXIST FOR CUSTOMER ***
1002115	SNOHOMISH									
CUSTOMER ID: 911324553	FAMILY PANCAKE HOUSE #6	02/01/93	99/99/99	108	405	029930	1	EACH	50.00	
1520031	REDMOND SR520/12.8									
CUSTOMER ID: 911337697	JENOS INC	02/01/94	99/99/99	108	405	029930	1	EACH	50.00	
1522018	MORROE									

**Motorist Information Signing
Customer Change Form**

Please indicate both old and new information for each change.

1. Delete customer from TRAINS:

Customer Name _____
Billing Name _____
Customer # _____ Permit # _____

Adjust the following RE/IN's for the above named customer/permit:

2. Billing Address Change:

Customer Name _____
Customer # _____ Permit # _____
Old Address _____
New Address _____

3. Business Name Change (Same Owner / Same Customer):

Customer # _____ Permit # _____
Old Business Name _____
CHANGE TO:
New Business Name _____
New Business Address _____

4. Business Sold (New Owner / New Customer):

Permit # _____
Old Customer # _____
Old Business Name _____
New Customer # _____
New Business Name _____
New Business Address _____

5. Permit Denials or Other Changes:

Authorized by _____ Date _____



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TTY: 1-800-833-6388
www.wsdot.wa.gov

Date

Inside Address

Re: Annual Maintenance Fees – Motorist Information Signs

CERTIFIED MAIL

Dear _____:

The Department of Transportation has not received your annual maintenance fees which were due _____.

Should you not make this payment within 15 days, we will assume that you no longer wish to participate in the Motorist Information Signing program. Then, 30 days after your receipt of this certified letter, we will remove your business signs.

If you have mailed the annual maintenance fee, please disregard this letter.

Sincerely,

Regional Traffic Engineer

cc: State Traffic Engineer



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Olympia, WA 98504-7300
360-705-7000
TTY: 1-800-833-6388
www.wsdot.wa.gov

Date

Inside Address

Re: MIS Signing

Dear _____:

The Department of Transportation periodically makes a field review of motorist information signing and ensures that each business is providing services for *(the required number of hours per day)*.

A recent review indicated that *(your business is not open for business 12 hours a day, seven days a week)*.

Item 7 of the Motorist Information Signing permit, which you signed, acknowledges that your permit may be revoked for failure to provide the services required by Section 468-70-050 of the Washington Administrative Code. Accordingly, we will require written assurance within 15 days that your facility will *(be open the required number of hours and days)*.

Should you choose not to respond, we will assume that you no longer wish to participate in the Motorist Information Signing program. Then, 30 days after receipt of this certified letter, we will revoke your permit and remove your business sign.

Your timely response to this matter is recommended. Should you have any questions, please contact _____ of my staff at _____.

Sincerely,

Regional Traffic Engineer

3.1 General

Delineation is the pavement markings, guideposts, and raised pavement markers used on and adjacent to the roadway to define vehicular travel paths. The MUTCD, *Design Manual*, and *Standard Plans* provide delineation placement guidelines.

The *Roadway Delineation Practices Handbook*, published by FHWA, discusses specialized materials and delineation treatments for unique applications and situations. This handbook does not establish policies or standards but is only a reference document.

3.2 Pavement Markings

Pavement markings are classified as either longitudinal or transverse. Materials typically used for each are paint for longitudinal markings and thermoplastics for transverse markings. Approved sources for thermoplastic materials are listed in the General Special Provisions. A purchase contract is available for the purchase of paint. Other durable materials are continually being evaluated.

- A. **Intersection Channelization.** The MUTCD has a provision that allows pavement markings to be extended through an intersection where design or visibility conditions make it desirable to provide control through the intersection. These markings are only installed as the result of a traffic engineering analysis that considers horizontal curvature and other visibility conditions. For statewide uniformity, the dotted line used for this extension is applied as a 2-foot stripe with a 4-foot gap between stripes.

Multilane approaches may provide exclusive or shared lanes for turning and through vehicles. At most intersections through traffic must share a lane with one direction of turning traffic. To minimize delay, through traffic should normally be combined with right-turning traffic unless opposite approach geometrics are unfavorable. An offset centerline and minor widening may help accomplish the proper lane assignments.

Stopbars are to be included at all signalized intersections with or without crosswalks. At nonsignalized intersections stopbars are necessary on the stop sign control approaches when crosswalks are not included. Including the stopbar at stop sign control locations having marked crosswalks is optional.

- B. **Interchange Off Ramps.** At either a parallel or a tapered deceleration lane, the MUTCD allows the application of an optional dotted extension of the main line right edge line through the ramp opening. The dotted line is a 2-foot stripe with a 4-foot gap.

For statewide uniformity, these optional dotted extensions should only be installed where the exit ramp is located on a horizontal curve, except for locations with continuous illumination, and at locations with prevalent foggy periods. They are generally not needed at ramps exiting from tangent sections. These markings are only to be installed as a result of a traffic engineering analysis.

- C. **Crosswalks.** Marked crosswalks serve to guide pedestrians in the proper paths. Crosswalks should only be marked at locations that are signalized (and have significant pedestrian volumes), where crossing guards are provided, or where pedestrian volumes meet the criteria for signal Warrant 3 in Section 4C-5 of the MUTCD.

Crosswalk markings should not be used at remote locations or where the speed limit exceeds 35 miles per hour unless protection is provided by a traffic signal or stop sign. Studies show that marked crosswalks have higher accident rates than unmarked crossings, thus crosswalks should not be considered safety devices.

Illumination of marked crosswalks is normally provided when pedestrian volumes meet the criteria in MUTCD Section 4C-5. When markings are requested by others and volumes do not meet those requirements, funding and power for crosswalk lighting is normally provided by the requestor.

- D. **No Passing Zone Marking.** No passing zones are to be established and marked on horizontal and vertical curves in accordance with the MUTCD.

State law, in the Rules of the Road RCW 46.61.100 – RCW 46.61.165, identifies several situations with a statutory no passing zone distance such as “. . . when approaching within 100 feet of or transversing any intersection or railroad crossing . . .” or “. . . the view is obstructed upon approaching within 100 feet of any bridge, viaduct, or tunnel” However, state law does not imply a need to mark no passing zones for such situations.

3.3 Guideposts

Guideposts, discussed in the MUTCD as delineators, are light retroreflecting devices mounted at the side of the roadway to indicate roadway alignment. They are effective aids for night, wet, or other reduced visibility driving conditions and are intended to guide rather than warn motorists.

Guidepost installation and spacing requirements are included in the *Standard Plans* and the *Design Manual*. The field spacing for guideposts shall be determined from Figure 3-1. Approved sources for guideposts as well as reflective materials are listed in the General Special Provisions.

3.4 Barrier Delineation

Barrier delineation is the extension of guideposts through an area of guardrail or concrete barrier. Spacing is the same as for guideposts.

Guardrail is delineated by mounting guideposts on guardrail posts as shown in the *Standard Plans*.

Concrete barrier is delineated by placing reflective devices on the face of the barrier about 6 inches down from the top. When concrete barrier is placed immediately adjacent to the traveled lane, such as in construction zones, delineator spacing should be a maximum of 40 feet on tangents and 20 feet through curves.

3.5 Chevron Alignment Signs

Although the Chevron Alignment Sign is intended to provide additional emphasis and guidance for drivers through horizontal curves in the roadway, this sign is not a delineator. See the MUTCD and the warning sign section of this manual for use.

3.6 Raised Pavement Markers

As described in the *Design Manual*, raised pavement markers are extensively used in western Washington to simulate lane lines and to supplement painted pavement markings.

Maintenance of raised pavement markers is discussed in the *Maintenance Manual*.

- A. **Right Edge Lines.** The general use of raised reflective pavement markers to supplement, or in lieu of, right edge lines is strongly discouraged. At night, such markers can be easily mistaken for lane lines.

The State Traffic Engineer has approved the use of reflective markers to supplement right edge lines in these locations:

- On the taper in lane reduction sections, such as from four lane to two lane.
- Through sections with reduced lane width, such as narrow structures.
- At the gore of exit ramps.

- B. **Recessed Markers.** Recessed reflective markers and recessed lane lines appear to be an effective way to provide additional centerline and lane line delineation in areas requiring extensive snow plowing.

The details for installation of the recessed marker are contained in the *Standard Plans*.

Recessed markers and recessed lane lines are expensive and data is still being collected to determine effectiveness and expected life. As a result, the criteria for application and installation are still subject to change and the State Traffic Engineer's office should be contacted when recessed markers or recessed lane lines are being considered.

With prior approval of the State Traffic Engineer, recessed markers may also be installed on bridges. Currently several alternative methods are being considered for this application to minimize the impact on bridge decks.

3.7 Impact Attenuator Marking

The end of impact attenuators adjacent to the roadway and facing traffic are to be marked with a modified type 3 object marker. The design and use of the marker shall be the same as the MUTCD type 3 marker except that the attenuator marker shall be square. Attenuators in gore areas or where traffic may pass on either side shall have the stripes in a chevron pattern sloping down from the center of the marker. These designs are provided in the *Sign Fabrication Manual*.

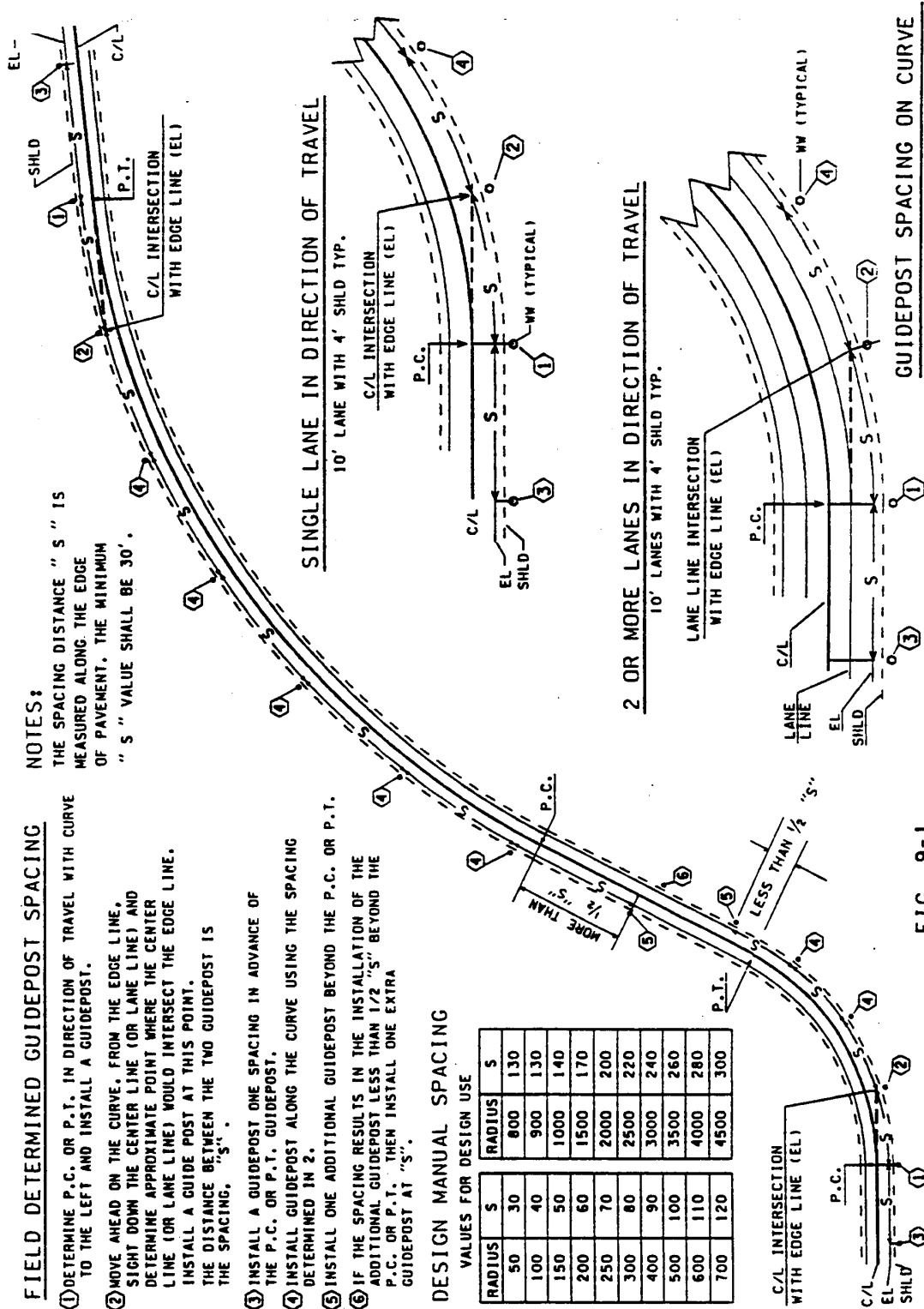


Figure 3-1

FIG. 9-1

4.1 MUTCD

The MUTCD, Section IV, discusses the types of signals and their application, and provides warrants and other guidelines used to justify signal installations.

4.2 *Design Manual*

Design Manual Section 335 provides the guidelines for signal installations with regard to state laws, department policies, permit approval procedures, design report requirements, preliminary signal plans, phase analysis (level of service/optimum cycle calculations), detection systems, pedestrian considerations, signal supports, and contract plan preparation.

Special attention should be given to signal permit applications submitted by local agencies or developers. The permit application should be submitted to the State Traffic Engineer at least two months prior to the time the approved permit is desired. The request can then be processed for approval in a timely manner.

See Chapter 6, Traffic Regulations, for the information required as support data which must accompany permit applications.

4.3 Flashing Operation

Occasionally traffic signals have been, or are, installed primarily to reduce intersection delay during the morning, noon, and evening peak hours. These signals may not be warranted during off-peak hours. At locations having fixed time signals, flashing operations may be considered for nonpeak hours where there is significantly larger traffic volumes on the major approaches than the minor approaches (i.e., intersections meeting primarily warrant No. 2).

If off-peak flashing operations are implemented, follow-up accident studies should be conducted.

4.4 Intersection Control Beacons

The MUTCD states that intersection control beacons are intended for use at intersections where traffic or physical conditions do not justify conventional traffic signals but where accident rates above the statewide average for like locations indicate a special hazard.

The most common application for these beacons is at intersections with minor approach stop control where some approaching vehicles on the controlled legs have failed to stop.

An intersection control beacon should be considered for a problem location only after other remedial measures have been tried and determined to be ineffective based on traffic engineering studies.

Twelve-inch lenses on the intersection control beacon may be desirable to enhance visibility at some locations.

4.5 Audio-Tone Signal Application

Pedestrian crosswalk signals with audio-tone application for the visually handicapped are available, although fairly new on the market. The audio-tone, if installed, should be activated from a push button control mounted on the signal post. This will provide audio-tone only when needed.

4.6 Illumination

A. **General.** Transportation facility illumination enhances visual perception of conditions or features that require additional driver or pedestrian alertness. This is accomplished through the use of materials and techniques that result in optimum energy efficient illumination designs.

B. References

Roadway Lighting Handbook, USDOT, Washington, D.C., December 1978.

AASHTO Pamphlet, *An Informational Guide for Roadway Lighting*.

WSDOT Directive D 22-21 “Truck Weigh Stations and Vehicle Inspection Facilities on State Highways.”

National Electrical Code.

RCW 47.24.020.

Washington Administrative Code 468-18-040.

C. Definitions – Area Designations

Commercial Area. A district of continuous adjacent retail businesses at least 1,000 feet in length, with lighted store fronts, parking lots, etc.

Intermediate Area. A partially built-up area consisting of approximately 50 percent adjacent land use for retail businesses at least 600 feet in length, with lighted store fronts, parking lots, etc.

Residential Area. An area of continuous residences with occasional businesses where the local street grid has a continuous illumination system.

Rural Area. Areas not defined as commercial, intermediate, or residential.

Ballast. An electrical device which provides the necessary voltage, current, and wave form to start and operate an electrical discharge lamp.

Basic Illumination. The minimal amount of illumination to be provided at certain transportation facilities.

Basic Interchange Illumination. The minimum amount of illumination at interchanges which consists of two luminaires on each single or double-lane on ramp, two luminaires on each single-lane off ramp, three luminaires on each double-lane off ramp, and one luminaire at each ramp-crossroad intersection.

Candela. A unit of luminous intensity equal to one lumen per steradian.

Candlepower. Luminous intensity expressed in candelas.

Contrast Ratio (CR):

Brightness. The ratio between the photometric brightness, measured in foot lamberts, of any two relatively large areas in the field of view.

Light. The ratio between the maximum and minimum light levels of the design zone.

Coefficient of Utilization (CU). The percentage of the total light output that actually falls on the area to be illuminated.

Dirt Factor (DF). A factor used in illumination calculations to relate the initial illumination provided by a clean, new luminaire to the reduced illumination caused by dirt accumulation on the luminaire components. A dirt factor of 85 percent is normally used.

Footcandle (fc). The unit of illumination used when the foot is the unit of length; the illumination of a surface one square foot in area on which is uniformly distributed a flux of one lumen. A footcandle equals one lumen per square foot.

Design footcandles (Dfc). The average light level on the roadway at the end of rated life.

Initial footcandles (Ifc). The average light level on the roadway after the first 200 hours of operation.

Foot Lambert. A unit of luminance equal to 1/3.14 candela per square foot or to the uniform luminance of a perfectly diffusing surface emitting or reflecting light at the rate of one lumen per square foot.

Glare. The effect of brightness or brightness differences within the visual field sufficiently high to cause annoyance, discomfort, or loss of visual performance.

Hours of Darkness. The time from sunset to sunrise, inclusive of summer and winter conditions.

IES Distribution. Light patterns for luminaires consistent with the Illumination Engineering Society standards for various patterns and distributions.

Isolux Diagram. A graphical representation of points of equal illumination connected by a continuous line. These diagrams usually show footcandle values on a horizontal plane from a single unit having a definite mounting height.

Lamp Lumens (LL). The total light output from a lamp for the position in which the lamp is maintained. LL for a standard luminaire is 37,000 lumens.

Lamp Lumen Depreciation Factor (LF). The factor used in illumination calculations to relate initial rated output to the anticipated output at replacement time. This factor is 0.73 for high pressure sodium sources. Consult manufacturer's data for other sources.

Light. Radiant energy capable of producing a visual sensation.

Light Standard. A support provided with necessary attachments for wiring and luminaire mounting. See Standard Plan J-1.

Lumen. A unit of luminous flux; equal to the flux emitted through a unit solid angle (one steradian) from a uniform point light source of one candela.

Luminance. In roadway lighting luminance is the reflected light from the pavement surface that is visible to the motorist's eye.

Luminaire. The complete lighting unit inclusive of the lamp or light source; the optical system for the control of the light distribution; and the ballast for electrical regulation. The standard luminaire is a cobra head fixture with a Type III medium cutoff distribution, a 310 watt lamp and a flat glass refractor. Decorative cutoff fixtures may be considered for parking area applications.

Maintenance Factor (MF). The percentage of light degeneration through the life of the lamp equal to the product of the lamp lumen depreciation factor (LF) times the dirt factor (DF). The LF for high pressure sodium lamps is 62 percent.

Major Parking Lot. Major parking lots for park and ride, carpool, and ferry terminal facilities are those with nighttime usage exceeding 50 vehicles during the nighttime peak hour.

Mounting Height (MH). The vertical distance between the surface to be illuminated and the center of the light source of the luminaire. Standard mounting height is 40 feet. When nonstandard luminaires are approved, the mounting heights noted in Figure 4-5 are recommended.

Mounting Height Factor (MHF). A factor used in illumination uniformity calculations to correct light values when a different mounting height than the one on the isolux curve is used.

Nighttime. The period of time from one-half hour after sunset to one-half hour before sunrise and any other time when persons or objects may not be clearly discernible at a distance of 500 feet (RCW 46.04.200 Hours of Darkness).

Photometrics. The isolux diagram and coefficient of utilization plot for a particular luminaire and light source.

Spacing (S). The distance in feet measured on centerline between adjacent luminaires. Spacing (S) is equal to the lamp lumens (LL) times the coefficient of utilization (CU) times the maintenance factor (MF) divided by the width (W) and the design footcandle value (Dfc).

Security Lighting. The techniques of providing low level lighting for public safety or theft reduction. Security lighting is not subject to any lighting uniformity requirements.

Uniformity Ratio (UR). The ratio of the average light level on a section to the weak point light level of the same section for those applications when uniformity rates applies. The minimum uniformity rates are 4:1 approaching 1:1. Uniformity ratio requirements do not apply to security or single source applications.

Walkway. The connection between two areas over which the user is required to travel in order to utilize available services. Typical examples are as follows:

- Walkways between parking areas and rest room buildings at rest areas.
- Walkways between drop-off or pick-up points and bus loading areas at flyer stops.
- Walkways between parking areas and bus loading areas.

For the purpose of this section bicycle trails, walking trails, pet trails, etc., are not considered walkways.

Weak Point Light (WPL). The lowest light level within the area being illuminated. The minimum WPL is 0.2 footcandles for applications where uniformity criteria applies.

Width of the Area to Be Illuminated. This measurement is from edge of traveled way to edge of traveled way for highway lighting applications.

D. Approval Requirements

1. **General.** WSDOT is responsible for illumination on state highways with access control regardless of location and for illumination of highways without access control located outside of the corporate limits of any city. Cities are responsible for illumination of state highways without access control located within their corporate limits. In cities with a population under 22,500 where the state is responsible for signalization, the state may assume responsibility for illumination installed on signal standards in the interest of reducing intersection clutter.

When the State Traffic Engineer's approval is required, it will be obtained through the design deviation approval process. See *Design Manual* Chapter 330.

2. **Basic Illumination.** Basic illumination is required at the following facilities:
 - Freeway ramp gore areas.
 - Ramp terminals.
 - Channelized intersections.
 - Signalized intersections.
 - Railroad crossings with gates or signals provided there is nighttime train traffic.
 - Loading areas at flyer stops.
 - Major parking lots.
 - Rest areas.
 - Scale platforms at weigh stations.

Any proposal that provides less than or more than basic illumination at these facilities requires approval of the State Traffic Engineer. Basic illumination applications are shown on Figures 4-1, 4-2, and 4-3.

3. **Illumination Beyond Basic Levels.** Illumination at the locations listed below is divided into two categories depending on whether approval by the State Traffic Engineer is required.

Approval by the State Traffic Engineer is required for illuminating the following facilities:

- All highways with or without access control.
- Unsignalized or unchannelized intersections.
- Tunnels, underpasses, and lids.
- Bridges.

Illumination of the following facilities will not require the State Traffic Engineer's approval.

- Construction zones.
 - Detours.
 - Railroad crossings without gates or signals.
 - Walkways.
 - Bicycle trails.
 - Minor parking lots.
 - Pavement transitions, including drop lanes.
4. **Nonstandard Features.** Approval by the State Traffic Engineer is required for any proposal that incorporates lighting equipment or features other than those identified as standard in the *Traffic Manual*.

E. Warrants

1. **General.** Proposals to install additional lighting at basic illumination locations and to illuminate other locations requires satisfying the warranting conditions listed below. When volumes are used to determine the level of service, the counts should be taken during the nighttime peak hour.

Peaking characteristics in urban areas are related to clock time. Traffic counts taken during daylight hours after 4:30 p.m. and before 7:30 a.m. may be used to satisfy nighttime volume warrants providing seasonal adjustment factors have been applied to demonstrate warrant satisfaction for the applicable portions of the months of November, December, and January.

When accidents are used to warrant illumination, the ratio of nighttime to daytime accidents should be at least 1.5 times higher than the average for similar locations, and a study should indicate that illumination will result in a reduction in nighttime accidents. When comparing similar locations, volumes, speed, land use, and access control should be similar.

2. **Highways With Access Control.** All roadways within the limits of access control are covered in this category and include mainline, ramps, and crossroads.
- a. **Mainline.** Illumination is warranted when the nighttime peak hour level of service is D or below and any two of the following conditions occur:
- Three or more successive interchanges are located within an average spacing of 1½ miles or less.

- The segment is in an urban area.
 - The nighttime accident warrant is satisfied.
- b. **Ramps.** Illumination is warranted when any of the following conditions occur:
- Nighttime peak hour level of service is D or worse.
 - Complex ramp alignment and grade.
 - There are routine queues of five or more vehicles per lane during darkness due to traffic control features at the ramp terminal.
 - The exit advisory speed is more than 20 mph below the posted mainline speed.
 - The nighttime accident warrant is satisfied.
- c. **Crossroads.** Illumination is warranted if any of the following conditions occur:
- Nighttime peak hour level of service is D or below.
 - The nighttime accident warrant is satisfied.
3. **Highways Without Access Control.** Illumination is warranted if the segment is classified as commercial and the nighttime level of service is D or the nighttime accident warrant is satisfied.
4. **Intersections.** Illumination of unsignalized and unchannelized intersections is warranted if channelization warrants are satisfied or the nighttime accident warrant is satisfied.
5. **Tunnels, Underpasses, and Lids.** Daytime illumination is warranted if portal conditions result in a condition where brightness reduction is greater than 15 times and the length to vertical clearance ratio is ten to one or greater.
6. **Construction Zones.** Illumination may be warranted if construction activities take place on the roadway at night.
7. **Detours.** Illumination is warranted if detour alignment and grade are unusual or result in unexpected maneuvers.
8. **Minor Parking Lots.** Security lighting is warranted if vandalism or security problems have developed or are anticipated.
9. **Bridges.** Warrants for illuminating bridges are the same as those for highways with or without access control, whichever is applicable.

10. **Railroad Crossing Without Gates or Signals.** Illumination of these facilities is warranted if there are potential nighttime accidents. The extent of nighttime train activity should be taken into consideration. Also, if there is the probability that railroad cars may be stopped on the crossing during the nighttime, lighting should be considered.
11. **Walkways and Trails.** Security lighting is warranted if security problems have developed or are anticipated.

F. **Design Report.** The design report shall note the following:

- The facilities where basic illumination is proposed.
- Justification for any proposal to install less than or more than the lighting required for basic illumination.
- Justification for any proposal to install illumination at other highway facilities.
- The status of existing illumination before, during, and after construction.

G. **Design Criteria**

1. **Roadway Light Levels.** Design light levels are indicated in Figure 4-4. These levels are the minimum average levels to be provided on the roadway at end of rated lamp life for applications requiring a spacing calculation. Light level requirements do not apply to single source or security level installations.

When illumination is proposed for a roadway with a radius of 450 feet or less, it may be necessary to reduce spacing, thereby increasing the average light level in order to achieve uniformity ratio requirements.

Light levels at railroad crossing shall be consistent with the area classification and highway functional classification.

2. **Nonhighway Light Levels.** Average, maintained end-of-rated-life light levels for various types of nonhighway facilities are indicated in Figure 4-4.

Security light levels are defined as follows:

- **Park and Ride Lots, Ferry Terminal Parking Lots.** Approximately one-fourth of the luminaires required for full illumination are left on.
- **Rest Area Parking Areas.** Typically two luminaires per parking area.
- **Walkways.** Luminaires provided at angle points and shadow areas.
- **Bus Loading Zone.** One luminaire in the immediate vicinity of the loading zone.
- **Weight Stations.** One luminaire at the public telephone, if any.

3. Light Levels for Special Applications

- a. Short tunnels and underpasses with length to vertical clearance ratios of 10:1 or less will normally not require daytime illumination. Short tunnels with length to vertical clearance ratios greater than 10:1 will be treated the same as an entrance zone on a long tunnel to establish daytime light levels. Nighttime light levels in short tunnels on continuously illuminated roadways should be approximately two times, but not exceeding three times, the light level required on the roadway outside the tunnel. Nighttime light levels in short tunnels on noncontinuously illuminated roadways should be consistent with Figure 4-4.
- b. Long tunnels have a portal to portal length greater than the wet pavement stopping sight distance. Long tunnels are divided into zones for the determination of daytime light levels. Each zone is equal in length to the wet pavement stopping sight distance. The entrance zone beginning point is usually taken to be a point outside the portal where the motorist's view is confined to the predominance of the darkened tunnel structure.

The entrance zone light level is dependent upon the brightness of the features within the motorist's view on the portal approach. The brightness level is defined as the average brightness measured over a 20 degree cone at a point 500 feet in advance of the portal. The entrance zone light level produced within the tunnel must be sufficient to provide a brightness level of approximately $1/15$ of the measured portal brightness, after adjustment for the reflectivity of the roadway, walls, and ceiling.

Successive zones should have a daytime light level of $1/15$ of the previous zone light level until a minimum value of 5 foot candles is achieved.

Requirements for nighttime light levels for long tunnels are the same as those noted for short tunnels.

4. **Control Requirements.** The control requirements for various types of illumination systems will vary with the application as follows:
 - a. **Continuous Nighttime Operation.** Controls for continuous nighttime operation will normally consist of a photocell for sunset turn-on and sunrise turn-off. The following types of applications will have controls for continuous nighttime operations.
 - All basic interchange illumination on access controlled highways.
 - All illumination in excess of basic levels that was installed by special condition warrant on access controlled highways.

- Illumination at intersections.
 - Illumination at railroad crossings.
 - Security lighting at bus loading zones at park and ride lots, and at flyer stops.
 - Security lighting in parking areas at park and ride lots, ferry terminals, and pool-it lots.
 - Illumination for walkways at park and ride lots, flyer stops, ferry terminals, and rest areas.
 - Illumination for parking areas and conflict points at rest areas.
 - Detour illumination.
 - Construction illumination.
 - Illumination installed on nonaccess controlled highways by accident warrant.
 - The single luminaire in the vicinity of the public telephone at truck weigh stations.
- b. **Continuous Nighttime Operation With Reduction Capability.** Controls for these applications will normally consist of a photocell control for sunset turn-on and sunrise turn-off along with another mechanism capable of providing independent nighttime turn-off and turn-on. This mechanism will override photocell control only during periods of energy crisis. The following applications will require this type of control:
- Illumination in excess of basic levels on access controlled highways.
 - Illumination in excess of basic levels installed on ramp segments because of nighttime backups that routinely occur due to ramp terminal intersection control.
- c. **Noncontinuous Nighttime Operations.** Controls for these applications will normally consist of a photocell control for sunset turn-on and sunrise turn-off along with another mechanism capable of providing independent nighttime turn-on and turn-off. This mechanism will override photocell control on a regular basis, during periods of low use. If requested by the WSP, manual switching may be provided inside scale houses at truck weigh stations. The following applications will require this type of control:
- Illumination in excess of security levels in parking areas at park and ride lots, ferry terminals, and pool-it lots.

- Illumination in excess of security levels at bus loading areas at park and ride lots and flyer stops.
 - Illumination in excess of security levels at truck weigh stations.
- d. **Special Applications.** Some special applications, such as tunnels with daytime lighting, will require special controls. Circuits for fixtures providing nighttime light levels will be energized continuously throughout the day. Minimum daytime light levels, entrance zone light levels, and any subsequent zone light levels will be accomplished with fixtures in addition to continuously burning nighttime light level fixtures. In most cases, fixtures providing light levels in addition to minimum daytime light levels will be provided with controls so that reduced light levels can be achieved during periods when the portal brightness is less than the design value.

5. Wiring Design

- a. **Line Loss.** Line loss is the voltage drop between the electrical service and the electrical load. Line loss usually controls wire size determination rather than the allowable ampacities listed in Chapter 3 of the National Electric Code. For design purposes, allowable line loss is assumed to be a function of the stage of plan development and the ballast characteristics of the luminaire being utilized. See Figure 4-6 for allowable line loss and lamp load factor requirements.

Loads shall be determined by dividing the lamp wattage by the voltage and then multiplying by the appropriate lamp load factor.

Construction illumination circuits and other temporary circuits that are both installed and removed on the same contract may be designed for 10 percent line loss.

- b. **Voltages.** Illumination systems should operate on 240 or 480 volts, single phase.
- c. **Wire Size.** The minimum wire used by any illumination circuit is No. 8, except for the No. 10 pole and bracket cable included within the light standard. The ampacity of the wire, exclusive of pole and bracket cable which is protected by fusing, shall equal or exceed the branch breaker rating.
- d. **Wire Type.** With the exception of temporary aerial installations where aluminum conductors are allowed, all wiring from the service on shall be copper.

6. **Conduit.** Conduits carrying illumination circuits are to be sized to provide 26 percent fill, maximum, with 1¼-inch minimum size under all roadways and 1-inch minimum size at other locations.
7. **Luminaire Support Locations.** Luminaire supports will normally be located 16 feet from the edge of the traveled lane pavement on the right of the roadway with respect to the driving direction.
8. **Base Types.** Luminaire supports are installed with either fixed base or slip base. The pole schedule in the plans should indicate the required base type. Fixed bases are installed at locations where it is either unwarranted or undesirable to install a slip base. Locations where fixed bases are normally installed are:
 - Parking areas.
 - Where the support location is outside the clear zone.
 - Median lighting applications where the luminaire support is mounted on cast-in-place median barrier.
 - Behind traffic barrier provided the traffic barrier is warranted for reasons other than the luminaire support installation.

Fixed based may be considered for roadways with speeds under 30 mph with considerable adjacent pedestrian activity.

9. **Overcurrent Devices.** Branch breakers are to be sized to carry 140 percent minimum of the computed illumination load. Loads should be computed in accordance with the lamp load factors noted in Figure 4-6.

Main breakers are to be sized to carry 140 percent minimum of the computed illumination load in addition to 125 percent minimum of all other loads on the service. The minimum size main breaker shall be 60 AMP.

Lighting contactors are used to switch the lighting circuits. Lighting contactors shall be rated to equal or exceed the branch breaker rating for the circuit it switches. Lighting contactors are available in 30, 60, and 100 AMP ratings.

H. Example Applications

1. **Spacing and Uniformity Ratio Calculation.** Determine the spacing and uniformity ratio for the intersection in Figure 4-7. Channelization is painted, highway class is other, and area classification is intermediate. Utilize standard luminaires, standard mounting height and standard base location.

Design values are:

- Approach Design Footcandles (Dfc) = 0.8 fc, Figures 4-3 and 4-4.
- Intersection Design Footcandles (Dfc) = 1.5 x 0.8 fc = 1.2 fc, Figure 4-4.
- Uniformity Ratio (UR) = 4:1.
- Weak Point Light (WPL) = 0.2 fc.
- Mounting Height (MH) = 40 feet.
- Luminaire = 310 watt high pressure sodium.
- Dirt Factor (DF) = 0.85.
- Lamp Lumen Depreciation Factor (LF) = 0.73.
- Maintenance Factor (MF) = DC x LF = 0.85 x 0.73 = 0.62.
- Roadway Width (W) = 39 feet, Figure 4-7.
- Initial Lamp Lumens (LL) = 37,000 lumen.

The formula for spacing is:

$$S = \frac{LL \times CU \times MF}{Dfc \times W}$$

- S = Spacing
- LL = Initial Lamp Lumens
- CU = Coefficient of Utilization
- MF = Maintenance Factor
- Dfc = Design Footcandles
- W = Roadway Width

The CU is determined from the utilization curve on Figure 4-8. The ratio of transverse width (TW) to mounting height (MH) is 39/40 or 0.97. From Figure 4-8 the CU is 0.26.

Spacing for the intersection can now be calculated.

$$S = \frac{37,000 \times 0.26 \times 0.62}{1.2 \times 39} = 127 \text{ feet}$$

Round odd spacing down to the nearest 10 foot increment, therefore, S = 120 feet. Reducing spacing increases Dfc. The adjusted Dfc is:

$$Dfc = 1.2 \times \frac{127}{120} = 1.27 \text{ fc}$$

Check uniformity at mid spacing in center of the roadway.

$$UR = \frac{Dfc}{WPL}$$

The weak point light is determined by entering the isocandle curves on Figure 4-8.

The ratio of transverse distance to mounting height at midpoint is $39/(2 \times 40) = 0.48$. The ratio of longitudinal distance to mounting height is $120/(2 \times 40) = 1.5$. From Figure 4-8 a value of 0.035 is determined. This value must be doubled since two luminaires are contributing light on the point. The value must also be adjusted for the lumen output of the lamp, the lamp maintenance (MF) and for mounting height correction (MHF).

$$\text{WPL} = \text{chart value} \times 2 \times \frac{37,000 \times \text{MF} \times \text{MHF}}{1,000}$$

The mounting height correction factor (MHF) is 0.56 from Figure 4-8.

$$\text{WPL} = 0.035 \times 2 \times 37 \times 0.62 \times 0.56 = 0.9 \text{ fc}$$

$$\text{UR} = \frac{\text{Dfc}}{\text{WPL}} = \frac{1.27}{0.9 \text{ fc}} = 1.4:1 \text{ OK}$$

Light standard A can now be located as indicated on Figure 4-7.

Check to see if 0.2 fc is provided at the left turn lane full width point.

$$135 \text{ ft}/40 \text{ ft} = 3.37 \text{ MH}$$

Entering Figure 4-8 a chart value of 0.008fc is determined.

$$\text{WPL} = 0.008 \times 37 \times 0.62 \times 0.56 = 0.10 \text{ fc}$$

Since 0.10 fc is less than 0.20 fc, additional light standards will be required to illuminate the approach. A new calculation is required since the design light level on the approach is 0.8 fc versus 1.2 fc for the intersection.

$$X = \frac{37,000 \times 0.26 \times 0.62}{39 \times 0.8} = 191 \text{ feet}$$

Round to 190 feet and adjust Dfc

$$\text{Dfc} = 0.8 \frac{191}{190} = 0.80 \text{ fc}$$

Check WPL at half spacing in the center of the roadway.

Entering Figure 4-8 at 190 (2 x 40) or 2.37 longitudinal and $39 / (2 \times 40)$ or 0.48 transverse yields a chart value of 0.017.

$$\text{WPL} = 0.017 \times 2 \times 37 \times 0.62 \times 0.56 \text{ or } 0.44 \text{ fc.}$$

$$\text{UR} = \frac{0.80}{0.44} = 1.8:1$$

Locate luminaires C & D at 190 feet spacing.

2. **Line Loss Calculation.** Determine the wiring requirements for the circuit in Figure 4-9. The wiring is installed in conduit and conductors are copper. Ultimate loads are known. Service voltage is 240. Luminaires are 310 watt high-pressure sodium vapor. From Figure 4-6 the lamp load factor is 1.2 and the maximum allowable line loss is 8 percent.

The load at each luminaire is:

$$\frac{310 \text{ watts}}{240 \text{ volts}} \times 1.2 = 1.55 \text{ amps}$$

The maximum voltage drop is:

$$240 \text{ volts} \times 0.08 = 19.2 \text{ volts}$$

Line loss is computed in ampere-feet and is the current in the circuit times the distance to the load. Typically the circuit segments with the greatest length and load will control. On this basis the line loss table in Figure 4-11 can be computed. The circuit segment from Luminaire 1 to the service has the highest line loss.

First check No. 8 wiring. From Figure 4-12, the line loss is:

	10,000	amp-ft	=	15.0 volts
	4,000	amp-ft	=	6.0 volts
	800	amp-ft	=	1.2 volts
Total	14,800	amp-ft	=	22.2 volts > 19.2 volts. Not good.

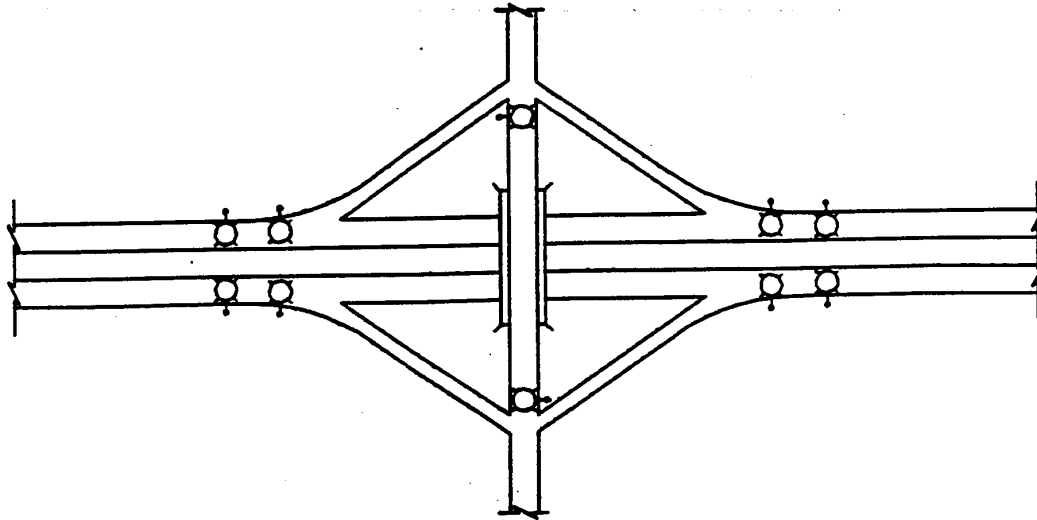
Try changing the wiring from the service to Luminaire 5 to No. 6 wire with the remainder No. 8 wire.

Service to 5 (10,850 amp-ft) No. 6				
	10,000	amp-ft	=	9.7 volts
	900	amp-ft	=	0.9 volts
Total	10,900	amp-ft	=	10.6 volts
5 to 1	(14,800 - 10,900		=	3,900 amp-ft) No. 8
	3,000	amp-ft	=	4.5 volts
	900	amp-ft	=	1.4 volts
Total	3,900	amp-ft	=	5.9 volts

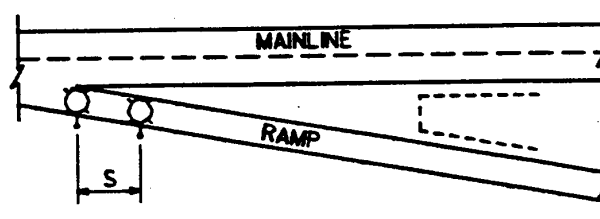
The line loss to Luminaire 1 is:

$$10.6 + 5.9 = 16.5 \text{ volts which is less than 19.2 volts maximum allowed.}$$

Final wire sizes are shown in Figure 4-10.



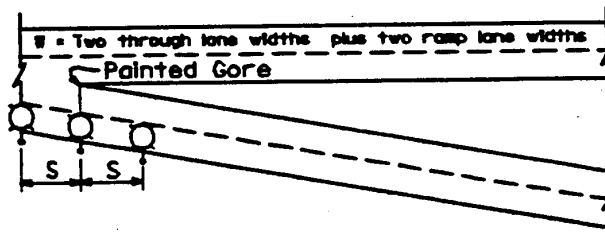
TYPICAL DIAMOND INTERCHANGE PARTIAL ILLUMINATION
 (Shown for single lane off connections and two lane crossroad without channelization)



LEGEND

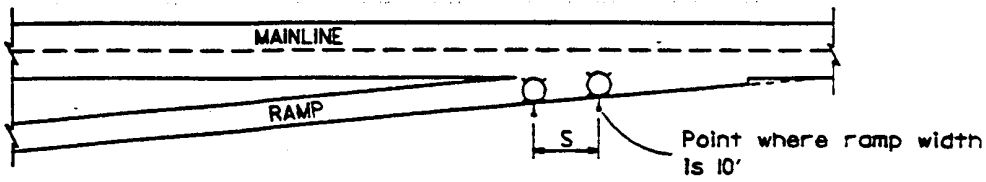
- Standard luminaire and lighting standard
- S=220' for off ramps

SINGLE LANE OFF CONNECTION
 (Standards can be shifted up to 100' downstream from gore point)

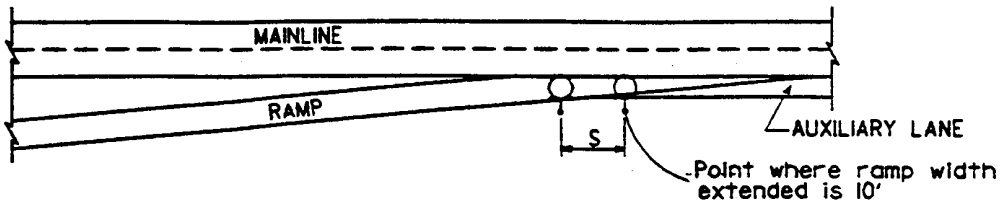


DOUBLE LANE OFF CONNECTION
 (Basic applications)

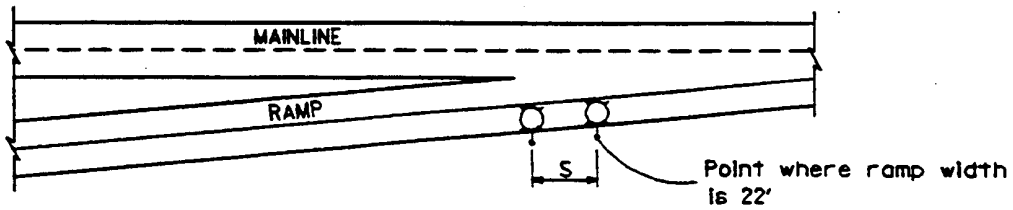
Figure 4-1



STANDARD ON CONNECTIONS



AUXILIARY LANE STARTING AT ON CONNECTION
(Required only if a significant weaving problem exists)

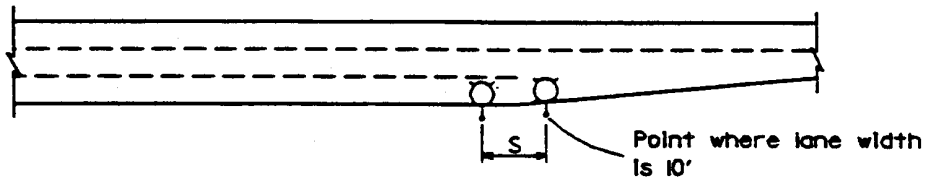


DOUBLE LANE ON CONNECTION

LEGEND

⊙ Standard luminaire and lighting standard

S-240' for on ramps



DROP LANE
(Basic illumination applications)

Figure 4-2

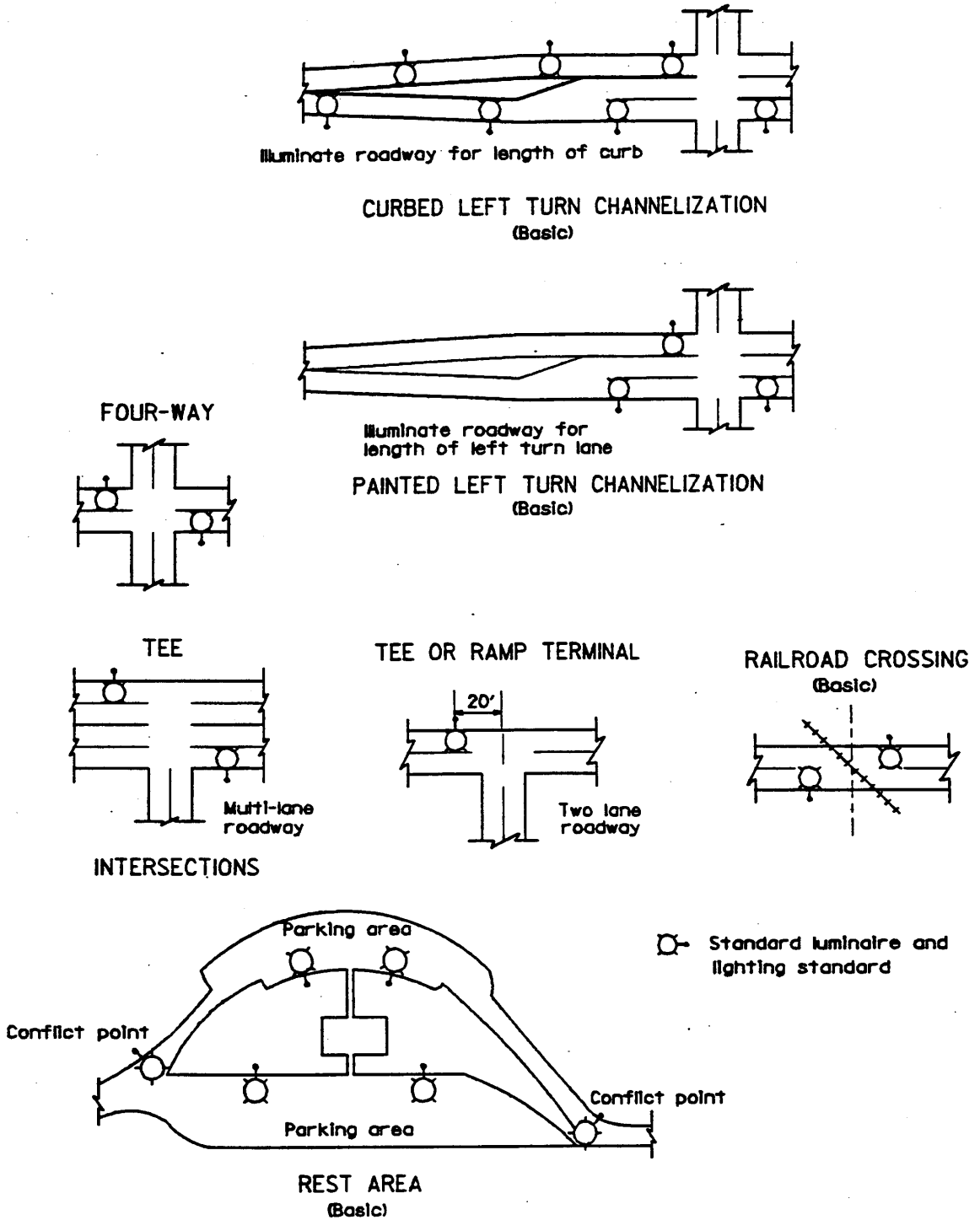


Figure 4-3

Average Maintained Horizontal Illumination Levels (Foot Candles)				
Highway Applications				
Highway Class	Area Classification			
	Commercial	Intermediate	Residential	Rural
Full Access Cont. – Divided	0.6*	0.6*	0.6*	0.6*
Arterials	1.6	1.2	0.8*	0.6*
Other	1.0	0.8*	0.6*	0.6*
Construction Lanes and Detours	1.0	1.0	1.0	1.0
Non-Highway Applications				
	Parking Areas	Bus Loading Areas	Walkways	Weight Scales
Park & Ride Lots	0.8	2.0	0.8	N.A.
Flyer Stops	N.A.	2.0	0.8	N.A.
Ferry Terminals	0.8	2.0	0.8	N.A.
Rest Areas	2 Luminaires	N.A.	Security Level	N.A.
Pool-It Lots	0.8	N.A.	N.A.	N.A.
Weigh Stations	None	N.A.	N.A.	2 Luminaires

*Increase light level by 50 percent at intersections where more than one light standard is installed.

Figure 4-4

High Pressue Sodium	
Wattage	Mounting Height (Ft)
70	20
100	25
200	30
250	35
310	40
400	50
1000	100

Recommended Mounting Heights

Figure 4-5

Lamp	Lamp Load Factor	Maximum Line Loss	
		Ultimate Loads Known	Ultimate Loads Unknown
High Pressure Sodium	1.2	8%	5%
Metal Halide	1.2	8%	5%
Mercury Vapor	1.1	10%	5%

Line Loss and Lamp Load Factor Requirements

Figure 4-6

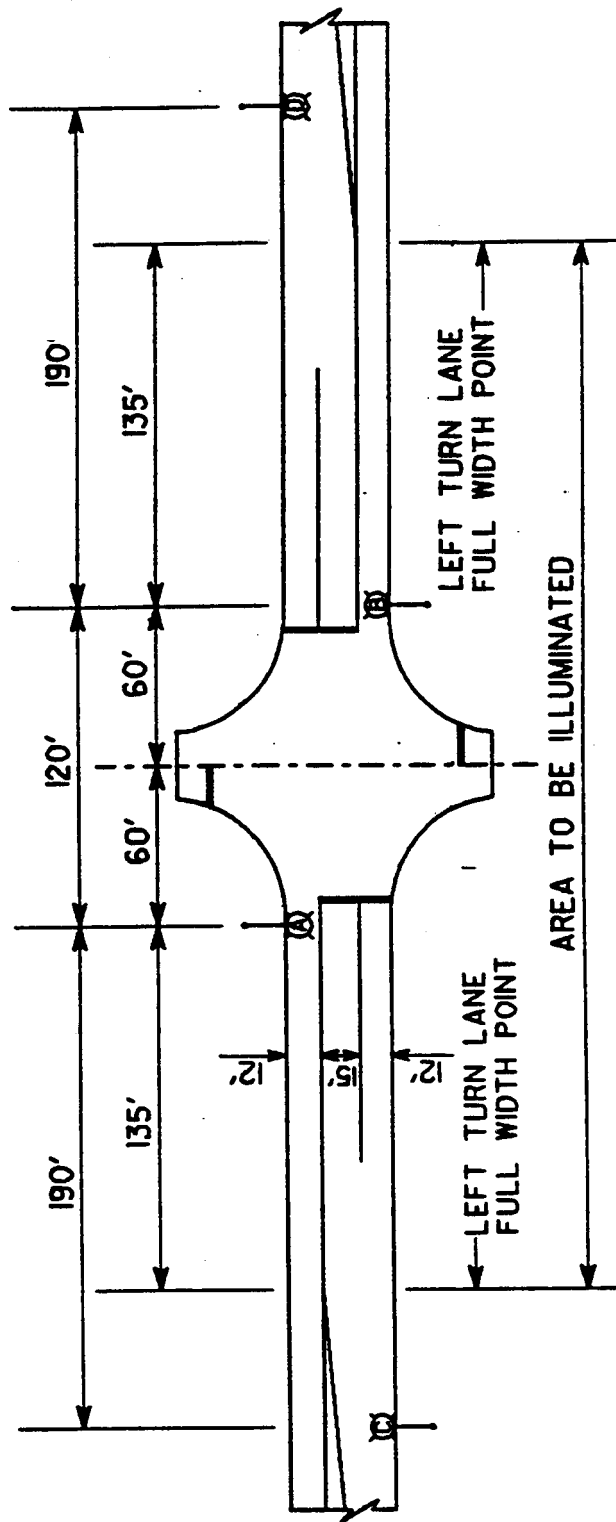


Figure 4-7

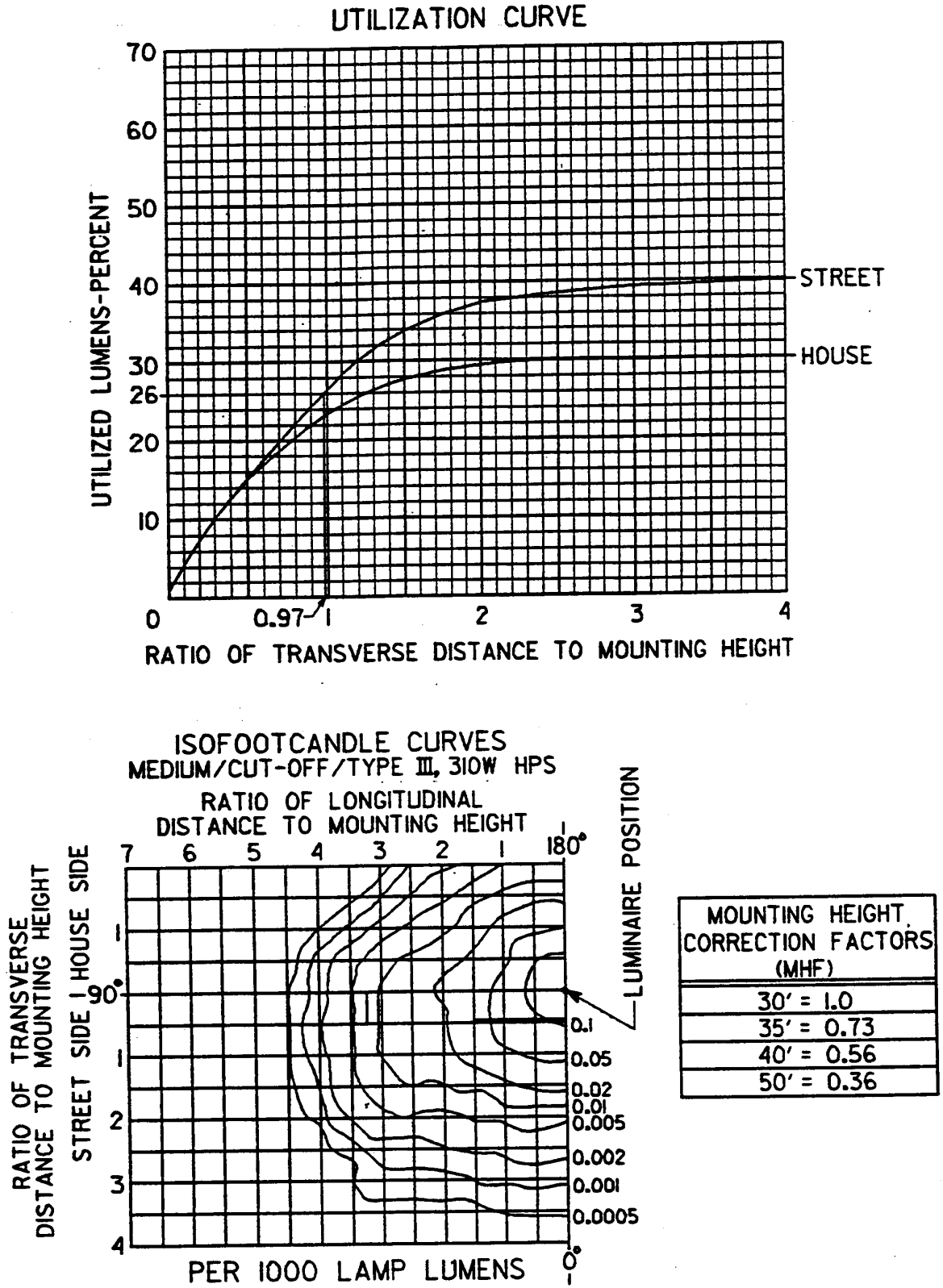


Figure 4-8

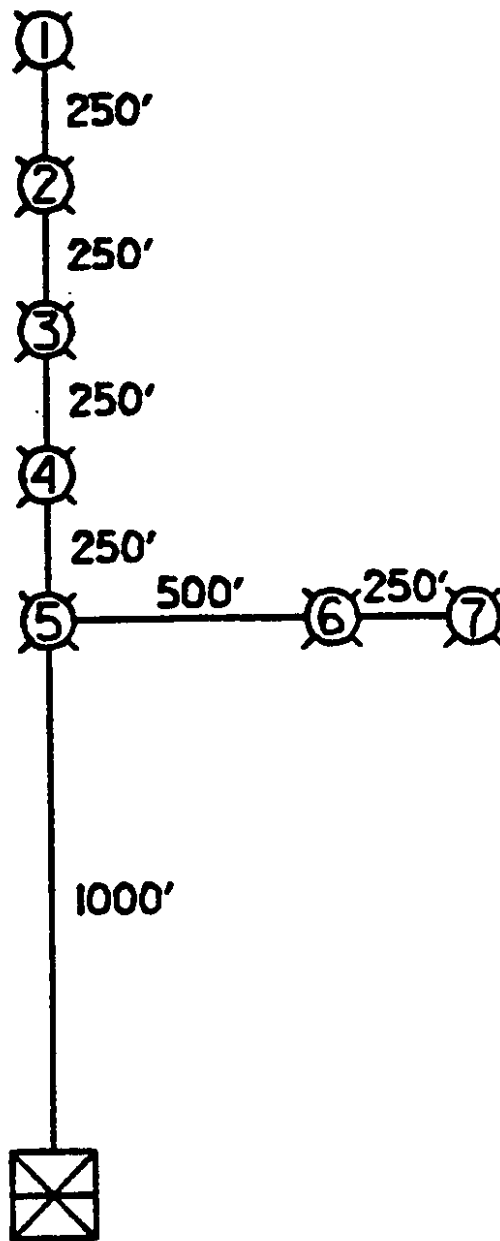


Figure 4-9

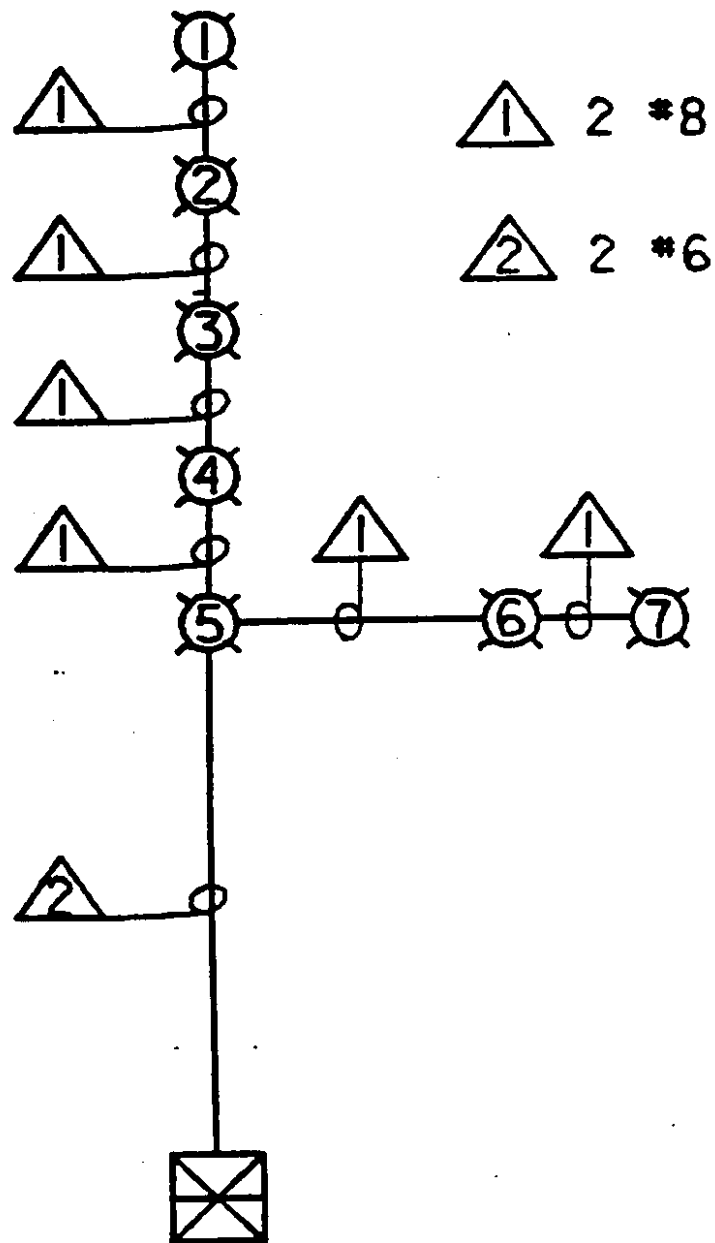


Figure 4-10

Load No.	Load (A) AMPS	Σ Loads (A) (AMPS)	Distance (D) (FT)	A x D (AMP-FT)	Σ AD (AMP-FT)
1	1.55	1.55	250	390	390
2	1.55	3.10	250	780	1170
3	1.55	4.65	250	1,160	2,330
4	1.55	6.20	250	1,550	3,880
5-6-7	4.65	10.85	1,000	10,850	14,730
Service					Say 14, 800
7	1.55	1.55	250	390	390
6	1.55	3.10	500	1,550	1,940
5-4-3-2-1	7.75	10.85	1,000	10,850	12,790
Service					Say 12,800

Line Loss Table
Figure 4-11

WIRE SIZE AWG	4/0	3/0	2/0	1/0	1	2	4	6	8
Amperes Feet	Volts Drop								
500,000	95.9	120.0	151.0	191.0	240.0	303.0	483.0	—	—
400,000	76.8	96.0	121.0	153.0	192.0	241.0	386.0	—	—
300,000	57.6	72.0	90.6	115.00	144.0	182.0	290.0	460.0	—
200,000	38.4	48.0	60.4	76.4	96.0	121.0	193.0	307.0	478.0
100,000	19.2	24.0	30.2	38.2	48.0	60.6	96.6	153.0	239.0
90,000	17.3	21.6	27.2	34.4	43.2	54.6	87.0	138.0	215.0
80,000	15.3	19.2	24.2	30.5	38.4	48.5	77.3	123.0	191.0
70,000	13.4	16.8	21.1	27.6	33.6	42.4	67.6	107.0	167.0
60,000	11.5	14.4	18.1	22.9	28.8	36.4	58.0	92.0	144.0
50,000	9.6	12.0	15.1	19.1	24.0	30.3	48.3	76.7	120.0
40,000	7.7	9.6	12.1	15.3	19.2	24.1	38.6	61.4	95.6
30,000	5.8	7.2	9.1	11.5	14.4	18.2	29.0	46.0	71.7
20,000	3.8	4.9	6.0	7.6	9.6	12.1	19.3	30.7	47.8
10,000	1.9	2.4	3.0	3.8	4.8	6.1	9.7	15.3	23.9
9,000	1.7	2.2	2.7	3.4	4.3	5.5	8.7	13.8	21.5
8,000	1.5	1.9	2.4	3.1	3.8	4.9	7.7	12.3	19.1
7,000	1.3	1.7	2.1	2.8	3.4	4.2	6.8	10.7	16.7
6,000	1.2	1.4	1.8	2.3	2.9	3.6	5.8	9.2	14.4
5,000	1.0	1.2	1.5	1.9	2.4	3.0	4.8	7.7	12.0
4,000	0.7	1.0	1.2	1.5	1.9	2.4	3.9	6.1	9.6
3,000	0.6	0.7	0.9	1.2	1.4	1.8	2.9	4.6	7.2
2,000	0.4	0.5	0.6	0.8	1.0	1.2	1.9	3.1	4.8
1,000	0.2	0.2	0.3	0.4	0.5	0.6	1.0	1.5	2.4
900	0.2	0.2	0.3	0.3	0.4	0.6	0.9	1.4	2.2
800	0.2	0.2	0.2	0.3	0.4	0.5	0.8	1.2	1.9
700	0.1	0.2	0.2	0.3	0.3	0.4	0.7	1.1	1.7
600	0.1	0.1	0.2	0.2	0.3	0.4	0.6	0.9	1.4
500	0.1	0.1	0.2	0.2	0.2	0.3	0.5	0.8	1.2
400	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.6	1.0
300	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.7
200	—	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.5
100	—	—	—	—	0.1	0.1	0.1	0.2	0.2

Voltage Drop for Aluminum Conductors
(Aerial Installation Only, Underground Installation Prohibited)
Power Factor 100 Percent Single Phase ... 2 Wire
Figure 4-12

WIRE SIZE AWG	4/0	3/0	2/0	1/0	1	2	4	6	8	10	12	14
Amperes Feet	Volts Drop											
500,000	62.4	78.6	98.5	123.0	153.0	194.0	306.0	483.0	–	–	–	–
400,000	50.0	62.9	78.8	98.4	122.0	155.0	244.0	386.0	–	–	–	–
300,000	37.4	47.2	59.1	73.9	91.8	116.0	184.0	290.0	450.0	–	–	–
200,000	25.0	31.4	39.4	49.2	61.2	77.6	122.0	193.0	300.0	480.0	–	–
100,000	12.5	15.7	19.7	24.6	30.6	38.8	61.2	96.6	150.0	240.0	384.0	–
90,000	11.2	14.2	17.7	22.2	27.5	34.9	55.1	87.0	135.0	216.0	345.0	–
80,000	10.0	12.6	15.8	19.7	24.5	31.0	49.0	77.3	120.0	192.0	307.0	487.0
70,000	8.7	11.0	13.8	17.2	21.4	27.2	42.8	67.6	105.0	168.0	269.0	426.0
60,000	7.5	9.4	11.8	14.8	18.4	23.3	36.7	58.0	90.0	144.0	230.0	365.0
50,000	6.2	7.9	9.9	12.3	15.3	19.4	30.6	48.3	74.9	120.0	192.0	304.4
40,000	5.0	6.3	7.9	9.8	12.2	15.5	24.4	38.6	60.0	96.0	154.0	234.0
30,000	3.7	4.7	5.9	7.4	9.2	11.6	18.4	29.0	45.0	72.0	115.0	182.0
20,000	2.5	3.1	3.9	4.9	6.1	7.8	12.2	19.3	30.0	48.0	76.8	122.0
10,000	1.3	1.6	1.9	2.5	3.1	3.9	6.1	9.7	15.0	24.0	38.4	60.8
9,000	1.1	1.4	1.8	2.2	2.8	3.5	5.5	8.7	13.5	21.6	34.5	54.7
8,000	1.0	1.3	1.6	1.9	2.5	3.1	4.9	7.7	12.0	19.2	30.7	48.7
7,000	0.9	1.1	1.4	1.7	2.1	2.7	4.3	6.8	10.5	16.8	26.9	42.6
6,000	0.8	0.9	1.2	1.5	1.8	2.3	3.7	5.8	9.0	14.4	23.0	36.5
5,000	0.6	0.8	1.0	1.2	1.5	1.9	3.1	4.8	7.5	12.0	19.2	30.4
4,000	0.5	0.6	0.8	1.0	1.2	1.5	2.4	3.8	6.0	9.6	15.4	24.3
3,000	0.4	0.5	0.6	0.7	0.9	1.2	1.8	2.9	4.5	7.2	11.5	18.2
2,000	0.3	0.3	0.4	0.5	0.6	0.8	1.2	1.9	3.0	4.8	7.7	12.2
1,000	0.1	0.2	0.2	0.3	0.3	0.4	0.6	1.0	1.5	2.4	3.8	6.1
900	0.1	0.1	0.2	0.2	0.3	0.4	0.6	0.9	1.4	2.2	3.5	5.5
800	0.1	0.1	0.2	0.2	0.3	0.3	0.5	0.8	1.2	1.9	3.1	4.9
700	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.7	1.1	1.7	2.7	4.3
600	0.1	0.1	0.1	0.2	0.2	0.2	0.4	0.6	0.9	1.4	2.3	3.7
500	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.5	0.8	1.2	1.9	3.0
400	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.6	1.0	1.5	2.4
300	–	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.7	1.2	1.8
200	–	–	–	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.8	1.2
100	–	–	–	–	–	–	0.1	0.1	0.2	0.2	0.4	0.6

**Voltage Drop for Copper Conductors
(In Conduit or Aerial Installtion)
Power Factor 100 Percent Single Phase ... 2 Wire
Figure 4-13**

5.1 General

Work zone traffic control is a major aspect of any roadway project. It must be designed from the motorists point of view to provide the motorists with the necessary information to proceed in a safe and orderly manner through a construction or maintenance work zone which may have unexpected roadway conditions, changes in alignment, and temporary roadside obstacles relating to the work activity. The sudden transition to tighter geometrics and the closer proximity of traffic control must be incorporated into the work area in a manner that will minimize driver uncertainty. Effective work zone traffic control is the result of strategy planning, plan development and preparation, and field applications. The goal of any work zone traffic control plan is to allow no reduction in the level of service for traffic.

TCP (Traffic Control Plans) must be included in the PS&E to provide for the orderly movement of vehicular and pedestrian traffic through construction and maintenance areas.

No single standard sequence of signs or other traffic control devices can be used as an inflexible arrangement for all situations due to the variety of roadway and traffic conditions that may be present in a roadway project. A TCP that adequately address the variables motorists will encounter on each specific project are generally preferred

5.2 Principles

Guidelines for TCPs are found in Section VI of the *Manual on Uniform Traffic Control Devices* (MUTCD). Section VI details the fundamental principles of temporary traffic control, including the design and erection of signing, traffic control layout, pavement markings, delineation, lighting, and flagging standards. This chapter sets forth specific principles for designing traffic control.

A. Traffic Control Features

1. **Lane Geometry.** The approach lane width should be equaled or exceeded throughout the connection. The minimum allowable lane width is 10 feet. Design the lane and the lane width reductions prior to any lane shifts within the transition area.

Every effort should be made to maintain an approach speed that matches the design speed of the facility. Where this is not possible, a 10 mph reduced speed advisory, posted with a warning sign which tells the driver of the hazard, is considered maximum per speed

change. Design for the highest design speed allowed with respect to curve radii. Curve radii and lane width should not be reduced simultaneously.

The objective is to use lane geometrics that will be clear to the driver and keep the vehicle in the intended lane. Lane lines and construction joints must be treated to provide a smooth flow through the transition area. It may also be necessary to modify or remove other existing traffic control devices.

2. **Physical Barriers.** There are three types of barrier protection used in construction workzones: water-filled barriers, moveable barrier, and concrete barriers. Several items as summarized below must be considered when determining their use.

Water-filled Barriers

- Short-term projects (zero to three days) for a minimum 100-foot length.
- Do not use in lane transitions until further testing has been done or unless the situation meets with manufacturer's specifications. In the case of an open construction work area, use in conjunction with TMAs.
- Evaluate risk and site conditions and if used, follow manufacturer's guidelines and specifications. Provide chart for Washington State Department of Transportation (WSDOT) designers to use which shows deflection based on speed of vehicle.

Moveable Barriers

- High volume traffic conditions with very short-term lane closures.
- Continuous operation over extended period of time, where there is a need to get the lane back in operation at some point in the day. (Could be used in lieu of reduced lane widths or lane reduction, i.e., HOV lane additions; wall next to roadway.)

Temporary Concrete Barriers

- High speed roadways and areas where there is a high potential for injury to workers (i.e., internal lane work).
- Work zones in "no escape" areas such as tunnels, bridges, lane expansion work, etc.
- Long-term, stationary jobs (work that occupies a location more than three days).

- Worker and traveling public exposure considerations such as high speed and volume of traffic, when workers are not protected by vehicle, and in proximity to traffic (concrete slab repair in freeways).

Temporary concrete barriers are normally installed for:

- a. The operation of opposing traffic where two-way traffic must be maintained on one roadway of a normally divided highway for an extended period of time.
- b. The separation of opposing traffic where a four-lane divided highway transitions to a two-lane, two-way roadway that is being upgraded to become a divided four-lane roadway.
- c. Projects where existing safety features such as bridge rail or guardrail are removed.

A 2-foot minimum shy distance is normally provided between the lane edge and the near edge of the separation barrier.

It may be necessary to utilize a portion of the roadway shoulder to provide the roadway width needed for the barrier use.

In areas where temporary concrete barriers cannot be installed, drums, cones, barricades, or vertical panels can be used as an acceptable alternate. However, temporary concrete barriers must be used in the transition areas between multilane and two-lane, two-way roadways, and as described in (c) above.

Exposed ends of concrete barriers must be located outside the clear zone and adequately flared, or have a crashworthy end treatment.

Where drums, cones, etc., are used, consistent patterns of the devices are important to help alleviate driver confusion. Random mixing of these devices at any given location is undesirable.

Where positive barriers are not used throughout a two-way connection, warning lights may be used to mark opposing traffic separation devices.

3. **Illumination.** Full lighting is normally provided through traffic control areas where power is available. Illumination will be placed in accordance with Chapter 840 of the *Design Manual M 22-01*.
4. **Delineation.** Removable temporary or painted lane lines and edge lines are normally used to delineate the roadway. These pavement markings are preferred for shifts in travelway alignment. Type 2 raised pavement markers and guideposts may be used to accentuate the lane and edge lines in illuminated areas.

In areas where power for illumination is not available, reflective devices must be used to delineate the traveled way for nighttime driving. Guideposts provide eye-level delineation, while Type 2 raised pavement markers provide lane line delineation. Reflective devices are also installed on temporary concrete barriers used in transition areas and/or to separate opposing traffic.

When concrete barrier is used, lateral clearance markers may be installed at the barrier's angle points and at other locations along the barrier where additional delineation may be needed.

Pavement marking arrows are placed in lanes to indicate direction of travel.

Delineation guidelines are shown in Chapter 830 of the *Design Manual*.

5. **Speed Limit or Speed Advisory Signing.** As part of the design process for construction and projects for maintenance, speed reductions are an option requiring a thorough traffic analysis conducted prior to making a change. For emergency and other necessary speed reductions, guidelines are outlined in RCW 47.38.020, WSDOT *Construction Manual* M 41-01, and Directive D 55-20 "Reduced Speed in Maintenance and Construction Zones."

When a change of speed is necessary, a request for change of speed limit must be submitted to the regional Traffic Control Engineer. When regulatory speed limit reduction or advisory speed signing is necessary, use the letters "XX" to represent the speed limit on the TCP. The actual posted speed indicated on the signs is determined prior to opening the temporary connection.

Some items to consider when reducing speeds in work zones because of worker safety include:

- Post speed limit signs in the work zone. When speed limit is lowered and enforced (monitored by WSP/local law enforcement), ensure work zone is adequately signed.
- Post regulatory speed limit signs for work hours only (identify hours when the limit is in effect if condition for speed limit reduction is not present when work is not being conducted). Remove signs when reduced speed limit is not in affect.
- Use variable message signs more frequently (as a supplement to standard signs) to display either advisory speeds or regulatory speed limits and explain the activity requiring the reduction.

6. **Variable Message Signs.** Per the MUTCD, the primary purpose of VMS in temporary traffic control zones is to advise the driver of unexpected traffic and routing situations. Some typical situations can include the following:

- Where speed of traffic is expected to drop substantially.
- Where significant queuing and delays are expected.
- Where adverse environmental conditions are present.
- Where there are changes in alignment or surface conditions.
- To provide advance notice of ramp, lane, or roadway closures.
- For accident or incident management.

Operators must always be aware of what the arrow board is displaying. Keep displays appropriate and when not needed, turn them off. For instance, when the vehicle or arrow board is placed on the right shoulder, never display the “right arrow” because it would move people off the shoulder/road and be potentially hazardous to drivers/workers. This also applies to “left arrow” usage in the left lane/shoulder placement.

Make messages clear and brief. Keep messages to a maximum of two panels. If special messages are necessary, be consistent with conventional signs and standards normally used. Whenever possible, use the pre-programmed “canned” messages that the VMS is equipped with.

7. **Truck Mounted Attenuators (TMAs).** Items to consider for determining TMA use:

- Speed of Traffic: Higher operating speeds leave less time for response, and impacts at higher speeds generally result in more severe injuries and damage. Therefore, activities on facilities with high speed limits are likely to entail more frequent and more severe incidents than are activities on facilities with low speed limits.
- Type of activity: moving, intermittent, or stationary.
- Duration of project.
- Roadway environment: access controlled vs. non-access controlled, urban vs. rural; and geometrics of roadway. Access controlled facilities frequently give drivers a false sense of security resulting in a lower expectation of interruptions to free traffic flow. Therefore, activities on freeways may be more likely to become involved in incidents than are activities on non-access controlled facilities where most drivers are operating at a higher state of alertness.

- Traffic volumes which relate directly to worker exposure.
- Exposure to special hazards: Operations involving personnel on foot or located in exposed positions on or within work vehicles (for example, on the platform of a cone pickup truck or in a lift-bucket performing overhead operations) are particularly susceptible to high severity incidents.
- Location of work area: Locations of primary concern are those within the traveled lanes and those within all-weather frequently used shoulders. Activities taking place within the traveled lanes are more likely to become involved in an incident than are shoulder activities.

Some suggested priorities for the application of truck-mounted attenuators are contained in Figure 5-2.

8. **Use of Flaggers.** Flaggers should be employed only when all other methods of traffic control are inadequate to warn and direct traffic. They should be used prudently when signing and other methods cannot work. The use of more innovative, restrictive, traffic control methods such as signs, signals, channelization, etc., should be considered.

Flaggers must be part of an approved Traffic Control Plan and included in the initial design.

On high speed locations, post speed advisory plaques with appropriate warning signs and other innovative traffic control methods, preceding flaggers, to slow the traffic down and to let drivers know there are people ahead.

Flaggers should not be used when there is no intention to control traffic.

Use of flaggers should be consistent between regions/offices/locations for like jobs. For instance, use flaggers for the following conditions:

- **Slow Traffic.** Do not rely solely on flaggers to slow the traffic; supplement with traffic control set up (i.e., simplify traffic flow, restrict traffic flow).
 - **Direct Traffic.** The flagger is sometimes necessary to keep traffic from following work vehicles into the work zone. They are responsible for redirecting vehicles back into the flow of traffic safely.
 - **Stop Traffic.**
9. **Use of Enhanced Enforcement.** For use of enforcement, the initial determination should be based on engineering judgment (between maintenance/construction office and district traffic office) considering the type of construction activity, complexity of the traffic control

plan, possible speed reduction needs, traffic volumes, nighttime work activity, geometric conditions, associated cost for use of enforcement (cost benefit analysis), and actual traffic problems observed as the work progresses.

Enhanced enforcement in the work zone is recommended to:

- Provide single stationary patrol car for work zones where the work area is less than 1,000 feet in length. (This is the length of the actual work area and excludes the advance warning, taper, and buffer spaces before and after the actual work zone.)
- Provide two or more stationary patrol vehicles for work zones with a work area greater than 1,000 feet in length. (This is the length of the actual work area excluding the advance warning, taper, and buffer spaces before and after the actual work zone). The WSP stated that use of two troopers (one set up at the start of the project who would radio to the trooper at the end of the project) works best for enforcement. One trooper would be available to transport individuals as needed and one trooper would remain to cover the work zone.

B. Pedestrian and Bicycle Safety. Special consideration must be given to the safe accommodation of pedestrians when the work zone encroaches upon a sidewalk, crosswalk, or other areas used by the pedestrian.

Where walkways are closed by construction or maintenance, provide an alternate walkway when feasible. Where it is necessary to divert pedestrians into the parking lane of a street, provide barricades and delineation to separate the pedestrian walkway from the adjacent traffic lane. Pedestrians should not be diverted into a portion of the street used for vehicular traffic. At locations where adjacent alternate walkways cannot be provided, post appropriate signs at the limits of construction and in advance of the closure at the nearest crosswalk or intersection to divert pedestrians across the street.

When overhead work could endanger pedestrians, it may be necessary to install a fixed pedestrian walkway of the fence or canopy type to protect and control pedestrians. In such cases, wood and chain link fencing can be used with warning lights and illumination to warn and guide both pedestrians and motorists.

Fences around a construction area are often necessary. They are constructed in conjunction with a special pedestrian walkway around deep excavations, or when pedestrian access to the job site is not desirable. Installation of such fencing must consider relocation of existing control devices and facilities such as traffic signals, pedestrian signals, traffic signs, and parking meters. Open mesh or other suitable fencing may be needed at intersections to ensure adequate sight distance.

When the work zone encroaches upon a bicycle path, an alternate route should be considered and provided for cyclists where feasible. Bicycles should not normally be directed into the same path used by pedestrians. See Part IX of the MUTCD for details on bicycle traffic control.

Appropriate considerations should be made for traffic control operations that are conducted during the hours of darkness.

C. **Types of Work Zones.** Anticipated work zones are categorized as: (1) Short-Term Stationary, (2) Continuous Moving, and (3) Long-Term Stationary. Different criteria will apply to the design and planning of the necessary traffic control measures for each of these categories. The following is a generalized description of the characteristics for these three types of work zones.

1. **Short-Term Stationary.** In this type of work zone, situations exist where the work activity is of a very short time, such as, picking up obstacles or inspecting a culvert for debris. For these very short-time work periods, a flashing/rotating beacon in addition to the vehicle's four-way flashers may give drivers, approaching on sections of highway that have no restrictions to sight distance, adequate warning. When the driver's sight distance is obscured by roadside obstacles or the roadway geometry, appropriate advance warning signs, and/or other traffic control devices, are required.

Advance warning signs should be used if the short-term activity is repetitive after moving only a short distance. The signs selected should be appropriate for the operation and the signs should be moved ahead as required in order to maintain an appropriate spacing between the warning signs and the activity. The maximum advisable distance between the advance warning signs and the work activity is one mile.

2. **Continuous Moving.** Continuous moving work areas are activities where work is being done while the equipment is moving either beside or on the traveled lanes of the highway. Included in this category would be striping, roadside spraying, sweeping, and other similar tasks.

The advance warning signs used for moving operations can be mounted on the shoulder or on a shadow vehicle, or both. Shadow vehicles should carry a sign which describes the work ahead and warning lights. If the shadow vehicle must encroach on the traveled lane, a flashing arrow board should be used. Whether the advance warning signs are ground mounted on the roadside shoulder or mounted on shadow vehicles, the signs should be moved ahead as required in order to maintain an appropriate distance between the signs and the work activity. The maximum advisable distance between the advance warning signs and the continually moving work activity is 1 mile.

On Multi-Lane Highways. The requirements for traffic control during moving operations on multi-lane highways are similar to those for stationary operations. If work vehicles must encroach on the traveled way, a flashing arrow board should be used while working on multi-lane highways.

An advance warning sign which describes the operation should be mounted on a separate or shadow vehicle. The distance between the shadow vehicle and the work vehicle can vary but it should not be so great that traffic has the tendency to pull back into the lane behind the work vehicle where the work is being done.

On Two-Lane Highways. Moving operations on two-lane highways can basically be handled in the same manner as on multi-lane highways with the exception that a flashing arrow board should never be used in the arrow or directional mode. Advance warning signs should be placed on the roadway shoulder or on a shadow vehicle.

- 3. Long-Term Stationary.** Traffic control plans developed for long-term stationary operations address each anticipated work situation that encroaches into the traveled lanes or shoulders. The considerations for those traffic control plans should include all traffic entering the work zone from driveways, intersections, ramps, and the main roadway. The plans should also consider how traffic will leave the work area and re-enter the main traffic stream or leave by the way of an intersection or off-ramp.

Detour routes should be given special consideration when directing traffic through urban areas. Local jurisdictions are to be consulted when detoured traffic must use local streets and roads. Also, advise local emergency services, transit and major traffic generators, such as airports and port facilities, about any detour routes.

If ramps, structures or intersections are to be temporarily closed, signs giving advance notice of the closure dates and times are necessary so commuting motorists have the option of selecting alternate routes. The advance notice should be placed a minimum of seven days in advance of the closure.

5.3 Strategy Planning

On construction projects, the design report establishes the parameters for the project's specific needs. At that time such items as lane restrictions and closures, working hours, ramp closures, detour options, and other possibilities should be considered. On low volume rural highways, traffic control procedures may be simple to develop; whereas, traffic control procedures on limited access, multi-lane, high volume routes can be complex and require extensive planning.

From this strategy the Work Zone Traffic Control Plan is developed to identify the type and location of devices (signs, pavement markings, delineation, and flaggers) required to adequately inform the motorists of the situation.

The keys to strategy planning for traffic control on any public roadway, whether rural roads, urban streets, or freeways are the traffic, with considerations for both volume and types of vehicles, and the roadway characteristics. Careful consideration should be given to the effect the traffic control will have on the traffic flow in the work area and on the adjacent roadways. Traffic volumes, along with the speed and classification of vehicles, express the character of the traffic to be encountered. Hourly volumes show the periods of heavy traffic which should be avoided or that will require special treatment. Any restrictions, such as lane closures, and the hours for those restrictions can then be established by the District Traffic Engineer. Special attention should be directed to bicycles and over-sized vehicles and the detouring of those vehicles which may be necessary. Figure 5-1 is a generalized checklist intended to assist in strategic planning and does not necessarily contain all the elements for consideration.

5.4 Plan Preparation

To aid in the preparation of traffic control plans, the Traffic Control Zone is divided into traffic control areas or elements. These individual traffic control areas or elements are used to develop the complete traffic control plan.

- A. **The Traffic Control Zone.** The traffic control zone is the section of street or highway having traffic control devices warning motorists of upcoming conditions or to guide motorists through a construction or maintenance operation. Complex projects may have more than one traffic control zone, one for each operation which may be going on at any one time. The traffic control zone extends from the first advance warning sign to the last sign which indicates the end of the traffic control zone.

The traffic control zone typically consists of five areas (illustrated in Figure 5-2):

1. **Advance Warning Area.** The area of initial warning and communication with the driver.
2. **Transition Area.** The area where lane closure tapers and detours transition traffic to the paths required for travel through or around the work area.
3. **Buffer Area.** The area in advance of the work area which provides a margin of safety for both traffic and the workers.
4. **Work Area.** The area where the operation or activity is taking place.
5. **Termination Area.** The area which provides a short distance for traffic to clear the work area and to return to normal traffic lanes.



WSP Field Check List

Today's Date: _____

To be Completed by WSDOT Inspector			
Contract No.	SR	Begin WSP Shift	End WSP Shift
Milepost		Date	
From	To	Time	<input type="radio"/> AM <input type="radio"/> PM
Title			
Project Engineer		WSP Task Order No.	
WSDOT Onsite Contact		Field Phone (include area code)	
Traffic Control Strategy Meeting Location		Attended By	
Traffic Control Strategy (review with WSP officer)			

To be Completed by WSP Officer - Return Completed Form to WSDOT Inspector	
Percent of Time	Duties
_____	Assistance in traffic control setup and takedown (blue lights)
_____	Passive presence (yellow lights)
_____	Proactive patrol in work zone (blue lights)
_____	Ramp closures (yellow lights)
_____	Lane closure (yellow lights)
_____	Road closure (yellow lights)
_____	Detours (yellow lights)
_____	Other duties as outlined in Strategy Session (above)

Is a second officer needed for similar work in the future? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Suggestions For Traffic Control Improvements (mandatory):	

Total Violators Contacted	No. of Accidents Within Work Zone
_____	_____
WSP Officer Name	WSP Badge No.
_____	_____

DOT Form 421-045 EF
Revised 2/97

Distribution: White - Project Engineer; Canary - Regional Traffic; Pink - WSP

Traffic Control Planning and Strategy Check List

Figure 5-1

Closure/Exposure Condition	Priority*			
	Non-Freeway with Speed Limit			
	Freeway	≥ 50 mph	40-45 mph	≤ 35 mph
No Formal Lane Closure				
Shadow Vehicle for Operation Involving Exposed Personnel	1	2	3	4
Shadow Vehicle for Operation Not Involving Exposed Personnel	1	2	3	4
No Formal Shoulder Closure				
Shadow Vehicle for Operations Involving Exposed Personnel	2	3	3	3
Shadow Vehicle for Operations Not Involving Exposed Personnel	2	3	4	5
Formal Lane Closure				
Barrier Vehicle for Operation Involving Exposed Personnel	1	3	4	5
Barrier Vehicle for Condition Involving Significant Hazard	1	3	4	5
Formal Shoulder Closure				
Barrier Vehicle for Operation Involving Exposed Personnel	3	4	5	5
Barrier Vehicle for Condition Involving Significant Hazard	3	4	5	5

The numerical rank indicates the level of priority assigned to the use of a TMA on an assigned shadow/barrier vehicle. The use of a TMA under the defined conditions is:

1. Very highly recommended.
2. Highly recommended.
3. Recommended
4. Desirable.
5. May be justified on the basis or special conditions encountered on an individual project.

Suggested Priorities for the Application of Truck-Mounted Attenuators

Figure 5-2

B. Plan Development. The work zone traffic control strategies are to be identified early in the design of a project in accordance with Section 8.10 of the *Design Manual*. Plan development begins with a review of the strategy contained in the design report. The supporting data should be checked and any changes in roadway or traffic characteristics should be taken into consideration while preparing the traffic control plan. Site specific traffic control is to be prepared for each work operation on the project unless the roadway and the work operation is repetitive and each location is similar in character.

There are a number of typical traffic control situations stored in a CADD file. These figures are not intended to be standard control plans for any given operation. They are shown only as examples for the situations depicted and are to be used as aids in the development of traffic control plans.

The traffic control devices shown in each area or element of the traffic control zone are available in a “CEL” library for CADD or PC Microstation and can be placed directly on the plan sheets drawn in either one of these systems.

Roadway plan sheets for the project should be used in preparing the traffic control plan. This provides the scale drawing of the roadway section needed to establish proper placement for the signs and devices. Signs and devices can then be placed on the plan sheet in their proper locations by using the CADD. An on-site review of the area is recommended, since many characteristics cannot be determined from a drawing. Give special attention to existing signs which are to be maintained during the work activity that could conflict with or obstruct the view of the traffic control signs. All features and characteristics which will have an effect on the movement of traffic within and adjacent to the traffic control zone should be included in the plan.

The drawings of sample situations included in the CADD file can be used as guidelines for the selection and placement of traffic control devices. The unique characteristics of the specific work area should be individually addressed. Those features may include side roads, driveways, ramps, commercial approaches, bus stops, bridges or areas which have no shoulders (which make temporary sign placement difficult), substandard roadway width, vertical or horizontal alignment which will affect the sight distance of approaching traffic, add-lanes, drop-lanes, railroad crossings, regulatory traffic controls, or any other characteristics which differ from the examples shown in the sample drawings or the standard plans.

The traffic control devices shown on traffic control plans should clearly and concisely give the motorists information needed to adjust their speed and travel direction through the work area. The prepared plans should include any special signs for situations in which standard signs do not give accurate information and should be supplied as an item in the contract. The use of special signs should be kept to a minimum and used only where necessary. The Headquarters Traffic Office should be consulted regarding the use of special signs. Signing should be as specific as possible and always relate to the immediate situation to be encountered.

1. **Work Area.** Although the work area is not the first area of a traffic control zone encountered by a motorist, it is the area that must be considered first when developing traffic control plans. Traffic control requirements for all the other traffic control zone areas are determined by the location of the work area and type of activity taking place within that area. The other areas of traffic control will then be designed to complement the activities and channelization requirements within the work area.

Identifying the work requirements in the work area, such as which lanes need to be closed, exposure to drop-offs, obstacles created, and equipment considerations will indicate what kind of traffic control or warning devices will be required in advance. With an understanding of the kind of work to be done, the designer then works back to the next element of traffic control which is the buffer area.

2. **Buffer Area.** The buffer area is a safety area but it can have other uses. Vehicles hauling material can be parked in the buffer area for short periods of time during the work day. This area should never be used as a material or equipment storage area unless the traffic is protected by a temporary barrier. The buffer area allows the driver to become accustomed to the channelization and to recognize the path of channelization they will follow through the work area.

After the desirable length of the buffer area is determined, by considering the number of vehicles which might be parked there and the channelization which the driver must follow, the next upstream element to be designed is the Transition Area.

3. **Transition Area.** This is the area where normal traffic flow is transitioned or shifted to the path it must follow around or through the work area. No parking of vehicles or storage should be permitted in the transition area. Lane closure and traffic shift taper lengths are established to recommended minimums depending on the speed limit of the highway and width of the traveled lane. Formulas for determining a taper length are found in Part VI of the MUTCD and a chart for determining taper lengths is available in the CADD file.
4. **Advance Warning Area.** Upstream from the transition area is the advance warning area that gives the oncoming driver information about the situation ahead. Messages used on the advance warning signs will depend on the type of transition ahead. Sign messages which give the driver clear and concise information are the most effective.

5. **Termination Area.** The final area of traffic control to be designed is the termination area. This is the area which gives the driver notification that the temporary traffic control situation is ended. Terminal notification is generally accomplished with a sign such as “END CONSTRUCTION” or may be indicated with channelizing devices which indicate the conclusion of the road work situation and a transition back to normal alignment.
6. **Other Considerations.** Planning temporary traffic control area by area has distinct advantages, especially for complex situations. For instance, if a flagger is needed in advance of the work area, the buffer space should be lengthened to provide space for a secondary warning area where warning signs for the flagging situation would be placed. Roadway features can affect the traffic control in many ways. For example, an on-ramp or side road which enters the highway within the proposed transition area will require special treatment. In such situations advance warning signs should be installed on the ramp or side road and the transition area might have to be relocated to provide a well channelized path for all vehicles.

After locations for the work site traffic control have been established, project signing such as “Road Construction Ahead,” “Road Construction Next XX Miles” (if required by the length of the project), and “End Construction” may be added to the plan.

The time of day when most drivers will encounter the traffic control should be considered while preparing the plans. If traffic control will be in effect during nighttime hours, the signs and devices might need to be supplemented with lights to increase perception and credibility. During a nighttime field review, give consideration to the area’s background lighting from adjacent facilities and advertising signs which are competing for the driver’s recognition.

Warning signs and channelization devices should be positioned in a sequence which can be recognized and respected by the driver. In order to assure proper application, conduct a visualization review of the signs and devices on the plans from a reasonable driver’s point of view. Make sure that the messages and devices are appropriate for each situation the reasonable driver will face.

Temporary concrete barriers and barrier end protection are to be shown on the traffic control plans.

5.5 Work Zone Operations

After traffic control plans based on strategy from the design report are reviewed by the District Traffic Engineer, traffic control can be put into operation on the project.

A drive through inspection of the project to compare actual field conditions, prior to installing the traffic control, can identify characteristics which might require adjustments on the traffic control plan. Aspects of the plan that are not appropriate for the field conditions should be revised. Any modifications to the traffic control plan should be documented. Section 1 of the *Construction Manual* gives additional guidelines for effective traffic control.

Immediately after the traffic control is laid out on the roadway, a drive-through inspection should be conducted by the individual designated as the “responsible person” for the project’s traffic control to check the installation and position of the signs and other devices; and, to determine if the overall configuration of the traffic control relays clear, concise information to the reasonable motorist. Special attention should be given to the traffic control for overlapping and potentially conflicting traffic control zones. If the traffic control plan is going to remain in effect during the hours of darkness, a drive-through inspection is to be made after sunset to ensure that all devices meet the requirements for reflectorization, proper position, and that the messages are clearly legible. The night review should also ensure work area flood lights and flashing arrow boards do not blind approaching motorists.

Periodic reviews (twice daily is recommended for long-term traffic control) of the traffic control devices should be made to verify the adequacy of the traffic control and to identify any needed revisions. Additional night reviews may be necessary to confirm that the devices are clean and that the reflectorized qualities of the signs and devices are being maintained. These reviews should be documented. Particular attention should be given to motorist’s reaction through or around the work area and if there appears to be confusion, additional reviews should be initiated.

The documentation refers to both the location, appropriateness and condition of the signs or devices. Devices are to be replaced as necessary when their appearance and condition dictate. A form to document the traffic control reviews is useful and most districts or project offices have developed their own forms for this purpose. A photo or video inventory of the work zone traffic control may be used to supplement documentation. If photos or video are used, supplemental inventory information should be referenced in the project documentation.

Should an accident occur on the project or within the work area, a review of the traffic control plan and the devices should be made and documented as soon as possible. This review should be done not only to see if the devices are in place as shown on the plan, but also to determine if the devices are adequate or if the plan should be revised in light of experience. Each field office should have a procedure for analyzing accidents which take place within the limits of the project. Formal communications with the Washington State Patrol must be established at the pre-construction stage and arrangements made to receive copies of accident reports in a timely manner. Occasional contact with WSP for their perception of the traffic flow through the construction area can be beneficial.

If any assistance is desired at any stage of traffic control plan development, consult the District Traffic Engineer's office. Each district traffic engineer's office should have a traffic control specialist to review and provide guidance in the preparation of the traffic control plans for the PS&E, to review traffic control in the field, and to have the authority to approve revisions to the traffic control plans.

The following is a list of things to consider when designing construction traffic control and writing traffic control specifications.

Effective traffic control is integrated into the project early in the design and planning process. Traffic control will often determine the staging of a project and will always effect the project cost.

Step 1 — To Close Or Not To Close

Closing the roadway or ramp is the most desirable option. This usually lowers construction costs, decreases contract time and increases worker safety.

Roadway closure can be considered if an alternate route is available. The alternate route must carry the additional traffic volumes and any weight or height restrictions must be considered.

For the traveling public, closing the road for a short time may be less inconvenient than having the road under construction for a long time.

Consider the following while determining if a road should be closed.

1. Is there an available detour route?
2. Can the proposed detour carry the additional traffic?
3. Will businesses or residences be isolated if the road is closed? If so, is there an alternate access point.

If a complete closure is possible, do the following:

- Get the approval of the governing agency to use the proposed detour route.
- Meet with the community and businesses to discuss the roadway closure. Find resolutions to the community's concerns. This may mean leaving the roadway open during construction.
- Determine the maximum number of allowable days of closure and incorporate this into the special provisions.
- Determine if liquidated damages or incentives for early completion should be included in the special provisions.

Step 2 — Strategy Or “How Can This Thing Be Built?”

If the roadway must remain open during construction, determine how to build the project with the least possible impact on traffic.

1. Read any District policy about lane closures or restrictions.
2. Determine the volumes of traffic on the facility and the hours of high volume.
3. Determine if long duration lane closures are needed. Some construction activities that require long closures are:

- Concrete panel replacement
- Bridge overlays
- Major excavations in the roadway
- Large continuous concrete pours

4. Determine the hours of restriction — the hours that lanes and shoulders must be open and clear for traffic.

For a quick analysis, assume the following volumes of vehicles per hour in urban construction areas:

- 1400 Veh/hr/lane on controlled access highways
- 600 Veh/hr/lane on undivided rural and suburban highways
- (any signals will lower the capacity)

When determining the hours of restriction, check the local noise ordinances and determine what construction work can be done at night. Loud construction work, such as pile driving, is prohibited at night in many areas. For work that is prohibited from being done at night, provisions must be made for daytime work. Avoid engine powered generators for VMS or arrow panels in residential areas during night-work, if possible.

Be sure to consider holiday weekends, special events, and regular weekend traffic when determining the hours of restriction.

Also, consider the impact on private or commercial driveways or road access.

5. Determine if there should be liquidated damages in excess of the standard specification amount. Determine if there should be contract incentives for early completion of the project. Determine the amounts of each of these.
6. Study the project and determine how it could be built. Is it possible to build the project within the restrictions stated? Is staging necessary?

Staging a project can be as simple as deciding one lane must be paved at a time. Staging is a suggested way of building the project, not the only way to build a project. By staging the project we determine:

- If our traffic control special provisions are realistic.
 - The approximate duration of lane closures.
 - If temporary structures and detours are needed.
 - If existing utility systems can remain operational during construction, or will they have to be relocated/replaced. (Examples: signals, electrical, drainage)
 - If the work areas are adequate. (Examples: storage space for equipment and materials, space to load/unload trucks.)
7. Incorporate into the project design ways of lessening the traffic impact. Some examples are:
 - a. Use precast concrete or steel girders instead of cast-in-place concrete for structures over main traffic lanes.
 - b. Specify materials that have faster cure times than conventional materials.
 - c. Building detours and improving alternate routes in order to carry the increased traffic volumes.
 8. Study the project and determine if traffic control or lane closures are needed on adjoining roads. Adjoining roads include frontage roads, intersections, overcrossings, and undercrossings. Some examples are:
 - Low clearance because of bridge falsework.
 - Long-term lane closures for bridge falsework and substructure excavation.
 - Short- and long-term lane closures on frontage roads because of retaining wall construction.

- Placement of “Road Construction Ahead” signs and other warning signs.
- Short-term access closures for paving intersections.

If traffic control is needed on facilities that are not state highways, get permission to use the facility from the governing agency.

9. Determine if there are any areas that construction vehicles cannot safely leave or enter the highway because of limited sight distance. Label these areas on the traffic control plans.
10. Work zone sites exhibiting one or more of the following characteristics should be reviewed for possible enhanced enforcement needs:
 - **Sites where “excessive speeding” is observed or could be anticipated within the construction zone.** Based on a study conducted by the California Department of Transportation (Caltrans), “speeding” and speed-related measures were identified as the primary factor affecting work zone safety. While sufficient warning of desirable travel speeds through the work zone may be placed in compliance with the MUTCD, driver acceptance and compliance with the advisory speeds is, in many cases, poor. The use of increased enforcement to “command” adherence to the speed limit has been shown to be effective in maintaining these speeds, as evidenced by the findings in the literature review and interviews with the Caltrans and California Highway Patrol (CHP) personnel.
 - **Sites where a reduced speed limit is recommended.** The purpose of a reduced regulatory speed limit within a construction zone is based on a perceived need, such as reducing travel speeds prior to diverting or detouring traffic, reducing speeds adjacent to unprotected construction workers. For a complete discussion, refer to D 55-20. Based on the findings from the study sources, adherence to reduced speed limits is, in many cases, poor. To ensure adherence to the speed limit, enhanced enforcement may be necessary.
 - **Sites having a complex traffic plan or multiple phases to the plan.** Sites with traffic control plans having a number of traffic diversions, lane closures, or traffic restrictions requiring a number of decisions by motorists, particularly in a short distance, are highly susceptible to increased accident activity. Much of this activity may be attributed to motorist’s indecision through the area, to differentials in travel speeds through the site, and to the lack of adherence to speed controls in the area. Past efforts have shown that enhanced enforcement, through manual control/flagging or a visible presence, have resulted in smoother, more efficient traffic flow through the work zone. Typically, a lower level of accident activity has resulted.

In addition, construction projects requiring multiple traffic control phases are shown to exhibit greater accident activity than those containing a single phase. Much of this may be attributed to the driver indecision associated with “learning” a new traffic pattern each time a new traffic control phase occurs. As the requirements for the motorists’ decision-making increases between subsequent phases, accident activity is also likely to increase. The use of enhanced enforcement to supplement the existing traffic controls has an “alerting” effect, helping motorists recognize field changes and the need for increased safety through the area. Use of enhanced enforcement for a specific time period following traffic control phase changes has been found to be effective.

- **Sites currently exhibiting a “high” accident rate.** Based on research, accident rates during the construction activity typically increase over the pre-construction accident rate. As such, sites exhibiting a “high” accident rate prior to construction (under normal field conditions) may require supplemental traffic control in the form of enhanced enforcement in order to minimize accidents during construction. Oftentimes, site characteristics (horizontal and vertical curvature, geometrics, access) prior to construction are a major factor in the level of pre-construction accident activity. The presence of construction activity may worsen the impact of these characteristics.
- **Sites having high volume conditions and/or limited roadway capacity.** Construction activity resulting in significant reductions in the available roadway capacity can have a dramatic impact on travel speeds and congestion in an area. To aid in maintaining an acceptable level of traffic operations, selective enforcement through the work zone may be desirable. The enforcement may take the form of traffic control/flagging or the visible presence of police officers and vehicles.
- **Sites planned for nighttime construction.** Research has identified safety problems associated with nighttime work in construction areas. Increased distraction to motorists, unique construction lighting needs, reduced perception levels by motorists, sub-optimal traffic controls, as well as excessive travel speeds for the conditions through the work zone contribute to the increased accident activity. The use of enhanced enforcement to “alert” motorists to the need for increased caution and to enforce excessive speeding in the area can be extremely valuable in maintaining safety during nighttime construction activities.

The safety impact associated with nighttime travel through work zones with no construction activity presents a similar problem. Faced with similar field situations as identified above (e.g., reduced perception levels by motorist, sub-optimal traffic controls, excessive speeding), accident activity through the work zone during nighttime conditions

has exhibited major increases over nighttime conditions prior to construction, particularly where traffic movement through the area drastically differs from the “normal” condition. Enhanced enforcement measures have been shown to aid safety in these situations.

- **Sites involving short-term activities.** Past studies have shown that the most critical safety period for work zones is the initial implementation period. Motorists accustomed to driving through an area with no restrictions are forced to adhere to restrictions and “unfamiliar” situations that did not exist previously. Driver indecision is at its peak and driver compliance to regulations varies sharply. As a result, increased accident activity typically results. As drivers become more familiar with the field conditions, the level of accident activity typically is reduced. For short-term project activities (less than one day), little or no adjustment period exists. The accident activity can be quite high, particularly for field situations requiring traffic diversions, detours or lane reductions. Enhanced enforcement for these conditions may be warranted.
- **Sites with restricted geometrics.** Where steep grades, sharp curves, narrow lanes, or other abnormal field conditions exist, enhanced enforcement to supplement the traffic controls per the MUTCD may be necessary. Sites with restricted geometrics can exhibit accident rates higher than normal. The use of enhanced enforcement can reduce the anticipated accident levels.
- **Sites in areas during periods of poor weather conditions.** In areas where weather conditions such as snow, fog, ice, and heavy rain are anticipated to occur during periods of construction activity, enhanced enforcement services during these conditions would be beneficial. The visible presence of enforcement personnel would serve to “alert” motorists to the potential hazards and need for driver caution through the area. Most construction projects shut down during adverse weather conditions.
- **Sites extending for long distances (>½ mile).** Past studies show that in long construction zones, a location within the zone exists in where motorists become “comfortable” with field conditions and are likely to become lax in maintaining safe driving practices. Examples of such practices can include speeding or unsafe lane changes. At this location, there is a need to reinforce safe driving techniques and motorists’ caution within the work zone. Proper placement of enhanced enforcement personnel are included in a later portion of this section.

- **Sites requiring incident management.** Where immediate response to freeway incidents (accidents, breakdowns) is desirable in order to reduce traffic delays and additional traffic accidents, the use of enhanced enforcement techniques is beneficial. Numerous studies have documented the benefits associated with improved response times to freeway incidents. These benefits have often led to the implementation of freeway surveillance techniques. On-site availability of enhanced enforcement personnel at areas where quick response is critical (high volume corridors, peak period conditions, limited off-road space) is desirable.
- **Sites where workers are not protected by barrier.** Situations falling under this heading generally include only those work areas where personnel must work within 10 feet of the traveled way. Having an officer on the site can, as stated before, keep the drivers more “alert” and attentive, increasing the safety margin for both the workers and the drivers.

11. Determine traffic control concerns that should be addressed in the special provisions. Examples are:

- Abrupt lane edges
- Installation of sign bridges
- Rolling slow-down operations for short time complete closures of a highway.

Washington State Patrol Work Zone Enforcement and Assistance

Introduction

The use of Washington State Patrol (WSP) enforcement and assistance in work zones can increase driver compliance and improve worker safety and traffic movement. The need for WSP assistance in a work zone is considered and determined during project development or when planning a maintenance operation. Region Designers, with input from the Region Work Zone Safety Specialist, assess all work zone impacts and develop a work zone strategy in accordance with *Design Manual* Chapter 810-1. If used, the appropriate level of WSP enforcement and assistance is spelled out in the Transportation Management Plan (TMP). In addition, local law enforcement agencies may be considered for work zone enforcement or assistance; their use is also managed following the procedures provided in this appendix.

This appendix:

- Discusses factors to consider when determining appropriate use of WSP for work zone enforcement and assistance.
- Provides guidance on work zone strategies, equipment, and procedures related to WSP assistance and enforcement.
- Establishes the procedures to make specific work zone assignments.

Policy

WSP assistance is considered as part of an overall work zone strategy:

- In areas of high worker exposure.
- Where a high level of traffic violations are expected.
- Where there are other unique safety concerns.

WSP assistance is not a replacement for effective work zone strategies and traffic control devices. However it can be a cost effective enhancement that provides enforcement emphasis or other specific assistance duties when other measures are not practical or effective. Active enforcement of traffic laws in operating work zones is the most effective strategy for achieving driver attention and compliance. Routine enforcement by WSP in our work zones is always welcome.

Determining the Need for WSP Enforcement or Assistance

The need for WSP assistance or enforcement is determined during the Project Development phase and is based on specific project conditions. Consider the following factors:

Work Zone Location. Consider WSP use if the work zone includes any of the following:

- High Accident Location (HAL) or corridor.
- High traffic volume or high speed roadway segment.
- Unprotected work zone areas.
- Speed enforcement emphasis area.
- DUI enforcement area.

Type of Work. Consider the use of WSP assistance in work zones which include:

- **Mobile Work Operations.** Both construction and maintenance use mobile operations for the installation and removal of traffic control and other operations. WSP may be used as a “shadow vehicle” on the shoulder in advance of the first traffic control device, to alert motorists to the operation.
- **Short-Term Work Operations.** Because these operations are of short duration, it is not practical to install positive protection devices such as barriers; thus, workers can be subjected to greater levels of traffic hazards. WSP presence can alert drivers to the work zone and the workers. Short term closures or rolling slowdowns may also require WSP assistance.
- **Night Work.** Because of reduced visibility and potentially higher numbers of impaired drivers, consider WSP assistance for night work.

Enforcement Strategies and Techniques

Enforcement is used to enhance the work zone traffic control measures. It is not a “stand alone” substitute for appropriate traffic control design, signs and devices. Any decision to use WSP assistance or enforcement must focus on the worker safety benefits and the possible reduction of work zone crashes. The local WSP detachments are familiar with operational and enforcement issues along state highways; it is important to request their early input during work zone strategy development.

Random/Roving Enforcement. High profile enforcement in work zones results in increased levels of driver compliance and leads to a “residual compliance effect” even when WSP is not present. The appropriate number of troopers and the frequency of use are determined with input from WSP. A minimum enforcement effort would employ one or two troopers for a shift.

Typically, enforcement can be implemented once or twice a week, depending on the location, to provide adequate compliance and may be used Region-wide in multiple work zones. Implement enforcement during active work operations, stage change-overs, major traffic control shifts, etc. Troopers should be located prior to or just beyond the work area since it can be difficult and potentially hazardous to pull over vehicles within the work area limits. Coordinate with the Region Public Information Office (PIO) as part of this strategy. A Task Assignment form is needed for specific enforcement requests.

Reduced Speed Limits. The rules and guidance for setting work zone regulatory speed limits are covered in WSDOT Directive D 55-20. All proposed work zone speed reductions must be reviewed and determined jointly by the Region Traffic Engineer and WSP. WSP may also recommend a work zone speed reduction. Specific enforcement may be required to effectively establish the lower speed limit. Use of special signs or radio equipment can increase compliance to reduced speed limits.

Public Information Campaign. A Public Information Campaign to increase driver awareness of work zone safety issues increases the effectiveness of using WSP enforcement or assistance. A campaign should include notice of the “double fines” law for a work zone citation. The Region PIO can help develop information strategies to fit the situation.

Routine Patrols. The occasional presence of WSP in work zones will maintain driver awareness and compliance with traffic laws. Local detachments will often increase their presence when notified by WSDOT of the work zone. There is no cost to WSDOT and no Task Assignment form is needed.

Short Term Road or Ramp Closures. Use of a traffic barrier for short term roadway or ramp closures may not be practical. WSP can provide effective enforcement of the closure where violations are likely to occur, such as on a high volume roadway or where there is no convenient detour route. A Task Assignment form is needed to implement this strategy.

WSP Vehicles. The WSP uses patrol cars or motorcycles in their enforcement or assistance efforts. A WSP vehicle shall not be used as a buffer vehicle. In some cases, motorcycles may be more effective due to their ability to navigate narrow work zones, but they are generally used only during daytime operations. Contact WSP to determine which vehicle type is most appropriate for a specific work zone condition.

Passive vs. Active. Active enforcement of traffic laws is a more effective use of the WSP, rather than the passive use of a WSP vehicle stationed in the vicinity of a work zone.

Flagging at Intersections. WSP flagging at either signalized or unsignalized intersections provides a cost effective operation with high driver compliance. A complex intersection may require more than one trooper. When flagging at a signalized intersection, the signal shall be turned off or set to all-red flash mode. Coordinate with WSP to determine who accesses the signal controller. Use of WSP for a flagging operation requires a Traffic Control Plan (TCP) and Task Assignment form.

Rolling Slowdowns. WSP typically conducts any rolling slowdown, particularly on freeways. The WSP troopers are skilled in the techniques used to implement the operation and their presence adds a high level of compliance. Use of WSP for rolling slowdowns requires an approved TCP and Task Assignment form. The WSP should be notified of any rolling slowdown or stop operation, even if they are not conducting it.

Short term Traffic Stops. This operation is a variation of the rolling slowdown and the use of WSP is advised. An approved TCP and Task Assignment form is needed.

Toolbox (Exhibit 1). This list provides guidance on the appropriate use of WSP or other law enforcement in work zones.

Sign and Radio Equipment

Specialized signing and radio equipment is often used in a work zone to provide current and pertinent information to drivers. Driver compliance to these messages is increased by the use of WSP enforcement. Consider use of special signs when WSP speed enforcement is part of the work zone strategy. The Region Traffic office or work zone specialist can assist with use of special equipment and appropriate messages.

Portable Changeable Message Sign (PCMS). PCMSs display work zone information to drivers and send safety, enforcement and compliance messages. PCMSs are available with optional radar speed detection and display equipment.

Following are example PCMS messages to display when using WSP assistance or enforcement. A minimal level of enforcement will be needed to validate the message.

“WORK ZONE AHEAD – SPEED LIMIT ENFORCED”

“WORKERS ON ROAD – SPEED LIMIT ENFORCED”

“WORK ZONE AHEAD – WSP PATROLED”

“WORK ZONE AHEAD – ACTIVE WSP PATROL”

**“YOUR SPEED IS XX – SPEED LIMIT ENFORCED”

**“YOUR SPEED IS XX – SLOW DOWN”

** These messages are for use with a PCMS sign with incorporated radar.

Speed Display Signs. The units are available separately or as an option for a PCMS. Radar speed detection equipment measures an approaching vehicle’s speed and displays it on the sign’s message panel. The speed can be accompanied by a message of “YOUR SPEED IS XX.” Studies show that most drivers will check and adjust their speed when provided this clear message.

Use these devices when active enforcement is in place; effectiveness is reduced when drivers see no consequence associated with their speed.

Portable Highway Advisory Radio (PHAR). These portable radio stations are used to broadcast messages to drivers regarding roadway restrictions, detours, or other work zone impacts. Enforcement and safety messages strengthen WSP efforts to enforce traffic laws in the work zone.

“Double Fines in Work Zones” Signs. The WSP encourages the use of these signs in our work zones. Although the signs are not required to enforce the “double fines” law, they can be an effective reminder to drivers and provide the WSP with a “no excuse” back-up when issuing a work zone citation. Install “double fines” signs at strategic locations, usually in advance of the work zone, or where side traffic enters the work zone.

Procedures for Incorporating Use of WSP Assistance or Enforcement

Project Scoping. Use of WSP enforcement and assistance must be determined and coordinated at the Project Development phase as part of the TMP. Early planning secures adequate funding and ensures WSP resource availability. A preliminary cost estimate is developed using \$75/hour (which includes the trooper and vehicle).

Project Design. The work zone design strategy identifies specific uses of WSP assistance or enforcement. A more complete cost estimate is prepared to identify the dollar amount attached to the project. Average cost rates are shown in Agreement GC 5080 (Exhibit 2) and are applied to the number of estimated hours. A Task Assignment (Exhibit 3, WSDOT Form 130-020EF) showing costs and assigned WSP activities must be completed and processed prior to advertisement of the project, to establish the reimbursement work order.

Local WSP representatives should always be invited to the work zone design strategy meeting even if specific WSP assistance is not anticipated.

Enforcement activities are managed by WSDOT, but are not part of the contract work items.

Project PS&E. Traffic control plans are required for specific WSP traffic control assistance. Typical operations requiring TCP's are rolling slowdowns, traffic stops, intersection flagging or similar assignments. The *Work Zone Traffic Control Guidelines* M 54-44 are used as a reference during plan development. Do not develop TCP's for routine enforcement operations.

Project Construction. The local WSP representative is included in the preconstruction meeting. Their input is valuable and it is important that they are aware of the project and how it might impact traffic operations, safety and mobility. Projects with WSP assistance or enforcement need to have a TMP strategy meeting to discuss specific project assignments, schedules, report forms, communication contacts and expectations.

Maintenance. Regional maintenance divisions may establish a standing Task Assignment agreement (considered a "best practice"). This allows for a quick response by the WSP if needed, with the paperwork already in place.

Emergency Response and Incidents Within a Work Zone. WSP responds to emergencies and incidents in work zones, just as in regular roadway sections. If incidents or emergencies occur in the work zone contact WSP if they are present; otherwise call 911. Do not resume the same work zone activity until it is determined if the traffic control needs to be revised or protective measures added. If WSP activities are not directly related to work zone features or project traffic control, costs incurred will be covered by the WSP.

Ensure that flaggers and others working at isolated areas in the work zone have a means of communication with the WSP.

Agreement GC 5080 (Exhibit 2)

This agreement between WSDOT and WSP is the legal document that allows WSDOT to reimburse WSP for costs associated with assigned work zone enforcement or assistance.

Task Assignment Form 130-020EF (Exhibit 3)

The Task Assignment form is completed to assign specific work zone activities to the WSP. It also connects WSDOT reimbursement to a specific work order. The Task Assignment form must be approved and signed by the Agreement manager, Region approving authority, and WSP prior to requesting WSP presence on the roadway.

The following steps provide a “walk through” on completing the Task Assignment:

Each Region assigns a person the duties of Task Agreement Manager; typically this is the Work Zone Specialist in the Traffic office. The Task Agreement Manager requests the agreement number for the Task Assignment from the Headquarters Traffic Office fiscal manager. Do this via email to provide a written record of the request. Include the project name and route number, Contract or Work Order number, if known, and estimated dollar amount.

Once the task number is assigned, the Task Assignment form can be filled out by the Region Task Agreement Manager and signed by both WSP and WSDOT. The WSDOT signature is typically a Region Construction Engineer and the WSP signature is from their Budget and Fiscal manager (Mailstop 42602). Two originals are required, one for WSP and one for WSDOT.

A signed original Task Assignment must be submitted to WSDOT Headquarters Budget Office. Copies are to be sent to Region Program Management, the Project Engineer’s Office administering the project, the Region Accounting Office, and the Region Traffic Office.

The Region accounting office reimburses WSP per the Task Assignment Agreement.

For use of local agency law enforcement personnel, the Region Local Programs office develops a project specific agreement between WSDOT and the agency to establish procedures for use and reimbursement.

WSP Field Checklist Form 421-045 EF (Exhibit 4)

The WSP field checklist is filled out by the project inspector. Use of the form establishes the “on the job” expectations for the work to be performed by the WSP trooper. To ensure effective enforcement or assistance work, discuss the specific details with the trooper, including any suggestions the trooper may offer.

Schedule. On each project, identify the person who will coordinate with the WSP to schedule troopers. In some Regions scheduling is done by the individual project office administering the contract. In other Regions the traffic office is the primary scheduling contact. This communication should be established prior to the project to avoid confusion and overlapping of duties. The WSP contacts can be identified at the preconstruction meeting or from the WSP Contact List in this document (Exhibit 5).

To ensure troopers will be available, secure scheduling as soon as possible. Cancel only when necessary; this may include incidents of inclement weather, work stoppage, etc. A 2-hour minimum call out is required when assigning troopers for a project.

Field Monitor and Adjust the Work Zone. The field engineer or project inspector should meet with the assigned WSP trooper(s) at the beginning of each shift to determine communication methods and to discuss the WSP tasks for the work operation. The goal is to have steady, balanced traffic flow through the work area.

The project inspector monitors the traffic control operation and the WSP enforcement or assistance activities. If there is excessive braking, queuing of traffic, etc. due to the WSP presence then adjustments may be necessary.

Additional Resources

Work Zone Speed Reductions D 55-20

Standard Specifications, Section 1-10

General Special Provisions, Division 1-10

WSDOT/WSP joint operating procedures (JOPs)

WSP Work Zone Enforcement and Assistance “Toolbox”

Exhibit 1

The Work Zone Safety Task Force has developed this toolbox to provide guidance on the appropriate use of WSP troopers in work zones. The toolbox is intended to be used as a quick reference to common procedures and the appropriate category for use. Use of the WSP checklist (Form 421-045 EF) is required on individual contracts, but is not needed when WSP use is part of a Region-wide enforcement emphasis. The Task Assignment (Form 130-020 EF) must be approved and funded prior to WSP use.

The following specific assignments for WSP are allowed as listed below.

Recommended

- Enforcement Emphasis – **The most effective overall strategy is active enforcement in the work zone.**
- Signalized intersection control in lieu of flaggers, signal off or on all-red flash.
- Rolling slowdowns or temporary stopping of traffic.
- Full closures of roadways that are high-volume or at high risk for motorist intrusion.
- During installation and removal of traffic control devices. (WSP trooper on the shoulder in advance of the first traffic control device, not as a buffer vehicle).
- To control access points where motorists could follow construction vehicles into the work zone.

Not Recommended

The following tasks are not recommended as efficient use of WSP assistance and are generally not allowed. Short term use may be considered, but not an ongoing strategy.

- General or routine use, especially with no significant traffic impacts expected.
- Passive use (vehicle parked near or inside work zones with blue or yellow lights flashing). WSP presence is not a substitute for proper traffic control.
- Shoulder or HOV closures.
- Single-lane closure on a multi-lane highway unless significant traffic impacts are likely.
- Single-lane closure on a two-lane highway.
- A ramp closure without other traffic control devices.
- WSP vehicles are not buffer vehicles and shall not be the first vehicle in the lane when setting up or removing traffic control.

00707666SC

AGREEMENT 5080
STATEWIDE WORK ZONE ENFORCEMENT and TRAFFIC CONTROL ASSISTANCE
AGREEMENT BETWEEN WSDOT and WSP

THIS AGREEMENT is made and entered into this 22 day of February 2008, by and between the State of Washington, Department of Transportation, hereinafter called the "WSDOT," and the Washington State Patrol, hereinafter called the "WSP," referred to collectively as the "PARTIES" and individually as the "PARTY."

WHEREAS, WSDOT and the WSP first entered into Agreement GC 9131 on July 1, 1991 for the purpose of having WSP provide traffic control in WSDOT work zones, and

WHEREAS, GC 9131 needs to be superseded to reflect the PARTIES current agreement, and

WHEREAS, WSDOT, as it deems necessary, desires WSP to provide traffic control in work zones where project work may disrupt the smooth flow of traffic, increase the risk of crashes to the traveling public, and/or increase hazards to roadway workers, and

WHEREAS, WSDOT may not at times have sufficient trained personnel in traffic control available to provide the needed traffic control for safe highway project operations for the benefit of the traveling public and roadway workers, and

WHEREAS, WSDOT does not have the authority to enforce traffic laws, and

WHEREAS, WSP is also concerned with the safety of the traveling public and roadway workers and agrees to provide the additional traffic control as needed by the WSDOT and as provided under this AGREEMENT, and

WHEREAS, the PARTIES deem it to be in the public's best interest for WSP to be present in the work zones to enforce traffic laws and to assist WSDOT with traffic control when requested by the WSDOT,

NOW, THEREFORE, by virtue of chapter 39.34 RCW, and in consideration of the terms, conditions, covenants and performance contained herein,

IT IS MUTUALLY AGREED AS FOLLOWS:

1. WSP RESPONSIBILITIES

1.1 WSP agrees to furnish uniformed officers, vehicles and associated equipment to assist the WSDOT in traffic control operations, hereinafter the "WORK," when requested by WSDOT. The WORK to be assigned to WSP under this AGREEMENT may include, but is not limited to, the following: work zone traffic enforcement; rolling slowdowns; flagging; controlling pedestrians, spectators and participants; controlling signalized intersections; and controlling traffic in restricted lane situations and/or providing support during ramp, lane or road closures.

1.2 The officers provided by WSP, under the terms of this AGREEMENT, shall be under the sole direction, management and control of the Chief of the WSP or his/her designee and shall perform the WORK required by this AGREEMENT in a manner consistent with WSP policy and regulations, applicable state and local laws, and the Constitutions of the State of Washington and the United States.

1.3 The assignment of uniformed officers to accomplish the WORK under this AGREEMENT shall be at the discretion of the Chief of the WSP or his/her designee.

2. SCOPE OF WORK

2.1 The PARTIES agree to enter into separate Task Assignments for the WORK performed under the terms of this AGREEMENT. WSDOT may assign WORK to the WSP only as authorized by an agreed upon and executed Task Assignment. Task assignments shall be made in writing and shall at a minimum include: date, time, and location of WORK; number of personnel and type of equipment needed; estimated hours per day required; estimated number of days required; and name, location and phone number of WSDOT contact in charge of the WORK. WSDOT Traffic Manual (M51-02) outlines the process for developing the Task Assignment.

2.2 If time or circumstances do not permit preparation of a written Task Assignment *prior* to the start of WORK, WSDOT may verbally authorize WSP to proceed with WORK and document this authorization in a written Task Assignment within 72 hours after the verbal authorization is given. The PARTIES agree that the terms and conditions of this AGREEMENT shall be in full force and effect with any verbal authorization to start WORK prior to entering into a written Task Assignment.

3. PAYMENT AND RECORDS

3.1 WSDOT, in consideration of faithful performance of the WORK to be performed by WSP, agrees to reimburse WSP for the actual direct and related indirect costs in accordance with a work order accounting procedure as prescribed and approved by the Office of Financial Management for all reimbursable work requested by WSDOT.

3.2 Costs for WORK under this AGREEMENT are likely to be included in requests to the Federal Highway Administration for reimbursement of project costs; therefore, WSP agrees to follow the rules of the Office of Management and Budget (OMB) Circular A-87. In particular, WSP shall follow A-87, regarding equitable distribution of indirect costs and the provisions for costs of Interagency Services (sections F and G of A-87). All labor costs billed to WSDOT by WSP shall comply with WSP regulations and policies relating to employee compensation.

GC – 9131
Page 2 of 5

3.3 WSP may make requests for payment at any time, but such requests shall not be more frequent than once per month. Payment shall be made by WSDOT to WSP within (30) days following the date the invoice is received.

3.4 WSP agrees to submit a final invoice to WSDOT within sixty (60) days after notification by WSDOT that WSP's services for the WORK under a Task Assignment are no longer required.

3.5 WSDOT will reimburse WSP for actual hours worked by WSP officers or a minimum of 2 overtime hours for each WSP officer called out from an off-duty status to provide WORK under this AGREEMENT. WSDOT will reimburse WSP for overtime salaries and benefits; indirect costs at WSP's federally approved current indirect rate; and mileage at WSP's current rate. Two examples of the overtime cost rates for staff typically assigned to this type of WORK are as follows:

WSP Trooper (w/ 10 years service):
O.T. rate w/ 35% Indirect Costs (i.e. overhead) \$60.31

WSP Sergeant (w/ 15 years service):
O.T. rate w/35% Indirect Costs (i.e. overhead) \$70.74

3.6 WSP will be paid mileage for its vehicles at WSP's approved rate which is currently \$0.48/mile. WSDOT acknowledges that the WSP approved rate is higher than the Office of Financial Management approved mileage rate for privately owned vehicles.

3.7 For the purposes of estimating costs of providing the requested WORK, the all inclusive (labor, vehicle, mileage) amount of \$75.00 per hour shall be used when preparing WORK estimates.

3.8 During the progress of the WORK and for a period of not less than three (3) years from the date of the final Task Assignment payment to the WSP, the records and accounts pertaining to the WORK under this AGREEMENT and accounting therefore are to be kept available for inspection and audit by WSDOT and/or the Federal Government and copies of all records, accounts, documents, or other data pertaining to this AGREEMENT WORK shall be furnished upon request. If any litigation, claim, or audit is commenced, the records and accounts along with supporting documentation shall be retained until all litigation, claim, or audit finding has been resolved even though such litigation, claim, or audit continues past the 3-year retention period.

4. EXTRA WORK AND AMENDMENTS

4.1 In the event unforeseen conditions require an increase in the costs of a specific Task Assignment by twenty-five percent (25%) or more, or a change in scope of the WORK to be accomplished in connection with a specific Task Assignment is required, the PARTIES agree to amend the Task Assignment in writing to cover the increase or change.

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Page 3 of 5

5. AGENCY REPRESENTATIVES

5.1 WSDOT's representative under this AGREEMENT shall be the Region Administrator of the WSDOT Region for which the WORK is being performed or an appointed representative; except in the case of oversize loads, WSDOT's representative shall be located at WSDOT Headquarters Maintenance and Operations Division in Olympia. These representatives shall be responsible for requesting the WSP provide WORK and shall be responsible for verifying and processing billings for payment. WSP's representative shall be the Headquarters Duty Officer or his/her designee.

6. ADMINISTRATION OF WORK

6.1 WSDOT shall follow the requirements of WSDOT's policy and procedures contained in the WSDOT Traffic Manual Chapter 5 throughout the process of assigning, implementing and compensating for WSP traffic control. Task Assignments must be authorized by the designated WSDOT manager prior to beginning work or within 72 hours for unforeseen or emergency conditions.

7. TERMINATION

7.1 Either PARTY to this AGREEMENT may terminate this AGREEMENT by giving thirty (30) days written notice to the other PARTY. In the event that this AGREEMENT is terminated, such termination shall also terminate all outstanding Task Assignments. The WSP shall be entitled to recover its costs as provided under this AGREEMENT for WORK provided up until the termination date of this AGREEMENT and any Task Assignment.

7.2 WSDOT will initiate a biennial review of this AGREEMENT to ensure that it is kept current.

8. GENERAL PROVISIONS

8.1 Independent Contractor: WSP shall be deemed an independent contractor for all purposes under the terms of this AGREEMENT or any Task Assignment. WSP officers and employees shall not be deemed employees, agents or representatives of WSDOT.

8.2 Amendment: This AGREEMENT may be amended by the mutual agreement of the PARTIES. Such amendment or modifications shall not be binding unless they are in writing and signed by persons authorized to bind each of the PARTIES.

8.3 Disputes Resolution: In the event that a dispute arises under this AGREEMENT which cannot be resolved between the PARTIES, the dispute shall be settled in the following manner: Each PARTY to this AGREEMENT shall appoint a member to a dispute board. The members so appointed shall jointly appoint a third member to the

dispute board who is not employed by or affiliated in any with the two PARTIES to this AGREEMENT. The dispute board shall evaluate the facts, contract terms, and applicable statutes and rules and make a determination of the dispute. The determination of the dispute board shall be final and binding on the PARTIES hereto All costs associated with the appointment of the third party to the disputes board shall be split evenly between the two PARTIES. As an alternative to this process, either of the PARTIES may request intervention by the Governor, as provided by RCW 43.17.330, in which event the Governor's process will control.

8.4 Venue: In the event that a PARTY deems it necessary to institute legal action or proceedings to enforce any right or obligation under this AGREEMENT, the PARTIES hereto agree that any such action or proceedings shall be brought in Thurston County Superior Court.

IN WITNESS WHEREOF, the PARTIES hereto have executed this AGREEMENT as of the day and year first above written.

WASHINGTON STATE PATROL

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

Paul S. Beckley
Signature

Ted Trepanier
Signature

1-27-07
Name Date

TED TREPANI ER 2/22/07
Name Date

Approved as to form
1/17 2007

Approved as to form
12-22 2006

BY: Sharan Singh
Assistant Attorney General

BY: Paul E. Salay
Assistant Attorney General



**Washington State
Department of Transportation**

Task Assignment

NOTE: This form cannot be used for "Y" Agreements

All terms and conditions of this agreement are in full force and effect for this Task Assignment document.

Agreement No.
(To be filled in by Agreement Manager)

On-Call Agreement Manager Information

Task No.

Agreement Manager	Phone	Org.	Mailstop
Mailing Address			

Project Manager Information

Project Manager	Phone	Org.	Mailstop
Mailing Address			

Project Information

Project Title	
State Route No(s).	County(s)

Task Schedule

Task Start Date	Task End Date
-----------------	---------------

← No payment will be made for work done **PRIOR** to Task Start Date or for work done **AFTER** Task End Date

Task Cost

This section required if there is Fed. Aid Part.

Work Order No.	Org. Code	Amount	Fed. Aid Part.?	Fed. Aid Project No.	Fed. Aid Part. %
			<input type="radio"/> Yes <input type="radio"/> No		
			<input type="radio"/> Yes <input type="radio"/> No		
			<input type="radio"/> Yes <input type="radio"/> No		
			<input type="radio"/> Yes <input type="radio"/> No		
			<input type="radio"/> Yes <input type="radio"/> No		
			<input type="radio"/> Yes <input type="radio"/> No		
			<input type="radio"/> Yes <input type="radio"/> No		
			<input type="radio"/> Yes <input type="radio"/> No		
			<input type="radio"/> Yes <input type="radio"/> No		
			<input type="radio"/> Yes <input type="radio"/> No		
			<input type="radio"/> Yes <input type="radio"/> No		
			<input type="radio"/> Yes <input type="radio"/> No		

Total Task Amount →

Prime Consultant	Contact		
Address			
Phone	Fax	E-Mail	Federal I.D. No.
Are there any Subconsultants working on this project? <input type="checkbox"/> Yes <input type="checkbox"/> No			
If Yes, complete the Subconsultant Worksheet and return with signed Task Assignment.			

Approval Signatures ****Note: Two original signed Documents are required.****

_____	_____
Consultant	Washington State Department of Transportation

Agreement Manager	

DOT Form 130-020 EF
7/08

Scope of Task Assignment

Provide description of work and reference attachments for prime consultant and all subconsultants (to include detailed description of work schedule and estimate).

Agreement No.
Task No.

Report Due Date

Distribution: Originals: Consultant Copies: File Consultant Services
 Accountant Task Manager Other _____

DOT Form 130-020 EF
7/08



WSP Field Check List

Today's Date:

To be Completed by WSDOT Inspector			
Contract No.	SR	Begin WSP Shift	End WSP Shift
Milepost		Date	
From	To	Time	
Title		<input type="radio"/> AM <input type="radio"/> PM	<input type="radio"/> AM <input type="radio"/> PM
Project Engineer		WSP Task Order No.	
WSDOT Onsite Contact		Field Phone (include area code)	
Traffic Control Strategy Meeting Location		Attended By	
Traffic Control Strategy (review with WSP officer)			

To be Completed by WSP Officer - Return Completed Form to WSDOT Inspector	
Percent of Time	Duties
_____	Assistance in traffic control setup and takedown (blue lights)
_____	Passive presence (yellow lights)
_____	Proactive patrol in work zone (blue lights)
_____	Ramp closures (yellow lights)
_____	Lane closure (yellow lights)
_____	Road closure (yellow lights)
_____	Detours (yellow lights)
_____	Other duties as outlined in Strategy Session (above)

Is a second officer needed for similar work in the future? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Suggestions For Traffic Control Improvements (mandatory):	

Total Violators Contacted	No. of Accidents Within Work Zone
WSP Officer Name	WSP Badge No.

DOT Form 421-045 EF Revised 2/97

Distribution: White - Project Engineer; Canary - Regional Traffic; Pink - WSP

WSP Statewide and District Contacts

The website for the WSP is www.wsp.wa.gov

Overtime Coordinator – Each district has an overtime coordinator to establish the call out list for troopers available for projects.

WSP Administrative Headquarters

General Administration Building
PO Box 42600, Olympia WA 98504-2600
(360) 753-6540 (Budget & Fiscal Manager, signs Task Assignment)
WSP Contracts coordinator (360) 753-0692, administers
Task Assignments.

District 1 Headquarters and Communications – Tacoma

State of Washington Combined Transportation Center
2502 112th Street East, Tacoma, WA 98445-5104 (253) 536-6210

Detachments:

Olympia/Thurston County
222 Tumwater Boulevard, Building 16,
PO Box 42640, Tumwater, WA 98504-2640 (360) 586-4443

District 2 Headquarters and Communications – Bellevue

2803 156th Ave SE, Bellevue, WA 98007-6523 (425) 649-4370

Detachments:

Enumclaw
333 Griffin Ave, Enumclaw, WA 98022 (360) 825-6154
North Bend
134 Sydney Ave, PO Box 1127, North Bend, WA 98045 (425) 888-1116
Seattle North
811 E Roanoke, Seattle, WA 98102 (206) 720-3040
Seattle South
15666 International Blvd, Seattle, WA 98188-6523 (206) 439-3830

District 3 Headquarters – Union Gap

2715 Rudkin Road, Union Gap, WA 98903 (509) 575-2320

Detachments:

Kennewick
143302 East Law Lane, Kennewick, WA 99337-2011 (509) 734-7029
Sunnyside
173905 West Interstate 82, Grandview, WA 98930 (509) 882-9945
Walla Walla
406 Wellington, Walla Walla, WA 99362 (509) 527-4413

District 4 Headquarters and Communications – Spokane

6403 W Rowand Rd, Spokane, WA 99224-5300 (509) 227-6566

Detachments:

Colfax

840 W. Fairview St, Colfax, WA 99111-9515 (509) 397-3600

Colville

751 S. Main, Colville, WA 99114-2704 (509) 684-7431

Ritzville

1563 E Gun Club Rd, Ritzville, WA 99169-9713 (509) 659-1210

Spokane Port of Entry

RR1 Westbound I-90, Milepost 299, (509) 226-3366,

Liberty Lake, WA 99019-9801

District 5 Headquarters and Communications – Vancouver

11018 NE 51st Circle, Vancouver, WA 98682-6686 (360) 260-6333

Detachments:

Chehalis

850 NW Louisiana Ave, Chehalis, WA 98532 (360) 748-2194

Goldendale

PO Box 105, Goldendale, WA 98620 (509) 773-3775

Kelso

1823 Baker Way, Kelso, WA 98626 (360) 578-4147

Morton

342 Morton Road, Morton, WA 98356 (360) 496-3323

District 6 Headquarters and Communications – Wenatchee

2822 Euclid Ave, Wenatchee, WA 98801-5916 (509) 663-9721

Detachments:

Cle Elum Scale (CVD)

PO Box 550, Cle Elum, WA 98922 (509) 674-9704

Ellensburg

291 Thorp Hwy S, Ellensburg, WA 98926 (509) 925-2698

Moses Lake

101 Laguna, Moses Lake, WA 98837-0151 (509) 765-6175

Okanogan

PO Box 486, Okanogan, WA 98840-0486 (509) 826-7400

District 7 Headquarters and Communications – Marysville

2700 - 116th Street NE, Marysville WA 98271-9425 (360) 658-2588

Detachments:

Bellingham

3860 Airport Way, Bellingham, WA 98226-8040 (360) 676-2007

Burlington

10945 Chuckanut Dr., Burlington, WA 98233 (360) 757-7553

Monroe

909 W. Main St., Suite 1A, Monroe, WA 98272-2031 (360) 805-1153

Oak Harbor

840 SE 8th Ave., #101, Oak Harbor, WA 98227-2996 (360) 675-0710

Silverlake

Interstate 5, Silverlake, WA 98204 (425) 514-5444

District 8 Headquarters and Communications – Bremerton

4811 Werner Road, Bremerton, WA 98312-3333 (360) 478-4646

Detachments:

Hoquiam

3111 Pacific Ave, Hoquiam, WA 98550-4222 (360) 533-9332

Naselle

797 State Route 4, Naselle, WA 98638 (360) 484-3130

Port Angeles

62 Old Olympic Hwy, Port Angeles, WA 98362-9121 (360) 417-1738

Poulsbo

22065 Viking Way NW, Poulsbo, WA 98370-9451 (360) 478-4646

Shelton

629 W. Dayton Airport Road, Shelton, WA 98584-8945 (360) 427-2180

6.1 General

Traffic regulations enhance safety and operating efficiency on state highways, county roads, or city streets by placing enforceable operating restrictions on the use of the public roadway. A traffic regulation is either established in state law (RCW 46.61, Rules of the Road) or is warranted based on data from an engineering and traffic investigation of traffic conditions at the proposed location. The guidelines in this chapter explain specific regulations and identify the information needed to establish or modify a traffic regulation.

The Rules of the Road (RCW 46.61) regulate basic traffic movements on public roads including:

- maximum speeds
- lane use
- vehicle restrictions
- stop control
- turning movement restrictions
- assignment of right of way
- parking

A traffic regulation other than the Rules of the Road may be implemented only after an official action by the appropriate jurisdictional authority. For state highways, a proposed traffic regulation (or modification) is submitted for action to either the Regional Administrator or the State Traffic Engineer, depending on the delegation of authority, and is reviewed as a “Calendar Agenda” item on the Regional Administrator or State Traffic Engineer’s schedule.

Where city streets are part of managed access state highways, a city or town ordinance establishes speed limits, parking restrictions, stop control, and turn prohibitions. The department must approve any regulation that is not identical to state law before it becomes effective (RCW 46.61.415 and RCW 47.24.020(11)).

A. Regional Traffic Regulations Approved by Regional Administrator

- Traffic signal installation permits on state highway system.
- Reduced speed limits in construction or maintenance zones.
- Regulatory speeds in rest areas, weigh stations, and ferry terminals.
- Stop control on state highways.

- Turn prohibitions and restrictions.
- Pedestrian prohibitions on partial or modified access control highways.
- Roadside parking restrictions (except for angle parking).
- Tow-away zones along freeways.
- Prohibitions on fishing or jumping from bridges.
- Emergency or construction closures and weight restrictions.

B. Headquarters Traffic Regulations Approved by State Traffic Engineer

- Regulatory speeds (outside construction and maintenance work zones) including 20 mph school speed zones established under RCW 46.61.440(2).
- Bicycle prohibitions on limited access highways.
- Truck restrictions (including trucks hauling hazardous material).
- HOV lane designations.
- Angle parking on state and federal-aid highways.
- Parking restrictions for park and ride lots and other parking facilities.
- Regulation of sales within state parking facilities.
- Permanent weight restrictions.

6.2 Documentation

Permanent traffic regulation records are maintained in the office of the designated approving authority.

Each traffic regulation or modification is submitted by the Regional Traffic Engineer to either the Regional Administrator or the State Traffic Engineer on a Calendar Agenda Form (Figures 6-1 and 6-2). The regulation's approval or denial is recorded on the form, which provides the necessary official documentation of the regulatory action.

Additionally, as outlined in this chapter, retain a summary of the engineering and traffic investigation and other data to support and document the regulation.

Informational copies of completed calendar agenda actions are exchanged between the state and region Traffic Offices. Copies are also provided to the Washington State Patrol (WSP) and appropriate local agency.

Inventories of traffic regulations are maintained in the office of the designated approving authority.

6.3 Regional Traffic Regulations

Some types of traffic regulations address specific local traffic and geometric characteristics, without statewide implications. The Regional Administrators are delegated the authority to approve those regulations, which include the following:

- A. **Traffic Signal Installation Permits.** Traffic control signals are addressed in the *Manual of Uniform Traffic Control Devices (MUTCD) M 24-01, Part 4*. Discussion includes advantages and disadvantages of signals, possible alternatives to signals, and the warrants under which signals are justified.

Signal permits are required for the following signal types, prior to installation:

- conventional traffic signals
- emergency vehicle signals
- hazard identification beacons, when installed overhead at an intersection
- intersection control beacons
- lane control signals
- movable bridge signals
- portable signals
- ramp meter signals
- pedestrian signals
- temporary signals
- school crossing signals

Permits are **not** required for:

- hazard identification beacons that are not installed overhead at an intersection
- speed limit sign beacons
- stop sign beacons
- lane assignment signals at toll facilities

Complete an engineering and traffic investigation of the proposed signal location to determine if a traffic signal is warranted per the MUTCD. If a signal is warranted, submit a Calendar Agenda Form (Figure 6-1) with the documentation below to the Regional Administrator for approval. Include:

- A vicinity map showing SR/MP location of the proposed signal, and a detailed sketch showing traffic volumes, lane distribution, and other data relative to the request.

- Photos of the location and surrounding area, if possible.
- A complete warrant analysis per MUTCD, Section 4C based on accurate traffic volumes, collision experience, and other traffic conditions.
- A capacity analysis and other justification if volume warrants are not met but a signal appears necessary to resolve operational problems.
- Collision data summary for the last three years and whether the proposed signal location is at a High Accident Location (HAL), High Accident Corridor (HAC), or Pedestrian Accident Location (PAL) or is scheduled for improvement in the latest priority array.
- A statement detailing local agency funding and maintenance responsibilities, if applicable.
- All city, county, fire district, and citizen requests, along with copies of other pertinent documents and correspondence.
- The history of previously tried corrective countermeasures.
- Other supporting data such as proximity to schools, shopping centers, pedestrian traffic, etc.
- A Signal Application Checklist (Figure 6-3).

Once a signal is approved, a Statewide Signal Permit Inventory number is obtained from Headquarters and noted in part “F” on the permit form (Form 242-014). Send a copy of the completed permit to Headquarters for final documentation.

Where signal removal is being considered, refer to Section 6.6, Rescinding Existing Traffic Regulations.

- B. Reduced Regulatory Speed – Construction/Maintenance Zones.**
The Regional Administrator may reduce speed limits in construction or maintenance zones, following the complete guidelines given in Directional Document D 55-20.
- C. Regulatory Speeds in Rest Areas, Weigh Stations, and Ferry Terminals.** The department is authorized (RCW 46.61.405) to set speed limits on any part of the highway system and at ferry terminals. Rest areas and weigh stations are included in the definition of a state highway (RCW 46.04.197). Identify appropriate speed limits through an engineering and traffic investigation that considers:
- existing speed characteristics
 - foot traffic patterns
 - geometric elements
 - congestion
 - operational conflicts

Field observation during periods of heavy use is necessary to determine these characteristics.

The Rules of the Road (RCW 46.61.415) state that speed limits on local roadways cannot be posted at lower than 20 mph. Additionally, school zones are posted at 20 mph, recognizing the high volume of juvenile pedestrian traffic and inherent congestion and conflicts. This suggests that 20 mph is a good starting point when considering an appropriate speed limit. Lower or higher speeds may be determined based on the engineering and traffic investigation.

Submit regulatory speed limit requests for these locations as a calendar agenda item to the Regional Administrator. Include data collected from the engineering and traffic investigation to support the request.

D. Stop Control on State Highways. All state highways are considered arterials and entering traffic must stop when signs are posted (RCW 46.61.195). Most intersections of a state highway and a county road or city street are controlled by a stop sign posted on the local roadway. However, stop control can be installed on the state highway approaches if it will improve the intersection operation and if the traffic volume on the local roadway is equal to or higher than the state highway volume. The specific provisions regarding stop control are:

- The department is responsible for STOP or YIELD signs on county road approaches to state highways and on city street approaches in cities and towns under 25,000 population.
- The department can designate a county road or city street as an arterial having preference over the state highway if it will improve traffic conditions.
- An incorporated city or town may pass an ordinance designating a city street as an arterial having preference over a state highway, if approved in writing by the department. The city or town is then responsible for the STOP or YIELD signs. (RCW 46.61.195 does not specify a population threshold; therefore any city or town may exercise this authority.)
- Vehicles entering arterials from all other public or private roadways must stop before entering, when STOP signs are posted on the approach.

Respond to requests for state highway stop control by conducting an engineering and traffic investigation to determine if it is warranted at the subject location. Consider a multi-way STOP if approach volumes are approximately equal or if a collision analysis shows collisions which are correctable by multi-way stops (i.e., angle collisions). See MUTCD, Section 2B.07.

Document the investigation and submit the proposed regulation to the Regional Administrator as a calendar agenda item. Include:

- A vicinity map and detailed strip map showing SR/MP location of the intersection, together with the total traffic volumes and approach distributions.
- A description of the operational problems (such as limited sight distances) which identify the need for stop control, including any history of previously tried corrective measures.
- A study of the last three years' collision history, including whether the location is a High Accident Location (HAL), High Accident Corridor (HAC), or Pedestrian Accident Location (PAL) or is scheduled for improvement in the latest priority array.
- A city or town ordinance, as required for city streets which are part of state highways.
- Copies of city, county, and/or citizen requests along with other pertinent documents and correspondence.
- Copies of WSP and/or local police agency concurrences.

E. **Turn Prohibitions and Restrictions.** Specific turning movements may be prohibited or restricted by traffic regulation to reduce potential conflicts or improve the operational characteristics of an intersection or business access.

Turn prohibitions or restrictions which are established in the Rules of the Road or clearly defined by design elements (MUTCD, Section 2B.19, Option) do not need a traffic regulation. All other turn prohibitions or restrictions require a traffic regulation.

Conduct an engineering and traffic investigation of the subject location; document the investigation and submit the proposed regulation to the Regional Administrator as a calendar agenda item. Include:

- A vicinity map and intersection sketch showing the SR/MP location together with the total traffic volumes, approach lane distributions and turning volumes.
- Descriptions of operational problems which identify the need for the regulation, such as pedestrian movements, large truck turning radii, or lack of adequate gaps.
- The alternate routing intended to accommodate the turn-restricted traffic. Convenient and strategic alternate routing is necessary to minimize the likelihood that a driver will ignore the prohibition.

- A study of the last three years' collision history, including whether the location is a High Accident Location (HAL), High Accident Corridor (HAC), or Pedestrian Accident Location (PAL) or is scheduled for improvement in the latest priority array.
- Copies of city, county, and/or citizen requests along with other pertinent documents and correspondence.
- A city or town ordinance as required for city streets which are part of state highways.
- Copies of WSP and/or local police agency concurrences.
- Photos or video, if available.

F. Pedestrian Prohibitions on Partial or Modified Access Control

Highways. The department is authorized to prohibit non-motorized traffic (e.g., pedestrians) on any limited access highway (RCW 46.61.160 and 47.52.025). Pedestrians are prohibited only on highways with full access control (WAC 468-58-050). Therefore, on highways with partial or modified access control, a specific traffic regulation is required to prohibit pedestrian traffic. A prohibition is only considered when an engineering and traffic investigation determines that pedestrians have an alternate and safer route. It is not WSDOT policy to close pedestrian access when no feasible alternate route exists.

Prohibitions are appropriate along partial and modified access controlled highways in areas having the appearance of full access control, in areas where parallel pedestrian routes are available, locations on a Pedestrian Accident Location (PAL) list, and other areas where pedestrians on the shoulder create a potential hazard to themselves or vehicular traffic.

Document the investigation and submit the proposed regulation to the Regional Administrator as a calendar agenda item. Include:

- A vicinity map of the area showing proposed prohibition limits and alternate pedestrian routes.
- Traffic volumes.
- Collision history for the past three years including any pedestrian involvements.
- Summary statement detailing need for prohibition.
- Photos or video, if available.

G. Roadside Parking Restrictions. The Rules of the Road, (RCW 46.61.560 through 46.61.590) provide specific parking restrictions that are effective at all times along public roadways. When the region considers additional parking restrictions, conduct an engineering and traffic investigation to determine the need.

Document the investigation and submit the proposed regulation to the Regional Administrator as a calendar agenda item. Include:

- A detailed strip map of the area showing SR/MP, intersecting streets and driveways, and other on-street or off-street parking alternatives.
- Photos or video if available.
- The type of restriction requested (i.e., time of day, mid-block to corner).
- An analysis of operational problems, such as narrow shoulders or limited sight distances, that identify the need for the regulation.
- Copies of a city or town ordinance, as required for city streets which are part of state highways.
- Correspondence or comments regarding adjacent property and business owners' parking requirements and their concurrence with the regulation.
- Copies of WSP and/or local police agency concurrences.

H. **No Parking/Tow-Away Zones Along Freeways.** A “no parking/tow-away zone” along a freeway may be established where there is an operational problem or collision history associated with vehicles parked on the shoulder. The Washington State Patrol (WSP) typically identifies suggested locations.

Officers may promptly remove an unattended vehicle from a roadway shoulder if it constitutes an obstruction or jeopardizes public safety (RCW 46.55.113(2)(b)). The “no parking/tow-away zone” traffic regulation and related signing provide additional information for the motorist and an effective enforcement tool for the WSP.

Submit the proposed regulation to the Regional Administrator as a calendar agenda item. Documentation should include:

- A detailed strip map of the area showing SR/MP and interchanges.
- An analysis of operational problems, including collisions associated with vehicles parked on the shoulder, narrow shoulders, or limited sight distances.
- Copies of WSP and/or local police agency request and concurrence.

For freeway shoulders without any parking/tow-away zone, RCW 47.52.120(1) notes that vehicles experiencing equipment failure or other emergency may park within the right of way of limited access facilities.

- I. **Prohibitions of Fishing or Jumping from Bridges.** Prohibitions of fishing or jumping from bridges are intended to alleviate potentially hazardous situations. An engineering and traffic investigation is conducted to determine the need for the prohibition.

Document the investigation and submit the proposed regulation to the Regional Administrator as a calendar agenda item. Include:

- A vicinity map showing the SR/MP of the bridge and the bridge number from the *Bridge List M 23-09*.
- A discussion of the potentially hazardous condition requiring the prohibition.
- Copies of public or local agency correspondence.
- Copies of WSP and/or local police agency concurrences.

There are a number of ‘fishing from bridges’ prohibitions that were adopted by the former Highway Commission, prior to traffic regulation authority being transferred to the department. The prohibitions remain effective unless rescinded by the Regional Administrator (see Section 6.6).

- J. **Highway Restrictions or Closures – Emergency, Temporary, Construction, or Weight Related.** The Regional Administrator approves emergency, temporary, construction, or weight related restrictions or closures. These place specific limitations on the use of a state highway. Examples are:

Investigate and document:

- The need for the restriction or regulation.
- Copies of public or local agency correspondence.
- Copies of WSP and local police agency concurrences.

1. **Emergency Closures or Restrictions.** Emergency closures or restrictions may be implemented immediately, without prior notice or posting, in accordance with the procedures in the *Maintenance Manual*, M 51-01. The *Maintenance Manual* provides signing guidelines for emergency and non-emergency closures and restrictions.
2. **Temporary or Construction Restrictions or Closures.** RCW 47.48.010 gives the department the authority to close highways or segments of highways to all vehicles or any class of vehicles where such continued use will damage the roadway or be dangerous to traffic.

Submit the proposed regulation to the Regional Administrator as a calendar agenda item. Include:

- A vicinity map of area including SR/MP.

- A discussion of roadway condition or situation that requires the restriction or closure
- Copies of WSP and local police agency concurrence

Prior to restricting or closing a roadway segment, notice of the action must be given (per RCW 47.48.010) by:

- Publishing a notice describing the restriction or closure in at least one newspaper issue of general circulation in the county, city, or town where the highway is located.
- Posting a notice describing the restriction or closure in a conspicuous place at the ends of the highway or highway section.

The highway or highway section may be closed no sooner than three days after the newspaper notice and highway posting first appear.

If the closure will be in effect for less than 12 hours (such as for many Special Events) it is not necessary to post a notice in a newspaper. Advance closure notices must still be posted on the highway. The Special Event Letter of Agreement is sufficient documentation of an event related restriction or closure.

3. **Weight Restrictions.** In accordance with WAC 468-38-080, temporary weight restrictions may be immediately imposed on highways in response to emergency road conditions, such as potential damage from freeze/thaw action.

The State Traffic Engineer approves permanent weight restrictions such as a restriction on a road segment not built to WSDOT standards but acquired as a state highway.

4. **Oversize Load Restrictions.** Notices of any roadway restriction or closure must be distributed to the regional Permit Office and signs must be installed which identify the milepost limits and the duration of the restriction. The regional Commercial Vehicle Services Administrator issues the oversize load permits, and needs to know of any restrictions or closures along a proposed route. Because they may require pilot cars to accompany these loads (WAC 468-38), signs are installed at locations that provide pilot car operators safe on/off access to the highway without conflicting with other traffic.

6.4 Headquarters Traffic Regulations

Some types of traffic regulations address conditions that have statewide implications. To assure uniformity, these are approved by the State Traffic Engineer, and include the following:

A. Regulatory Speed Limits – Outside Construction and Maintenance Zones. Maximum speed limits for state highways, county roads, and city streets are mandated in the Rules of the Road (RCW 46.61.400). The department may raise or lower state highway speed limits based on an engineering and traffic investigation (RCW 46.61.405 and 46.61.410). The MUTCD, Section 2B.13 also addresses establishing speed limits.

Regions may initiate speed limit revision requests for many reasons including roadway realignment, urban growth, strip development, or other changes in roadway environment. Requests to change a speed limit may also come from a city, law enforcement, or citizens' group.

Conduct an engineering and traffic investigation to determine the appropriate speed limit. If a change is warranted, submit to the State Traffic Engineer as a calendar agenda item (Figure 6-2) and include the following supporting information:

- A memo outlining the reasons for the proposal, and any previously tried corrective measures and results.
- A description of the roadway characteristics including geometrics, lane and shoulder width and condition, grade and sight distance, etc.
- A map showing SR/MP, speed study locations and results, including 85th percentile speeds. Show pedestrian walkways, schools, accesses, significant traffic generators, newly developed areas, etc. Show locations of existing and proposed speed limit signs and curve or turn warning signs and applicable speed advisories. The map may be CADD generated, hand drawn, or ortho-photo based.
- Collision history for the past three years together with the critical collision rate. Note if the highway section is a High Accident Location (HAL), High Accident Corridor (HAC), or Pedestrian Accident Location (PAL).
- Description of changes in geometrics, sight distances, lane widths, and shoulders, if the proposal is based primarily on realignment.
- A copy of any local agency ordinance required for a managed access highway segment within an incorporated city or town.
- Copies of any citizen petitions or other letters regarding the proposed speed zone.
- Narrative on how any tribal considerations are addressed.
- Copies of WSP and/or local police agency concurrences.
- Speed Limit Request Checklist (Figure 6-4).

- An environmental review of the State Environmental Policy Act (SEPA) if the proposed speed limit is being raised to above 55 mph (see Section 5 below).
- A copy of the project results, if the “US Limits” speed zoning software is used.

When the engineering and traffic investigation does not support a speed limit revision, implement other potential corrective measures such as traffic calming revisions, warning signs, and public information campaigns. Observe and document the results of these measures before submitting a speed zone proposal. In most cases, the State Traffic Engineer will consider speed limit revisions that are within 5 mph of the 85th percentile speed, and that comply with MUTCD, Section 2B.13.

The State Traffic Regulations Specialist maintains a statewide speed limit inventory.

1. **Speed Limits Adjacent to Schools and Playgrounds.** State law (RCW 46.61.440(1)) establishes a 20 mph speed zone at a marked school or playground crosswalk when the crosswalk is posted with standard school or playground speed limit signs. A school or playground speed zone shall extend a full 300 feet in either direction from the marked school or playground crosswalk, unless there is less than 300 feet from the crosswalk to the terminus of the roadway. School or playground speed zones established under this law do not require a traffic regulation.

Required school or playground speed zone signs are shown in the *Traffic Manual*, Chapter 2 (WAC 468-95-330 and 468-95-340). Uses of supplemental flashing beacons or flags to increase compliance with a school speed zone are also discussed there.

A school or playground speed zone may extend more than 300 feet from the crosswalk; however, the distance beyond 300 feet requires a traffic regulation based on an engineering and traffic investigation.

School crosswalks are not allowed on fully controlled limited access highways where pedestrian traffic is prohibited. Where school crosswalks serve an elementary school, the engineering, and traffic investigation should consider the school’s Walk Route Plan. The Superintendent of Public Instruction’s office limits the number of school crossings and allows only one entrance-exit from each block to and from the school.

An incorporated city or town may establish a 20 mph speed zone extending up to 300 feet beyond the border of school or playground property. The extended zone may only include the area consistent

with active school or playground use (RCW 46.61.440(2) and WAC 468-95-330). For city streets that are also state highways, the department must approve the city ordinance that creates the school or playground speed limit (RCW 47.24.020(11) and RCW 46.61.415(5)).

The regions may receive requests for reduced speed limits near schools not served by marked crosswalks. Conduct an engineering and traffic investigation for the speed zone request. If study results warrant establishing the speed zone, submit a request to the State Traffic Engineer as required for regulatory speed limit changes. If the engineering and traffic study results do not support the request, consider other solutions such as focused law enforcement, playground fencing, and warning signs.

2. **Speed Limits on Ocean Beaches.** Ocean beaches are under the jurisdiction of the Washington State Parks and Recreation Commission (RCW 79A.05.610). The Commission has set the maximum speed limit on beaches at 25 mph (WAC 352-37-130).
3. **Minimum Speed Limit.** Although RCW 46.61.425(2) authorizes the department to post a minimum speed limit on a highway segment, the Rules of the Road do not mandate a statutory minimum speed limit for state highways. RCW 46.61.415 states in part that minimum speed limits on local roadways may not be set lower than 20 mph. Further, RCW 46.61.440 sets 20 mph as the speed limit at marked school or playground crosswalks. For consistency with these statutes, it is suggested that 20 mph be the lowest speed limit that the department will consider. Lower speed limits may be considered in unique situations such as weigh stations, ferry terminals or rest areas (see Section 6.3, C). Consult with the State Traffic Engineer's Office for guidance.
4. **Vehicle Specific Speed Limits, Trucks.** The maximum speed limit for trucks is 60 mph (RCW 46.61.410). The department may set lower maximum limits by vehicle class if determined necessary for safety reasons (RCW 46.61.405). Trucks are defined as vehicles over 10,000 pounds gross weight and all vehicles in combination (except auto stages). RCW 46.04.130 defines a combination of vehicles as every combination of motor vehicle and motor vehicle, motor vehicle and trailer, or motor vehicle and semi trailer.
5. **Environmental Review Process.** SEPA requires an environmental review of any proposal to raise the speed limit on a highway to above 55 mph. Contact the Regional Environmental Manager's Office for information on the environmental review process and to determine if the proposed speed limit change area falls within an air quality maintenance area (non-attainment area) for carbon monoxide or

ozone. A completed review must accompany the traffic regulation request package. For further information, consult the *Environmental Procedures Manual* M 31-11.

Either of two review procedures will be required:

- If none of the proposed change area is located within an air quality maintenance area, the reviewer completes the Non-project Environmental Checklist and the Determination of Non-Significance. Include a copy of each in the traffic regulation package, and provide copies to the Headquarters Environmental Services Office. It is not necessary to provide a copy to any other jurisdiction, nor does SEPA require a comment period.
- If any part of the proposed change area is located within an air quality maintenance area, the local Metropolitan Planning Organization (MPO) must model impacts from the proposed speed limit increase. If the modeling shows that the carbon monoxide and ozone allowances are not exceeded, follow the same procedures outlined for areas outside air quality maintenance areas. If the modeling shows that the carbon monoxide and ozone allowances will be exceeded, the impacts must be mitigated before the speed limit may be increased.

B. Bicycle Restrictions. Bicycles are defined as vehicles under state law (RCW 46.04.670) and treated and addressed as part of highway traffic. Bicycle restrictions may be implemented at specific locations due to speed differentials between bicyclists and other traffic, extremely high traffic volumes, roadway geometrics, or other safety considerations. Where bicycle restrictions are necessary, alternate routing suitable for bicycles must be available.

When considering an area for bicycle restriction or prohibition, conduct an engineering and traffic investigation and involve the regional bicycle coordinator, the bicycling community, and local agencies. Their input assures that bicycling interests are considered and that bicycle commute corridors remain intact.

Document the investigation and submit the proposed regulation to the State Traffic Engineer as a calendar agenda item. Include:

- A vicinity map and strip map showing SR/MP of the area.
- Location and descriptions of available alternate routes.
- Copies of documents, correspondence, and citizen requests.
- Narrative on how bicycle interests are addressed.
- Collision data involving bicycles.
- Copies of WSP and/or local police agency concurrences.

- Description of operational complexities (e.g., restricted shoulder width, interchange configurations) which identify the need for the regulation, as they relate to the following guidelines approved by the Bicycle and Pedestrian Advisory Committee (BPAC):
 1. Routes over 100,000 motor vehicles per day (ADT), or
 2. One or more of these criteria:

20,000 to 100,000 ADT	
Criteria	Condition and/or Consideration
Shoulder Width	Less than 4 feet when ADT between 20,000 and 60,000 or 8 feet when ADT exceeds 60,000 ADT.
Double On/Off Ramps	Consider forced exit and return.
Interchange Spacing	Less than 2 miles with ramp volume greater than 10,000 ADT, use forced exit and return.
Tunnels/Bridges	Consider restriction when alternate routes are available.

The State Traffic Engineer will coordinate with the department's Bicycle and Pedestrian Program Manager to arrange for review of the restriction with the BPAC. Comments from the BPAC will be included in the regulation review.

- C. **Truck Restrictions.** Truck restrictions may be imposed by statutory mandate (RCW or WAC), or by approval by the State Traffic Engineer through a calendar agenda item. Truck restrictions are either as lane restrictions or route restrictions and designations.
1. **Left-Lane Restrictions.** As mandated by RCW 46.61.100(3) and WAC 468-510-020, no vehicle towing a trailer or no vehicle or vehicle combination over 10,000 lbs. may use the left lane of limited access highways having three or more general purpose lanes in one direction.

Lane restrictions for trucks may also be imposed on other highway sections through a State Traffic Engineer Calendar Action. Although rare, these restrictions may be necessary to improve traffic flow on facilities having two general purpose lanes in one direction.

Truck route restrictions and designations are normally implemented together to establish a preferred truck route through a corridor. Route restrictions and designations may be initiated by a local agency for city streets that are also state highways.

An engineering and traffic investigation is conducted to determine the need for the restriction and route designation.

Document the investigation and submit the proposed regulation to the State Traffic Engineer as a calendar agenda item. Include:

- A vicinity map and strip map showing SR/MP of the area.
- Description of operational characteristics which identify the need for the restriction.
- Copies of speed studies, volume studies including vehicle classification, and a three year collision history.
- Copies of documents or correspondence from citizen groups.
- A copy of the local agency ordinance if the restriction is for a city street that is also a state highway.
- Copies of WSP and/or Washington Trucking Association concurrences.

Refer questions concerning WAC 468-510-020 to the State Traffic Regulations Specialist.

2. **Hazardous Material Route Restriction.** Some highways, due to operational characteristics, may be restricted for certain classes of vehicles, such as those carrying hazardous or flammable materials.

Conduct an engineering and traffic investigation and document the condition warranting a restriction. Submit as a calendar agenda item to the State Traffic Engineer with the following supporting information:

- A vicinity map showing the SR/MP of the restriction.
- Summary document detailing operational characteristics (tunnels, high traffic volumes) of the highway warranting the restriction.
- Copies of WSP and/or local agency concurrences.

- D. **HOV Lane Designation.** High Occupancy Vehicle (HOV) lanes are exclusive traffic lanes limited to carrying public transportation vehicles, private motor vehicles with the number of occupants specified on posted signs, motorcycles, and emergency vehicles (WAC 468-510-010). HOV lanes are typically a characteristic of urban freeways, but may also be designated on expressways, urban arterials, and highways serving major transportation hubs such as airports. The HOV lane objectives are:

- Increase the people-carrying capacity of highway corridors.
- Reduce total travel time.
- Improve the efficiency and economy of public transit operations.
- Reduce fuel consumption.
- Improve air quality.

Designated HOV lanes are established through a regulation approved by the State Traffic Engineer. Conduct an engineering and traffic investigation, document the condition, and submit the following information as a calendar agenda item:

- A vicinity map and strip map identifying the SR/MP limits, and showing the locations of ramps within the proposed section.
- The proposed minimum number of occupants per vehicle, and engineering documentation to support that minimum.
- Projected lane occupancy rates for both the HOV lane and the adjacent general purpose lanes.
- Proposed hours of HOV operation.
- Copies of design data.
- For proposed shoulder HOV lanes, include Design Office concurrence that the shoulder has adequate structural strength to support the HOV lane.
- On highways where bicycles are allowed on the shoulder, a narrative on how bicycle traffic will be accommodated if a shoulder HOV lane is approved.

E. Angle Parking on State Highways

1. **Statutory Requirements.** Angle parking may be requested by a city or town for a city street that is also a state highway (RCW 46.61.575(3)). Local authorities, by ordinance or resolution, may permit angle parking on such a street, if the department has determined that the roadway is of sufficient width to permit angle parking without interfering with the free movement of traffic.

Conduct an engineering and traffic investigation of the location. If angle parking is determined appropriate, submit as a calendar agenda item to the State Traffic Engineer with the following supporting information:

- Vicinity and strip map showing the SR/MP of the proposed regulation.
- Narrative describing the need for angle parking, including speed limit and traffic volumes.
- Collision data for the past three years.
- Copy of the city or town ordinance establishing angle parking.
- Parking plan layouts.

- A demonstration (using a passenger vehicle for design purposes) that the parking maneuver can be accomplished without interfering with the free movement of traffic. Use video or pictures.
2. **Pre-existing Angle Parking.** Angle parking was installed along some state highways prior to approval through the traffic regulation process, or before it was designated as a state highway. Further, these locations may not allow for the angle parking maneuver to be performed without interfering with the free movement of traffic, as required by law.

To address unapproved angle parking, the region may establish an inventory of the locations and then undertake a “housecleaning” project. The project can be region wide, or can encompass a specific area such as a state route or a county. The purpose is to bring unapproved locations into compliance with the law through a traffic regulation, or work toward removing those that cannot comply.

Where it is necessary to initiate removing angle parking, it is important to partner with local agencies (for city streets that are also state highways) and/or the business community to establish a mutually acceptable time frame. In many locations, angle parking may be the only parking available to business patrons. In these cases, a comprehensive approach to providing other parking must be part of any effort to remove angle parking.

- F. **Parking Restrictions for Park and Ride Lots and Other Parking Facilities.** Within the department’s park and ride facilities, parking is limited to a maximum of 48 hours, when posted with signs (R8-1201). The State Traffic Engineer established this restriction through an official calendar agenda action on January 8, 1982. Local agency police can enforce parking regulations in WSDOT park and ride lots if the city or town has adopted an ordinance similar to the department’s 48 hour parking maximum.

For other parking restriction requests, such as at ferry terminals or chain-up areas, conduct an engineering and traffic investigation of the location and document the condition. Submit the proposed restriction as a calendar agenda item to the State Traffic Engineer, together with copies of all correspondence associated with the request.

- G. **Regulation of Sales within State Parking Facilities.** The use of state parking facilities for sales of vehicles or other merchandise is not allowed.

The supporting enforcement statutes are as follows:

- RCW 46.55.070 specifies the posting requirements for public parking facilities.

- RCW 46.55.010(14) defines an unauthorized vehicle and the required period of time prior to impoundment for posted public parking facilities.
- RCW 46.55.080 authorizes that police officers may direct the impoundment of unauthorized vehicles.
- RCW 47.32.120 makes it unlawful to “merchandise” in a manner that requires the use of any portion of state highway right of way.
- RCW 46.55.240(1)(a) provides a city, town, or county the authority to adopt the provisions of RCW 46.55 by ordinance or resolution.
- WAC 308-330-436 of the Model Traffic Ordinance (MTO) may be used by local agencies who have adopted the MTO, for park and ride lots located within their jurisdiction.

H. **Permanent Weight Restrictions.** Permanent weight restrictions may be imposed where the pavement and base structure of a given section of roadway or a bridge structure will not support the maximum legal load. An example is a weight restriction on a road segment not built to WSDOT standards but acquired as a state highway. The State Bridge Condition Office will normally initiate bridge weight restrictions.

Investigate and document the need for the restriction and submit it to the State Traffic Engineer. Include:

- A narrative describing the road or bridge condition leading to the restriction.
- The appropriate maximum weight limit for a restricted section of roadway, as determined by the department’s Materials Laboratory.
- A determination of the appropriate bridge weight limit, as set by the department’s Bridge Condition office.
- Citizen or local agency correspondence.
- A copy of WSP concurrence.

Weight restrictions are signed with the appropriate R12 series signs illustrated in the *Sign Fabrication Manual* M 55-05.

6.5 Other Traffic Restrictions

Compression Brake Prohibition. The department does not regulate compression brake use; compression brake regulations are enacted by local agencies and may be signed on state highways as described in the *Traffic Manual*, Chapter 2.

6.6 Rescinding Existing Traffic Regulations

Occasionally changes to the highway or roadside environment create the need to rescind a traffic regulation. The Regional Administrator or State Traffic Engineer accomplishes this through a calendar action. **Removing the signs or posted notices of the regulation does not rescind the regulation.**

- A. **Regional Traffic Regulations.** Use the following guidance when rescinding regional traffic regulations:
1. When **removing a traffic signal**, complete Section E, Report of Change, on the regional copy of the Traffic Signal Permit. Part of Section E provides documentation for the date of removal, together with the engineer's name, title, and reporting date. A copy of that permit is then sent to the Headquarters Traffic Regulations Specialist for retention in the signal permit file.
 2. Reduced regulatory speeds in construction or maintenance areas may be implemented under certain conditions specified within Directional Directive D 55-20. The directive states that when the warranting conditions either are corrected or no longer exist, the reduced regulatory speed limit signs shall be removed, covered, or turned away from traffic. When reduced speed limits are no longer in effect, the permanent speed limit signs are reinstalled, uncovered, or turned toward traffic, as applicable.
 3. The Regional Administrator, using the regional calendar agenda process, rescinds all of the following regulations if they are no longer needed:
 - Stop control on state highways.
 - Turn prohibitions.
 - Pedestrian prohibitions on partial or modified access controlled highways.
 - Roadside parking restrictions (except for angle parking, and restrictions for park and ride lots and other parking facilities).
 - Tow-away zones.
 - Prohibitions of fishing or jumping from bridges.
 - Weight or closure restrictions.

Conduct an engineering and traffic investigation and document the condition requiring the rescinding of the regulation. Removing the regulatory signs does not rescind the traffic regulation, but renders it unenforceable under RCW 46.61.050(2).

B. **Headquarters Traffic Regulations.** The State Traffic Engineer, using the calendar agenda process, rescinds the following regulations if they are no longer needed:

- Bicycle prohibitions.
- Truck restrictions.
- HOV lane designations.
- Angle parking on state highways.
- Parking or sales restrictions for park and ride lots and other parking facilities.

Permanent regulatory speed limits may only be amended.

Provide documentation to support rescinding the traffic regulation to the State Traffic Engineer's office. As with the regional traffic regulations noted above, removing signs does not rescind the traffic regulation, but renders it unenforceable under RCW 46.61.050(2).



**Washington State
Department of Transportation**
Paula J. Hammond, P.E.
Secretary of Transportation

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Olympia, WA 98504-7300
360-705-7000
TTY: 1-800-833-6388
www.wsdot.wa.gov

DATE:

TO: Regional Administrator (or Designee)

FROM:

ITEM: Approval of Traffic Regulations

Attached is (are) the above-reference item(s) for inclusion on your calendar for approval and/or execution at calendar meeting to be held (place calendar agenda date here).

A. Traffic Signal Permits:

1. SR 404
Milepost 16.50
Permit Number 3,013

Submitted by the Regional Traffic Engineer, based on Warrant 1, Eight-Hour Vehicular Volume, and Warrant 6, Coordinated Signal System. The State Patrol and the Articulating Transit Authority concur with the proposal.

B. Turn Prohibitions:

C. Pedestrian Prohibitions:

Region Calendar Agenda
Figure 6-1



**Washington State
Department of Transportation**
Paula J. Hammond, P.E.
Secretary of Transportation

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P.O. Box 47300
Olympia, WA 98504-7300
360-705-7000
TTY: 1-800-833-6388
www.wsdot.wa.gov

DATE:

TO: State Traffic Engineer

FROM:

ITEM: Approval of Traffic Regulations

Attached is (are) the above-reference item(s) for inclusion on your calendar for approval and/or execution at calendar meeting to be held (place calendar agenda date here).

A. Speed Limits:

1. SR 404

Milepost 16.50 to Milepost 27.00

Posted 45 mph

Proposed 35 mph

35 mph for all vehicles in both directions from MP 16.50 to MP 27.00, for a total distance of 10.50 miles.

Submitted by the East-West region based on an engineering study. The State Patrol concurs with the proposal.

B. Angle Parking:

C. Bicycle Prohibitions:

State Traffic Engineer Calendar Agenda
Figure 6-2

Date: _____

Submitted By: _____

Permit No.: _____

Location: SR No. _____ MP _____ Minor Rd. _____

Vicinity Map: Include a general vicinity map of area showing intersecting roads, and any other features such as nearby signals and interconnected systems that may be of importance for analysis of application.

ADTS: Include all ADTS for all approaches entering the intersection.

ADT: Mainline _____ N___ S___ E___ W___ Mainline _____ N___ S___ E___ W___

ADT: Minor St. _____ N___ S___ E___ W___ Minor St. _____ N___ S___ E___ W___

No. of Lanes: Mainline Thru _____ Minor St. Thru _____

Number of Turn Lanes: Mainline _____ Minor St. _____

Signed Speed Limits: SSL on Mainline _____ 85th % _____

SSL on Side Street _____ Priority Array _____

Estimated Start Date: _____ **Estimated Cost:** _____

Estimated Completion Date: _____

Signal Application Checklist

Figure 6-3

Date: _____

Location: SR No. _____ MP _____ to MP _____

Submitted By: _____

Vicinity Map: Include a general vicinity map of area showing intersecting roads, and any other features of importance for analysis of the speed zone request.

Strip Map: Include a strip map showing 85th percentile speeds within the proposed area to be considered, noting the appropriate mileposts, curve warning signs with advisory speeds, and pedestrian crossings.

Speed Limits:

Existing	Proposed
_____ MPH, MP _____ to MP _____	_____ MPH, MP _____ to MP _____
_____ MPH, MP _____ to MP _____	_____ MPH, MP _____ to MP _____
_____ MPH, MP _____ to MP _____	_____ MPH, MP _____ to MP _____

Lane Width: _____

Shoulder Width: _____

Collision Data: Include the latest three years collision data together with yearly collision rate, yearly critical rate, and yearly statewide average for the area to be considered.

Correspondence: Include all appropriate correspondence including citizen petitions and local ordinance.

Concurrences:

Washington State Patrol _____ County _____ City _____

Speed Limit Request
Figure 6-4

7.1 Introduction

State highways function as multi-modal travel routes for commuters, commercial vehicles, and recreational traffic. In addition, the roadways are sometimes used for special events and other specialized highway uses.

Short-term special uses of the highways include parades, running or bicycle events, filming, and festivals. Long-term special uses such as designated shoulder-driving segments for slower vehicles, or school bus stops or pedestrian crossings on limited access highways, can also be authorized on specific roadway sections. Requests are also received for permanent specialized highway uses such as transit vehicle stops and placement of interpretive signing.

This chapter provides guidelines to assist in responding to special highway use requests.

A Memorandum of Understanding (MOU #C010355GSC) between the department and Washington State Patrol (WSP) governs the operation of special events (parades, running or bicycle events, filming, and festivals) on state highways. The MOU establishes guidelines and defines responsibilities for event operations. It also includes examples of event administration documents (Appendix 7-1).

Special events on the state highway system are administered through the regional Traffic Office for events taking place in a single region, or through the State Traffic Engineer's office for multi-region events. A Letter of Agreement or a Letter of Acknowledgement between WSDOT and the special event organizer defines the operation. There is no fee to event organizers for special event administration and coordination.

Continuing or long-term specialized uses are also addressed in the Traffic office, and may include coordination with other department offices or agencies. The State Traffic Engineer's office is available as a resource for questions about events or other specialized highway uses not specifically addressed in this chapter.

7.2 Bicycling, Running, Walking, Parade, and Festival Special Events

WSDOT receives numerous requests for short-term use of state highways or right of way for recreational or other public events. The Regional or State Traffic Engineer's office will respond to event organizers within 10 working days of receiving a request to begin the review and coordination process.

Special events are generally not held on fully controlled limited access highways. Occasional exceptions may be considered where no alternate route is available and roadway conditions allow for participant and other roadway users' safety.

In reviewing an event request, WSDOT will:

- Establish on-going communication with event sponsors to address route determination, traffic control, logistical issues, and other concerns.
- Conduct a traffic engineering analysis to determine the impact of the proposed event, as needed.
- Consult with regional Construction and Maintenance offices to identify any operational conflicts along the proposed route.
- Contact WSP to coordinate the event per the WSDOT/WSP Memorandum of Understanding, "Special Events on State Highways."
- Review special event traffic control plans.
- Identify alternative routes, if needed.

Additionally, WSDOT may:

- Provide use of Changeable Message Signing and Highway Advisory Radio (HAR) systems where available and appropriate.
- Suggest event specific signing to provide information for all highway users.

A. **Administration Guidelines.** Use of state highways or highway right of way for bicycle, running, walking, parades, festivals, or other special events is administered through either a Letter of Agreement or Letter of Acknowledgement between WSDOT and the event sponsor. Events that will not impact highway operations, where all participants will follow all Rules of the Road at all times, and where no traffic control is needed are not required to contact WSDOT. However, because those events may also benefit from WSDOT services, contact with the event sponsor is encouraged to ensure coordination with WSDOT projects, WSP, and other special events occurring in the immediate vicinity.

When the department receives a request for a special event, conduct a traffic analysis and begin coordination with the event organizer. Based on the specific event situation as described below, issue a Letter of Agreement or a Letter of Acknowledgement, or if circumstances warrant, a Letter of Denial. These documents are signed by the regional or headquarters signing authority. The Letter of Agreement is counter-signed by the event coordinator. If an event is denied, WSDOT will work with the organizers to seek solutions to the issues causing the denial. Event organizers may appeal a denial through the process outlined in this chapter.

1. **Letter of Acknowledgement.** A Letter of Acknowledgement is issued when event participants will follow the Rules of the Road at all times and when no special traffic control is needed. The Letter of Acknowledgement (Appendix 7-1) addresses specific event conditions such as:
 - Operational restrictions on specific highway sections due to conflicts with construction or maintenance operations.
 - Use of Changeable Message signs or a Highway Advisory Radio System.
 - The use of small crashworthy signs for guiding event participants.
 - Other highway conditions or restrictions.

Examples of when a Letter of Acknowledgement is appropriate:

- a. A group of 100 people will participate in a running event using portions of a state highway. The runners will conform to the Rules of the Road at all times.
 - b. A bicycle ride of 500 people uses a filtered start over several hours so cyclists are spread out along the roadways. Riders will cross the highway intersections in a legal manner and follow all other Rules of the Road.
 - c. A vehicle convoy of 10 to 15 vehicles accompanying “Santa Claus” to a local charity event uses portions of the state highway, following the Rules of the Road at all times.
2. **Letter of Agreement.** A Letter of Agreement (Appendix 7-1) is issued when the department’s review and analysis determines that the event participants are not able to follow the Rules of the Road, that there will be an impact on traffic operations, or that special traffic control is required. Additional information and terms may be attached as Exhibits to the Agreement.

A Letter of Agreement is developed when the event will:

- Require special traffic control (flaggers, escort vehicles, and/or law enforcement) to support the safe passage of event participants and the traveling public.
- Occur outside the roadway but within the right of way, and involve the use of highway facilities for non-transportation purpose.
- Close a portion of the highway to the public.
- Use services or personnel provided by the department, WSP, or other law enforcement.

- Place directional signing for the traveling public on department right of way.

Examples of when a Letter of Agreement is appropriate:

- a. A running or bicycle event uses local police control at a state highway intersection to allow participants to cross the highway while on-coming traffic stops.
- b. A large running event requests the use of portions of a limited access highway.
- c. A parade closes the highway to traffic and a detour is required.
- d. Temporary directional signs to a community festival are placed on the state highway right of way.

The following guidelines are considered and addressed when developing a Letter of Agreement:

- a. Event sponsors should be encouraged to use county roads or city streets where possible.
- b. Where a state highway will be closed for an event, a suitable detour route must be available and the Region or State Traffic Engineer or their designee must approve a detour traffic control plan. Road closures require a minimum three-day advance notice to the public (RCW 47.48.020). Longer notice is desirable for large impact events.
- c. Events requiring a Letter of Agreement must have a general liability insurance policy that names the department as an “additional insured.” Minimum policy requirements for an event are for \$1 million per incident with a \$2 million aggregate. If vehicles are used as part of the event operation, a minimum \$1 million automobile liability insurance must be added to the policy. Proof of insurance and indemnification of WSDOT is required prior to issuing the Letter of Agreement.
- d. The organizers or sponsors will pay all extraordinary costs for labor and materials provided by WSDOT, WSP, or local agency law enforcement.
- e. The department may determine that pre-event notices of the event are needed in specific locations or situations. This is a courtesy to local communities and can reduce traffic congestion on event day. If used, the event sponsor will post the notices seven to ten days before the event.

- f. Requests for state highway use within an incorporated city or town should have the city or town's concurrence.
 - g. At least 48 hours (preferably seven days) in advance of the event, the organizer shall notify all local fire, ambulance, transit, law enforcement departments, and other service-oriented activities that may be impacted by the event.
 - h. Department regulations and state law limit bicycling events and prohibit running or walking events on fully controlled limited access highways. Occasional exceptions are considered at locations where no alternative route exists. Where a special event is approved on a limited access highway, sufficient lane(s) must be left open in each direction to allow traffic to operate without significant congestion.
3. **Post Event Review.** WSDOT staff may conduct a follow-up evaluation to assess event operation. Discussion with the event organizer, law enforcement, WSDOT Area Maintenance and other affected groups can help identify any operational or public safety concerns and identify needed improvements. Document these issues so they can be addressed the next time the event occurs.
 4. **Appeal Process.** WSDOT has an appeal process for cases when a request for a special event on a state highway is denied. Appeals must be made to the State Traffic Engineer within 30 days of the event denial, and a minimum of 14 days before the event. The State Traffic Engineer has seven days to review the appeal and will notify the event coordinator by certified mail within seven days of the decision. For bicycle event appeals, the Traffic Engineer will consult with the State Bicycle Program Coordinator.
- B. **WSDOT and Event Organizer Coordination.** The department's review identifies the proposed event's impact on traffic operations and focuses on traffic control or operational solutions to mitigate those impacts. Communication between the department, event organizers, and WSP is essential to develop effective event operations and to schedule agreed upon services.

Department staff determines if construction, maintenance or other operations will conflict with the event; or if there are atypical roadway conditions such as a construction detour or another scheduled special event. Conflicts can often be avoided through schedule or route adjustments. Include information about significant activities and conditions that may affect the event in the Letter of Acknowledgement or Letter of Agreement. Contact the ferry system when an event includes use of state ferries.

Provide advance public notice about events that may impact traffic operations as a courtesy to the affected communities. Advance notice can influence regular highway users to choose other routes on event day, thus reducing event impacts. Include any requirements for giving such notice in the Letter of Agreement. Notice can include:

- Placement of pre-event signs along the affected route.
- Press releases by the organizer and the department.
- Other public information efforts commensurate with the event scale.

Work with the region or headquarters public information office (PIO) to publicize large events and their associated congestion or delays.

Copies of completed Acknowledgement and Agreement letters are shared between region and state Traffic Engineer's offices and sent to the WSP. Affected construction or maintenance offices are also notified. Sharing information helps assure statewide uniformity in department special event administration.

- C. **Bicycle Racing.** Timed event bicycle races are sometimes held on state highways under purview of WAC 468-400 (Bicycle Racing) and Washington Bicycle Racing Guidelines (www.wsdot.wa.gov/NR/rdonly/res/45CCAE77-0247-4BFB-995D-FB99E068A2FE/0/RacingGuide.pdf).

Refer to these guidelines for Bicycle Race event operation and administration. The WAC and racing guidelines were developed through a cooperative effort between the department, the bicycle racing community, WSP, and the Washington Traffic Safety Commission. A Letter of Agreement is developed between the department and the event organizer and liability insurance indemnifying the department is required.

There are eight common types of bicycle races: Time Trial, Criterium, Road Race, Stage Races, Cyclocross, Mountain Bike, Duathlon, Triathlon, or Multi-sport Event, and Relay/Cross Country. Each type of bicycle race has the potential to utilize a state highway, and each type has specific traffic control needs. Details are covered in the Bicycle Racing Guidelines.

7.3 Commercial Filming on State Highways

Filming of commercials or movies on state highways is administered using the Letter of Agreement in conjunction with the Exhibit for Filming (Appendix 7-1). The Letter of Agreement authorizes the filming and defines the terms and conditions applicable to the particular operation. It should be completed 10 days prior to filming.

When the department receives a request for filming, conduct a traffic engineering investigation that considers traffic impacts and safety. The State Traffic Engineer's office participates in requests for multi-region filming

operations. Notice of a proposed filming operation is provided to WSP (per the WSDOT/WSP Memorandum of Understanding) for their review and concurrence prior to issuing the Letter of Agreement.

Filming may not be scheduled on highways with high traffic volumes or during peak traffic flow periods. Generally, Interstate and other freeway mainline closures are not permitted. Road or lane closures on other state highways may be considered.

Traffic control and enforcement shall be provided by the WSP in cooperation with local police agencies where appropriate. The filming company must pre-pay all costs for labor, equipment, and supplies incurred by the department and the WSP.

The filming company must obtain a general liability insurance policy that names the department as an 'additional insured'. Minimum policy requirements are \$1 million per incident with \$2 million dollars aggregate coverage per filming event. Automobile insurance must be added if vehicles are to be used in the filming. Proof of insurance and indemnification of the department must be provided prior to filming.

The department and the WSP may develop additional guidelines and operational procedures for individual filming operations on state highways. These are included in the Letter of Agreement.

7.4 Other Special Events

The department receives requests for many types of special events on state highways or right of way. Car or tractor caravans, wagon trains, trans-continental running events, and stagecoach tours have all been conducted on state highways. Each of these is administered through a Letter of Agreement or Letter of Acknowledgement, as determined by a traffic engineering analysis and depending on the specific event conditions. Contact the State Traffic Engineer's office for discussion of any questions or concerns about special events.

7.5 Traffic Control for Special Events

When a special event includes a highway closure, detour, flagging operation, or other traffic control, a traffic control plan is developed and submitted by the event organizer to the department. Consideration is given to the type of highway, traffic speed, geometrics at the traffic control site, and duration and type of event operation.

When event organizers need help in plan development, WSDOT may either offer that assistance or advise the organizers of reference materials contained in both the *Manual of Uniform Traffic Control Devices (MUTCD) M 24-01* and WSDOT's *Work Zone Traffic Control Guidelines M 54-44*. WSDOT must approve all event traffic control plans.

Consider traffic control or other special operations with these event circumstances or roadway conditions:

- Where events with mass starts begin on state routes, or where, because of course design, large numbers of participants enter the state route together.
- When the number of participants may cause delay of five or more vehicles, impacting traffic operations.
- When narrow shoulders cause vehicles to move into the opposing traffic lane to pass event participants.
- Where there are significant sight distance restrictions such as numerous no passing zones.
- Other safety or operational considerations.

Traffic control must meet MUTCD and WSDOT standards. Traffic control operations shall be conducted by law enforcement officers, certified flaggers, or certified department personnel. They shall comply with the department-approved traffic control plan. Typical traffic control plans in the MUTCD or WSDOT *Work Zone Traffic Control Guidelines* M 54-44 may be used where applicable, or can be adapted to the special event situation.

Flagging operations may control traffic at intersections for running, bicycling, or other events. MUTCD Typical plans TA-13 and TA-14 address the intermittent stopping of highway traffic to allow event participants to safely enter or cross a highway or intersection.

Use the following guidelines when developing a traffic control plan for intersection flagging operations:

1. All flagging operations shall be conducted by a uniformed law enforcement officer or certified flagger.
2. **If flagging at a signalized intersection, the signal shall be off or set to “all-red flash.” Traffic may not be flagged with an active signal.** During hours of darkness, flagging stations shall be illuminated.
3. For flagging operations on highways with a posted speed of 40 mph or less, three advance signs on each approach are generally used. The “ROAD WORK AHEAD” sign should be replaced by an event specific message such as “RUNNING EVENT AHEAD,” “BIKES ON ROAD,” or “BICYCLE CROSSING.” The second and third signs should be “PREPARE TO STOP” and the “FLAGGER” symbol respectively.
4. On high-speed highways, where the posted speed is 45 mph or more, a four sign sequence is generally used. The additional sign may be either a repeated “EVENT AHEAD” or a specific sign noting the traffic condition.

5. In some limited situations, on low volume side streets, or at speeds below 40 mph, a two sign array may be considered unless other factors, such as restricted sight distance or congestion indicate a need for additional warning.
6. Sign spacing will conform to WSDOT requirements, based on highway type and speeds.

7.6 Special Event Signing Guidelines

Special event related signs may be allowed on the state right of way through the Letter of Agreement or Letter of Acknowledgement. The purpose of special event signs is to help manage event related traffic or to alert roadway users of potential traffic impacts. Sign types include:

- Directional signing to the event.
- Route designation signing for participants.
- Pre-event signing to give advance notice to roadway users.
- Detour signing.

Announcement of the event on a banner may be allowed in some circumstances (WAC 468-95-148) (see Section 7.7).

- A. **Directional Signing for Large-Scale Events.** Temporary directional signing may be installed for large-scale spectator activities such as county fairs, conventions, and major sporting events that do not qualify as destinations on permanent supplemental guide signs. This requires a written agreement between the WSDOT region and the event sponsor.

The department may design, fabricate, install, maintain, and remove temporary directional guide signs using the following criteria:

1. The region determines that the event will generate sufficient traffic to create operational challenges along a state highway.
2. The sign is requested by the sponsoring agency with enough lead-time for design, fabrication, and installation (a minimum of two months).
3. Signing is from the nearest state highway only.
4. By written agreement, all costs are paid by the sponsoring group.
5. Signs are sized for the specific highway conditions.
6. Signs shall be white letters on a green background and the design shall provide a clear, simple message.
7. Installation and removal shall be by WSDOT or an approved contractor and meet MUTCD and WSDOT requirements.

8. Any needed follow-through signing on local roadways must be installed prior to sign installation on the state highway.
 9. When a request for temporary directional signs is denied, the region provides an explanatory letter to the event coordinator with a copy to the State Traffic Engineer.
- B. Day of Event Directional Signs.** Directional signs may be installed on the day(s) of the event to direct traffic from the nearest state highway to the event or event parking. Signing will be located only at points where traffic must turn from the state highway or make another route decision. Follow-through signing on city and county roads must also be installed. No commercial advertising is allowed.
1. Signs are allowed through a Letter of Agreement.
 2. Signs must be of lightweight crashworthy materials such as corrugated plastic or ½-inch plywood. Lightweight ‘sandwich board’ signs no larger than 4-feet x 4-feet may be allowed.
 3. Sign type, size, and location will be determined and noted in the Letter of Agreement.
 4. Signs may be in place only for the duration of the special event.
 5. Signing shall not interfere with or obstruct the view of any traffic control devices or the sight distance to or from an intersection or road access.
 6. Portable Changeable Message Signs and other portable signs shall be placed off the shoulder if practicable, or on the far right of the shoulder, to maintain bike and pedestrian traffic.
 7. The regions may determine additional guidelines for day of event directional signing to address traffic safety and operational concerns.
 8. Signs installed on the right of way, which are not described in the Letter of Agreement, may be immediately removed by WSDOT.
- C. Route Designation Signing for Event Participants.** Small signs may be used to direct event participants along the event route or to event points such as rest or food stops.
1. Signs are allowed through the Letter of Acknowledgement or Agreement, which addresses sign size and type.
 2. Signs must be of lightweight crashworthy materials such as corrugated plastic or ½-inch plywood. Lightweight “sandwich board” signs no larger than 4-feet x 4-feet may be allowed.

3. Signs may be in place only for the duration of the special event.
4. Messages should consist of “Name of Event” or other simple message and a directional arrow. No commercial advertising is allowed.

D. **Pre-event Signing.** Advance notice signing is sometimes installed to advise regular highway users of an upcoming event that will affect normal traffic operations. It is a courtesy to any communities or highway users affected by a special event to alert them about potential traffic impacts and delays.

1. Pre-event signs, if required, are addressed in the Letter of Agreement.
2. Sign size, material, message, and locations are noted in the Letter of Agreement. Sign color shall be black letters on a white background.
3. Sign message is limited to name and date of event and a traffic control message such as “Use Alternate Route” or “Expect Delays” or more specific directional information as applicable. No commercial advertising is allowed.
4. Signs and supports must be of crashworthy materials. Types include roll-up signs on approved portable bases, signs mounted on approved posts, and Portable Changeable Message Signs (PCMS). Allowance is made for crashworthy sign materials such as corrugated plastic.
5. Post mounted signs shall be installed and removed per MUTCD installation standards. Signs shall not be installed on existing regulatory or warning sign posts. Signs may be installed on existing guide or informational sign posts.
6. Pre-event signing shall be installed between seven and ten days before the event and removed within three days after the event.

Additionally, when a roadway is to be closed for an event, pre-event “Road to be Closed” signs must be posted three days in advance (RCW 47.48.020). The signs will give the date(s) and time(s) of closure.

7.7 Banners

The department receives requests from public agencies, civic organizations, and event sponsors, to install banners for a variety of informational purposes on state highway right of way. Installation requests are generally for:

- Horizontal suspension over the highway, using span wire.
- Vertical mounting on structures such as luminaire poles adjacent to the highway.

Installations may require a wind load analysis prior to approval (see Section B).

Within this section, the term “banners” is used to mean signs, banners, and decorations as described in state law (RCW 47.36.030) and Washington Administrative Code (WAC 468-95-148). This WAC adds MUTCD Section 2J, and establishes criteria that allow the department to permit banners on state highways (see Section A). A banner is exempt from Highway Advertising Control regulations, provided it displays no commercial advertising (RCW 47.42.020(8)).

On state highways in unincorporated areas, the department has the authority to regulate banners. On city streets that are part of managed access state highways, the department may prohibit the suspension of banners up to a vertical height of 20 feet above the roadway surface.

Banners are administered through the region traffic office using a Banner Placement Permit (Figure 7-1) issued by the regional signing authority. The regional Traffic Office coordinates any required wind load analysis or review with the Headquarters Bridge and Structures Office.

A. **Approval Criteria.** The department may approve banner installations that promote a community or local agency sponsored event in accordance with the following criteria:

1. Messages are limited to name, date, and event sponsor. Commercial advertising is not allowed.
2. At least 20 feet of vertical clearance must be maintained from the roadway surface to the bottom of the banner.
3. Banners are not permitted to be visible to Interstate highways, or any other state highways having a posted speed limit of 50 mph or greater.
4. Banners shall not interfere with or obstruct the view of any traffic control device, or impair the operation of transportation management systems or illumination.
5. Temporary banners shall be installed no more than 30 days before an event and shall be removed no more than three days after the event.
6. The department will not permit a sign, banner, or decoration to be mounted over any multi-lane (a total of three or more lanes) highway. Vertical mounting on luminaire or signal poles may be permitted, provided such installations meet wind load requirements specified by the department.

B. **Wind Load Analysis.** Banners greater than 30 square feet require a wind load analysis by an engineer licensed in Washington State. Normally banners 30 square feet or less will not require a wind load analysis. If the banner is to be mounted to a luminaire pole that already has a sign attached and the combined banner and sign surface area exceeds 20 square feet, a wind load analysis is required.

Banners between 20 and 30 square feet must have wind slits. The design of wind slits and the banner mounting bracket/attachment method must comply with the hardware manufacturers' specifications.

The event sponsor must submit information including:

- A sketch of the banner size and area (note wind slit configuration).
- The banner/pole attachment drawing (manufacturer's illustration).
- Signal or luminaire pole specification data (manufacturer's name, pole height, pole size, arm number and length, and pole material).

The banner sponsor may also submit wind load calculations performed and stamped by an engineer licensed in Washington State to verify the integrity of the installation.

The regional Traffic Office submits this information to the Headquarters Bridge and Structures Office for either the wind load analysis, or a review of the engineer's submittal. Allow 30 to 60 days for the review. The Headquarters Bridge Office may charge the event sponsor for review time.

7.8 Special Event Pavement Markings

WSDOT allows placement of temporary directional pavement markings (commonly called "Dan Henrys" in the bicycle community) to indicate the special event route. These markings give direction to event participants and are located at points where a route decision must be made.

1. All pavement markings must use non-permanent, chalk based or "fade-away" paint. Permanent marking paint is prohibited.
2. Markings should be placed only just before, at, and just after directional decision-making points.
3. Route confirmation markings are permitted at major intersections.
4. For bicycle events, markings are placed to the right of the edge line where riders have a good rideable shoulder. Otherwise, they are located in the ordinary line of riding.
5. For running events, pavement markings are placed on the shoulder facing traffic.

6. The markings should be visible to event participants but placed so they are unobtrusive to others. A guideline is to make these marks no larger than 12 x 18 inches.
7. Markings must be placed away from traffic control pavement markings and existing construction or survey pavement markings.

7.9 Transit Vehicle Stop Zones

Region Traffic offices receive and review requests from transit agencies for approval of transit stops on state highways. The “Transit Vehicle Stop Zone Guidelines” (Appendix 7-2) provides a standard process for managing requests for transit stops outside incorporated areas. The department has a commitment to making transit stop locations more viable and user friendly as well as safe. The guidelines consider the operational needs of the department and transit authorities as well as public safety. See the *Design Manual* M 22-01 for information about incorporating transit vehicle stops into the project design process.

When the department receives a transit stop request, conduct an engineering and traffic investigation to find a location where the transit vehicle may stop entirely off the highway when loading or unloading passengers (WAC 468-46-010). If there is no location off the highway, then the review should establish a safe transit vehicle stopping area where suitable roadway geometrics allow.

Additionally, the investigation considers pedestrian amenities such as sidewalks, roadway crossing opportunities, security lighting, and shelters. The Americans with Disabilities Act guarantees access to public facilities (i.e., transit) for all persons; therefore, the review process must consider the needs of all transit users at each stage of transit use, including both before and after using the transit service.

Once the review has been completed, the stop location is either approved or denied. Approval is by the Regional Administrator or designee and an Agreement between the transit agency and WSDOT is written. If a location is denied, a letter stating the reasons is issued by the region.

The Rules of the Road provide general restrictions and privileges concerning transit vehicle stops:

1. RCW 46.61.560 provides that, outside of incorporated cities or towns, no one can stop, park, or leave a vehicle upon the roadway. An exception is granted for public transit vehicles stopped to receive or discharge passengers at a marked transit stop approved by the department or the county on their respective facilities. The statute anticipates transit stops on the roadway within incorporated cities or towns where stops are frequent and operating speeds are typically lower. (Note that RCW 46.04.500 excludes the shoulder from the definition of roadway.)

2. RCW 46.61.570 specifies several locations where it is illegal to stand or park a vehicle, except temporarily to load or unload property or passengers, and authorizes other limitations or restrictions by city ordinance, county resolution, or department order (traffic regulation).
3. RCW 46.61.575 authorizes the department to place traffic control devices that prohibit, limit, or restrict, stopping, standing, or parking. This authority is granted for locations where the department has determined by regulation that stopping, standing, or parking will endanger highway users or interfere with the free movement of traffic.

7.10 School Bus Stops on Limited Access Highways

School bus stops must be located where there is a minimum of 500 feet sight distance to the bus stop, to provide adequate visibility. If feasible, locate stops off the state highway. The state regulations noted below further govern locations.

- A. **WAC 468-58, Limited Access Highways.** WAC 468-58-030 and RCW 47.52 regulate school bus stops along limited access highways and prescribe the department's related duties.
 1. School bus stops are not allowed along fully controlled limited access highways. Exceptions may be authorized at interchanges where the department has provided a location and along the mainline where there is a separated facility.
 2. The department must approve school bus stops located along partial and modified control limited access highways in rural areas
 3. Department approval is not required along modified control limited access highways in urban areas.
 4. All approved school bus stops shall be signed in accordance with the MUTCD.
 5. The State Traffic Engineer will maintain an inventory of approved stops.

See Section 7.13 for information about pedestrians crossing limited access highways.

- B. **WAC 392-145, Additional Rules for School Bus Drivers.** The Superintendent of Public Instruction Office (OSPI) adopted WAC Rules that regulate school bus stopping. Consider these rules when reviewing school bus stops on limited access highways:
 1. Buses are not allowed to stop on a curve or a hill where visibility is less than 500 feet. Any existing bus stop locations that have less than the minimum 500-foot visibility must be moved to a compliant site

to provide safety to the bus riders and roadway users. If no other stop location is possible, it shall be signed with a “SCHOOL BUS STOP AHEAD” sign (S3-1).

2. No school bus may pull over to the left hand side of the road to load or unload children.
3. School children are not allowed to cross any roadway having three or more marked traffic lanes, or any highway divided into separate roadways, as described in RCW 46.61.150.

- C. **Coordination With School Districts and Approval Process.** The department works cooperatively with the OSPI to implement a school bus stop approval and inventory process based on the WAC rules. The region works with the individual school districts to assure that school bus stops on limited access facilities meet those requirements. Figure 7-2 provides a sample Proposed School Bus Stop Worksheet that the regions and the school districts may use cooperatively to assess and approve potential bus stops on partial or modified access controlled routes. The worksheet also provides the basic information the State Traffic Engineer’s office needs to maintain the required bus stop inventory. Figure 7-3 illustrates the school bus stop approval and inventory process.
- D. **School Bus Stop Inventory.** WAC 468-58-030 instructs the department to maintain an inventory of all school bus stops on limited access highways. The regions update the Limited Access school bus stop inventory on a regular basis, often after the start of each school year. The information is provided to the State Traffic Engineer. Regions also update school bus stop information when new stops are established and when existing stops are relocated or removed.

7.11 Interpretive Signs/Markers

Agreement GM 869 (Appendix 7-3) between the department and the Washington State Parks and Recreation Commission provides the procedures and guidelines for developing and maintaining interpretive signs and markers placed along the state highway. These markers depict the state’s natural and manmade history and are often located at designated pullouts or rest areas. The agreement documents the department’s responsibilities in locating and providing access to these markers. Use this process when new roadways, viewpoints or rest areas are being constructed or where a construction project includes an interpretive marker location. Contact the regional Accounting Services Office for agreement information.

7.12 “Memorial” Highways and Bridges

The Transportation Commission may, by resolution, name a highway or bridge to commemorate a person significant to Washington’s history. Typically, the Commission will only consider naming a facility after receiving a resolution of the Washington State Legislature. This practice assures the Commission that:

- Local and state officials jointly agree the facility should be named.
- There is agreement on which name should be used.
- Residents near the road or bridge agree.

The Regional Administrator may also nominate a person to be honored through the naming process. Supporting information is supplied to the Office of the Secretary who reviews the request and forwards it to the Transportation Commission. The subsequent Commission Resolution may either request or require legislative support by Joint Resolution or Joint Memorial, and may defer placing memorial plaques or signs until legislative support is secured.

Another type of memorial designation is the “**Blue Star**” **Memorial Highway**. It was first initiated after World War II to memorialize veterans, and now honors all members of the armed services. “Blue Star” Memorial Highways are a project of the National Garden Clubs and requests often originate from a local club. The Regional Administrator must present requests for designation to the Transportation Commission. Markers are not installed until the designation is received.

Marker plaques are 41 x 45 inches. The sign mounting and base size, style, and location are determined on an individual basis and approved by the region.

Plaques or signs memorializing highways or bridges are typically installed in rest areas, scenic overlooks, recreational areas, or other appropriate locations with a parking area, and where the installations are not visible to mainline traffic. Where there is no appropriate site off the main roadway, the MUTCD provides that one memorial sign per direction may be installed along the mainline, provided it does not affect safety or efficiency of traffic flow.

The Governor or the legislature approves requests to dedicate a facility to a cause, rather than a person.

7.13 Pedestrians Crossing Limited Access Highways

WAC 468-58-030 contains provisions concerning the approval of pedestrian crossings of limited access highways. These provisions:

1. Prohibit at-grade pedestrian crossings of fully controlled limited access highways.

2. Permit crossing of multi-lane partially controlled or modified control limited access highways only where grade crossings are provided.
3. Permit crossing of two lane, partially or modified control limited access highways at mailbox locations.
4. Permit crossing of two lane, partially or modified control limited access highways at points designated for school children to cross as follows:
 - On two lane highways, at the school bus, when the bus is stopped in the traveled lane to load or unload students, and its sign and signal lights are displayed as required by RCW 46.61.370.
 - On two lane highways, at least 100 feet from a school bus loading zone which is adjacent to the traveled lane and was established by school district and department personnel who determined that stopping in the traveled lane is hazardous.

7.14 Shoulder Driving for Slow Vehicles

Regional Administrators may designate sections of a two lane state highway to be a “shoulder-driving area” to allow slow-moving vehicles to drive onto improved shoulders so faster vehicles can pass (RCW 46.61.428).

Specific highway characteristics are required for designating shoulder-driving areas:

1. A minimum length of 600 feet of paved shoulder must be available.
2. The structural strength of the paved shoulder must be adequate to support traffic. Contact the region Materials Lab for an evaluation of the structural capacity of the shoulders.
3. The shoulder width must be 8 feet or more; except, shoulder widths of 6 to 8 feet may be utilized after review of the following considerations:
 - Horizontal and vertical alignment.
 - Shoulder slope from pavement edge.
 - Absence of passing opportunities.
 - Character of traffic (recreation, logging, or other slow-moving traffic).

Signing requirements for designated shoulder driving zones are shown in the *Traffic Manual*, Chapter 2.



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Olympia, WA 98504-7300
360-705-7000
TTY: 1-800-833-6388
www.wsdot.wa.gov

Date _____

RE: Placement of Banner Along SR _____

Name _____
Street Address _____
City, State, and Zip Code _____

Dear _____

This letter is in response to your request to place a banner across SR _____, at or near milepost _____ for your _____ event.

PERMIT TO PLACE BANNER

The Washington State Department of Transportation conditionally approves your request to place a banner only under the conditions following:

- (1) The message is limited to the event name, date, and event sponsor.
- (2) The banner will be placed at no less than 20 feet above SR _____, milepost _____, located (*physical description of banner location*) in (*name of city or town*).
- (3) The banner will only be maintained from date of installation to date of removal.
- (4) The banner is located so as not to interfere with, or obstruct the view of any traffic control device.
- (5) Banners between 20 and 30 square feet must have wind slits per manufacturer's requirements. Banners of over 30 sq. ft. may be mounted only after a wind load analysis of the proposed banner installation.

By signing below, (*event sponsor*) agrees to indemnify and hold harmless the State of Washington and the Washington State Department of Transportation, its officers and employees from any and all claims, actions, or damages of any type or nature which may accrue to be or be suffered by any person, persons, or property by reason of the action or omissions of the *event sponsor*, its agents, employees, contractors, or any person whomever, arising out of or in connection with any acts or activities authorized by the Permit for injuries, bodily injury, death, or property damage, including all costs of defense and attorneys' fees. This obligation shall not include such claims, costs, damages, or expenses, which may be caused by the sole negligence of the State or its officers or employees.

Sample Permit to Place Banner
Figure 7-1

If (*event sponsor*) agrees to these terms, please have the duly authorized representative of (*event sponsor*) or (*name of city or town*) sign this Permit and return it to the Washington State Department of Transportation at (*mailing address or fax number*).

Sincerely,

Regional Signing Authority
Title

Signature and Title of Authorized Official

Place

Date

By my signature, I affirm under penalty of perjury under the laws of the State of Washington that I am authorized to bind the (*event sponsor*) to the terms and conditions of this Permit.

XX:yy
Enclosure
cc: File
 Headquarters

Sample Permit to Place Banner
Figure 7-1 (continued)

**WAC 468-58
School Bus Stop Inventory**

Partial and Modified Limited Access Controlled Highways

Inventory Items – School District Information

Date: _____

DOT Region: _____

School District: _____

School District Contact Person (*Phone #, Mailing and E-mail Addresses*)

State Route Number: _____

Milepost (*and approximate distance and direction to nearest intersection*)

Direction of Travel: _____

Stop on/off Roadway: _____

Bus Stop Times: a.m./p.m.: _____

Inventory Items – WSDOT Information

Limited Access Type _____

Stopping Sight Distance _____

Signed – “School Bus Stop Ahead” _____

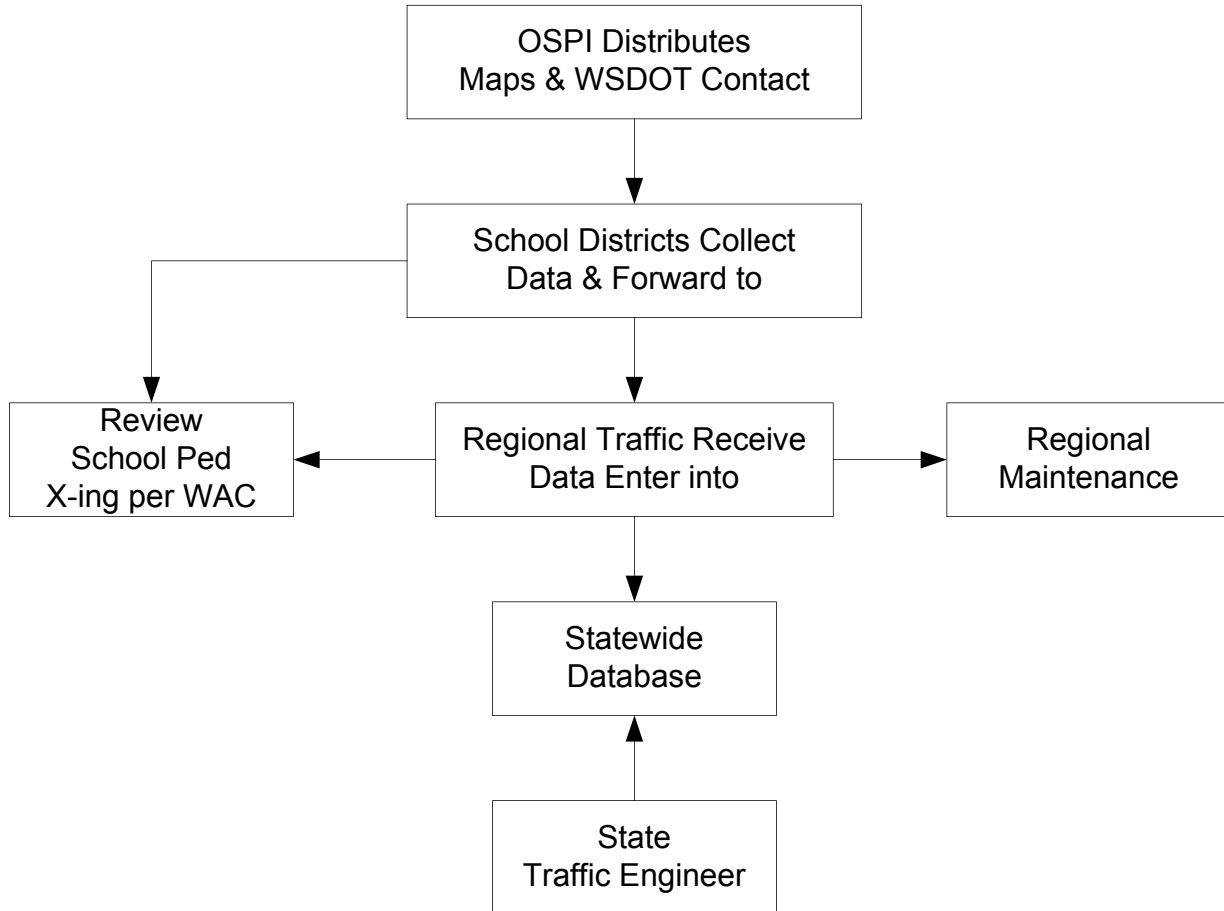
Regional Approval _____ Date _____

By _____

**Proposed School Bus Stop Worksheet
Figure 7-2**

**WAC 468-58
School Bus Stop Inventory**

Partial and Modified Limited Access Controlled Highways



Process Flow Chart
Figure 7-3

Joint Policy Guidelines
Letter of Acknowledgment
Agreement
Exhibit A – Filming
Exhibit B – Bicycle/Pedestrian
Exhibit C – Parades
Exhibit D – Payment
Exhibit E – RCW 47.48.020

Prepared by:

Field Operations Support Service Center
Traffic Operations
December 2000



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MEMORANDUM OF UNDERSTANDING
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
AND THE
WASHINGTON STATE PATROL
JOINT POLICY GUIDELINES FOR EVENTS ON STATE HIGHWAYS

It is the intent of the Secretary of the Washington State Department of Transportation (WSDOT) and the Chief of the Washington State Patrol (WSP) to enter into a Memorandum of Understanding to establish guidelines and define responsibilities for special events operations on state highways. These guidelines provide reasonable and consistent criteria for agreements that sanction the following events on state highway rights of way: filming, bicycle and pedestrian events, parades, and any other event that may disrupt the normal flow of traffic, or increase risk to the traveling public. These provisions apply to state highways where both WSDOT and WSP have jurisdiction.

Certain events may impact normal traffic operations to the extent that special traffic control efforts will be required, while other events may have a minimal impact. WSDOT and WSP shall follow these general guidelines with regard to the event operations on state highways.

1. Event coordinators proposing use of a state highway for event operations shall notify the appropriate WSDOT Regional Office and provide pertinent information about the operational requirements of the event. Initial contact may be made by phone, with a written letter of request required within 48 hours of initial contact. Additionally, application may now be made via the Internet. The form is found on WSDOT's web site. Notification information shall include: state highway number, state highway milepost limits, or nearest intersections with state highway, dates and times of event, number of participants expected, and a description of the purpose and scope of the event, including any proposed closure of any portion of a state highway.
2. Based on the event description provided in the request for approval, WSDOT will determine the potential for impact on normal traffic operations. WSDOT may consult with the WSP to determine impacts on traffic law enforcement. Considerations include, but are not limited to characteristics of the state highway, scope of the event, and any scheduled construction or maintenance work that may conflict with event operations. On an event basis, WSDOT and WSP may prohibit the use of particular roadways or prohibit specific aspects of an event. Approval will not be granted for the use of state highways at high volume locations or during days/times when events will adversely affect vehicular traffic.

Memorandum of Understanding
Page 1 of 3

3. Events that can be lawfully conducted within the Rules of the Road, RCW 46.61, receive concurrence as to the acceptability of the event by way of a Letter of Acknowledgment. This letter recognizes the location and time of the event and may include information about operational restrictions on specific sections of a state highway or route revisions that may be required due to conflicts with construction or maintenance operations.

WSDOT approval is required if it is determined that an event has potential impact on normal traffic operations, or includes special traffic control. The Event coordinator shall submit traffic control plans that adequately accommodate anticipated traffic conditions. Such plans must have written approval by WSDOT Region's traffic engineer(s) and are coordinated by the State Traffic Engineer for inter-regional events. All traffic control devices must conform to the Manual on Uniform Traffic Control Devices (MUTCD). Personnel executing traffic control plan must be certified flaggers or off duty police officers, to be provided exclusively by the event coordinator.

Approved traffic control plans, including any restrictions and/or prohibitions on the event, and liability issues shall be documented by way of a written Agreement between WSDOT and the event coordinator. If approved by WSDOT, the agreement shall be signed by WSDOT and counter signed by the event coordinator prior to commencement of the event. WSDOT may conduct a joint review with WSP prior to signing the proposed agreement document. This practice allows expert review by both agencies and ensures concurrence on all traffic control requirements necessary to safely conduct event operations. WSDOT and WSP have no obligation to approve or permit any event if the event Agreement has not been signed by WSDOT and the event coordinator, or the event Agreement has been altered by the event coordinator without express consent of WSDOT. WSDOT reserves the right to postpone or deny approval of any event when an event coordinator requests approval without sufficient advance notice, as determined by WSP or WSDOT.

4. Operational decisions and/or emergency situations may require road/lane closures to be opened immediately. WSP is responsible for traffic enforcement, and has final authority regarding the location and specific time of day that any road/lane closures, or any other part of the traffic control plan may be implemented.
5. Any costs incurred by WSDOT and/or WSP during implementation or operation of the event shall be the responsibility of the event coordinator. WSDOT and WSP shall submit separate billings to the event coordinator to recover individual agency costs and are to be paid within 30 days from the receipt of the billing.

Memorandum of Understanding
Page 2 of 3

- 6. WSDOT regulations and policies do not allow running or walking events on fully controlled limited access highways.

The foregoing does not preclude the WSP and WSDOT from developing additional guidelines and operational procedures to address specific issues of mutual concern related to the use of state highway rights of way for event operations.

ANNETTE M. SANDBERG
Chief, Washington State Patrol

Date

JOHN CONRAD
Assistant Secretary for Field Operations Support
Washington State Department of Transportation

Date

APPROVED AS TO FORM:

ASSISTANT ATTORNEY GENERAL
FOR THE WASHINGTON STATE PATROL

Date

APPROVED AS TO FORM:

ASSISTANT ATTORNEY GENERAL
FOR THE WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION

Date

Memorandum of Understanding
Page 3 of 3



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(Date)
(Name and address of event coordinator)

Re: (event on SR__)

Dear:

Thank you for your recent inquiry regarding your proposed (event type/name) at (event location) scheduled for (event dates).

Because the (event type/name) appears to have only minimal potential for traffic impact on state highways, we do not anticipate that special traffic control efforts are necessary.

(Note any special conditions here such as route or procedural restrictions).

(Give information specific to event type, as appropriate. Examples shown below)

(Pedestrians/runners are prohibited on the interstate system but may lawfully use other roadway shoulders by facing traffic as prescribed in the Rules of the Road (RCW 46.61), a copy of which are enclosed.) **or** (As a reminder, bike riders assume the risk for their own safety when traveling on the state's highways. Roadway conditions, traffic volumes, and weather changes require review of the route for suitability. Each rider should have adequate bicycling skills and know the Rules of the Road.)

I suggest that you provide a (event name) itinerary to all local authorities having jurisdiction where the (event name) traverses county roads or city streets. For these areas, the local authorities determine if special traffic control and permits will be required.

Best wishes for a successful (event name).

Sincerely,

State or Region Traffic Engineer
(As applicable)

Letter of Acknowledgment for Event Operation on State Highway
Page 1



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(*Filming, Parade, Bicycle, Pedestrian, etc.*) Agreement
Agreement # _____

(Name and Address of event coordinator)

Re: SR _____
(*Filming, Parade,
Bicycle, Ped. etc.*)
Event Agreement

This agreement, made and entered into on this _____ day of _____, 20____, by and between the Washington State Department of Transportation, hereinafter referred to as "WSDOT", and the event coordinator _____ hereinafter referred to as the "EVENT COORDINATOR", representing _____, for the purpose of staging a _____ event on state highway(s) rights of way.

Event Description

_____, hereinafter referred to as the "EVENT".

Whereas, WSDOT and the Washington State Patrol, hereinafter referred to as "WSP" have determined that the EVENT may impact traffic operations on state highway(s) to the extent that special traffic controls or other safety considerations are required.

Whereas, WSDOT with the advice of WSP conditionally approves EVENT operations on SR____ at or near milepost _____, on the date or dates of _____, subject to the terms and conditions in this Agreement and any attached Exhibits.

Administration and Procedures

1. WSDOT enters into this written agreement with you for the purpose of defining responsibilities and requirements for EVENT operations on state highways. This Agreement is not effective unless or until signed by WSDOT and countersigned by you prior to the commencement of the EVENT. WSDOT assumes no obligation for any EVENT, pursuant to an agreement form that is unsigned, or altered by the EVENT COORDINATOR without WSDOT concurrence. WSDOT reserves the right to postpone or deny an EVENT operation when approval is requested without sufficient advance notice, as determined by WSP or WSDOT.
2. You are encouraged to use county roads or city streets if at all possible. You are responsible for securing approval from local agencies or communities in unincorporated areas that may be impacted by the EVENT. If the EVENT takes place on city streets without access control that are part of state highways, you shall furnish WSDOT with courtesy copies of any traffic control, insurance, or liability agreements made with local agencies.
3. You are responsible for any and all agreed costs incurred by WSDOT and WSP enumerated here in Exhibit D. WSDOT and WSP shall submit separate billings to you to recover individual agency costs and shall be paid by you within 30 days from receipt of the billing. If the EVENT operations require substantial use of WSDOT and/or WSP labor, equipment, or materials, then the EVENT organizers are required to enter into a cost reimbursement agreement with WSDOT and/or WSP. The cost reimbursement agreement guarantees reimbursement of all EVENT related costs to WSDOT and WSP and shows costs associated with the event that must be paid by the EVENT organizers. (See Exhibit D). WSDOT and WSP costs for labor, equipment, and/or materials will be based on contracted amounts as determined by statute, and requirements for highway operations. Typical WSDOT and WSP activities may include, but are not limited to; labor costs, equipment related costs, indirect costs for service, such as; traffic control, maintenance operations and work zone safety or other highway operation activities.
4. You are responsible for cleaning up immediately after EVENT operations and returning any and all state highway facilities to the state or condition that existed prior to the EVENT.
5. Any base of operations, or storage or staging area for the EVENT shall be located outside the state's right of way. Prior authorization from WSDOT shall be required for any base of operations, storage or staging areas to be located within the right of way.

(Filming, Parade, Bicycle, Pedestrian, etc.) Agreement
Page 2 of 5

6. For events having participant registration forms, you are encouraged to include WSDOT and WSP in a statement of waiver or release of damages against the state of Washington, for signature by event participants or parents or guardians of participant minors. A sample release for such forms is as follows:

I, (name of participant), do hereby release, discharge, and hold harmless the Washington State Transportation Commission, the Washington State Department of Transportation, the Washington State Patrol, and their officers, agents, and employees from all claims, demands, and causes of actions of every kind whatsoever for any damage, loss, or injuries which may result from my participation in the (name of event), involving state highways, known or unknown, foreseen or unforeseen.

7. Information in attached EXHIBITS may identify existing regulatory prohibitions of specific types of traffic on limited access highways, such as the pedestrian prohibition on full access controlled highways.

Liability

1. EVENT COORDINATOR, at solely his or her expense, shall obtain and keep in force during the term of the EVENT, general liability insurance coverage in an amount no less than \$1 million per occurrence (combined single limit of liability) and \$2 million in the aggregate providing bodily injury, property damage, and personal injury coverage for the state of Washington for any liabilities, including all costs of defense, arising out of the use of state highways for the EVENT. Said general liability coverage shall be written on an "occurrence" basis, not a "claims made" basis, and shall provide coverage no less than the coverage provided by a *Commercial General Liability Coverage Form (CG 00 01 07 98 ISO* or later). Said policy shall not be subject to any self-insured retained limit of liability, or endorsements that would limit the coverage provided by the original policy form, except to the extent that coverage is limited to claims arising from the EVENT. EVENT COORDINATOR, at his or her expense, shall obtain and keep in force during the term of the EVENT commercial automobile liability coverage in an amount no less than \$1 million per occurrence (combined single limit of liability) providing bodily injury and property damage coverage for the State of Washington as an additional insured under said policy. Said liability coverage shall provide coverage no less than the coverage provided by a *Commercial Automobile Liability Form (CA 00 01 07 97 ISO* or later). Said policy shall not be subject to any self-insured retained limit of liability, or any endorsement that would limit the coverage provided by the original policy form, except to the extent that coverage is limited to claims arising from the EVENT. An affidavit verifying proof of insurance reflecting the required coverage is required and must be in the possession of WSDOT and WSP prior to commencement of the event. (See EXHIBIT C - Parades, to determine if insurance will be required for parades on city streets that are also state highways.)

(Filming, Parade, Bicycle, Pedestrian, etc.) Agreement

Page 3 of 5

2. EVENT COORDINATOR shall indemnify and hold the state of Washington harmless against any and all claims or actions of any type of nature by third parties for injuries or property damage, including all costs of defense, caused by or arising out of the EVENT.

Venue

1. In the event that any party deems it necessary to institute legal action or proceedings to enforce any right or obligation under this Agreement, the parties hereto agree that any such action or proceeding shall be brought in a court of competent jurisdiction situated in Thurston County, Washington, and EVENT COORDINATOR herein submits to jurisdiction thereunder.

Traffic Control

1. WSDOT has determined that a traffic control plan is necessary for this EVENT. Operational details specific to the EVENT are contained in EXHIBIT __, attached hereto. All components of the traffic control plan shall conform to the standards of the Manual on Uniform Traffic Control Devices (MUTCD). Such plans must be approved by the WSDOT Regional traffic engineer(s) and are coordinated by the State Traffic Engineer for inter-regional events. In addition, traffic control plans shall meet the following requirements and restrictions:
 - EVENT COORDINATOR is responsible for acquiring all traffic control devices, and shall have all traffic control devices installed per approved plan prior to commencement of the EVENT.
 - Traffic control operations shall be performed by certified flaggers, or off duty law enforcement officers.
 - Any rolling traffic break (intentional slowing of traffic through a moving roadblock, provided by WSP) shall operate at a speed greater than 35 mph on full access control, freeway type highways. In no event shall any vehicle exceed the regulatory speed limits.
 - Traffic control plans may include proposals to close shoulders, lanes, or entire sections of state highways. Information about the proposed closures including dimensions such as overall distance, lane or shoulder widths, times and dates, and detour plans shall be included in the approved traffic control plans. Closures on interstate and other access controlled, freeway type highways will not be allowed.
 - Road closures will be considered only where no other traffic control strategies appear satisfactory, and where an adequate detour route is available. The EVENT COORDINATOR is required to provide notification of the closure, at least 72 hours in advance, to all fire and law enforcement departments, ambulance companies, and transit agencies that would be affected by the closure. The EVENT COORDINATOR is required to comply with RCW 47.48.020, a copy of which is hereto attached. (The copy of RCW 47.48.020 has been provided as a courtesy. It may or may not have current amendments. EVENT COORDINATOR is responsible for reading and complying with any subsequent amendments to the statute that are not attached). Notice of closure signs posted under purview of this statute shall read, at a minimum, 'SR__ TO BE CLOSED *day, date, time AT location.*' The signs shall have 6-inch minimum size capital black letters on a white background with a black border and shall be fabricated so the sign will be retroreflective and not be affected by weather conditions.

(Filming, Parade, Bicycle, Pedestrian, etc.) Agreement

Page 4 of 5

- 2. If an element of the traffic control plan such as road or lane closures, or rolling traffic breaks impact traffic operations, a pre-event meeting, scheduled by the EVENT COODINATOR may be required. The EVENT COODINATOR, WSDOT, WSP should attend this meeting, along with a representative of any local agency impacted by the EVENT. The purpose of the meeting is to ensure that the traffic control plan and related operational procedures are finalized and participants understand their roles and responsibilities prior to commencement of the EVENT. Minor events (as determined by WSDOT or WSP) may not require this operational meeting.
- 3. EVENT COORDINATOR and WSDOT do agree that operational decisions and/or emergency situations may require road/lane closures to be opened immediately. WSP is responsible for traffic enforcement, and has final authority regarding the location and specific time of day that any road/lane closures, or any other part of the traffic control plan may be implemented. Neither WSDOT nor WSP shall be liable for any damages, or loss arising from the decision to reopen lanes during an event closure.

Please indicate your concurrence by countersigning and returning the enclosed copy of this Agreement to the WSDOT address or fax number provided below. Failure to do so, or any alteration of this document, will render this agreement invalid. If you have any questions or concerns, please contact (*WSDOT contact*) of my staff at (*telephone #*).

Event Signature

WSDOT Signature

SIGNATURE

SIGNATURE

PRINTED NAME

WSDOT OFFICE TITLE

TITLE AS OFFICE WITH (event name)

DATE

DATE

ADDRESS

FAX #

(Filming, Parade, Bicycle, Pedestrian, etc.) Agreement
Page 5 of 5



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EXHIBIT A
FILMING EVENT AGREEMENT
AGREEMENT # _____

This Exhibit, in combination with the Letter of Agreement comprises a complete understanding between the Washington State Department of Transportation (WSDOT), the Washington State Patrol (WSP), and the filming event coordinator.

1. The film production company shall be in direct contact with the Washington State Film Office (WSFO) regarding location filming on state highways. The WSFO may initially direct a filming event coordinator to the appropriate WSDOT region's filming liaison. A production company with previous experience filming on state highways under the sanction of WSDOT and WSFO may contact the appropriate WSDOT regional office directly. A courtesy copy of any correspondence and/or written agreement between WSDOT, WSP and the film production company shall be provided to WSFO. Contact WSFO at www.filmwashington.com.
2. The film production company's base of operations, including staging or storage areas, shall be located outside the state's operating right of way. Prior authorization shall be required for any base of operations located within right of way. *e.g., Your request to locate (material, equipment, trailer, etc) within the state right of way, at (milepost, offset left or right) has been approved for this filming event. Written approval is attached hereto and incorporated herein by this reference.*
3. Stunts, accidents, or pyrotechnics that may cause damage to state property or disrupt traffic flow shall not be allowed. Use of pyrotechnics must meet all statutory requirements. No liquid or solid materials may be placed on the highway except as approved by WSDOT and identified in this exhibit. *(Insert Specific Information)*
4. An affidavit verifying that the film production company has obtained the liability insurance policies covering the state of Washington in accordance with paragraph 1 of the Liability section of this Agreement shall be in the possession of WSDOT and WSP prior to event participants entering upon state right of way.
5. Special traffic control is required for this event. A traffic control plan has been approved by WSDOT for this event, a copy of which is attached hereto and incorporated herein by this reference. Traffic control shall operate as follows; *insert information including traffic control plan(s), location(s), duration of intermittent traffic closures, rolling traffic break details, detour route, personnel requirements etc.* At no time shall the traffic be allowed to back up beyond temporary warning signs. All lanes shall be allowed to clear traffic between intermittent traffic closures.

Exhibit A Filming Event Agreement
Page 1 of 2

6. Operational decisions and/or emergency situations may require the roadway to be opened immediately. Access for emergency vehicles shall be maintained at all times.
7. Prior to any filming operations requiring a road or lane closure or the use of a rolling traffic break, an operational meeting may be required with WSDOT, WSP and the film company. When appropriate, other local authorities and law enforcement agencies may attend this meeting. The purpose of this meeting is to ensure that all traffic control plans and related operational procedures are finalized and participants are aware of their individual responsibilities prior to the commencement of filming. Minor filming operations (as determined by WSDOT and WSP) may not require this operational meeting.
8. A rolling traffic break (the intentional slowing of vehicular traffic by way of a moving road block provided by the WSP) shall be greater than 35 MPH on full access control highways and in no event shall any vehicle be permitted to exceed regulatory speed limits.
9. Any filming involving the use of any aircraft shall be done in accordance with FAA regulations.
10. *Insert specific information regarding additional restrictions, prohibitions, or requirements imposed on approved filming operations.*

Exhibit A Filming Event Agreement
Page 2 of 2



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EXHIBIT B
BICYCLING / PEDESTRIAN EVENT AGREEMENT
AGREEMENT # _____

This Exhibit, in combination with the Agreement comprises a complete understanding between the Washington State Department of Transportation (WSDOT), the Washington State Patrol (WSP), and the coordinator for the (*name of event*).

Unless specifically required to participate in the development or deployment of any traffic control plan, WSDOT and WSP will have only incidental involvement with the event.

1. Special traffic control is required for this event. A traffic control plan has been approved for this event, a copy of which is attached hereto and incorporated herein by this reference. Traffic control shall operate as follows; *insert information including but not limited to: traffic control plan, detour routes, proof of notification of closure.*
2. Special conditions, such as relay starts, reflectorized participant clothing, legal bicycle lighting, transport and aid vehicles may also be imposed as part of the event approval. The Event Coordinator shall be responsible for scheduling any required meetings.
3. For competitive bicycle racing events, refer to *Washington State Bicycle Racing Guidelines*. This publication provides detailed information about traffic control and racing protocol for bicycle races, and contains a separate approval and permitting process. The guidelines are available from WSDOT's website at: <http://www.wsdot.wa.gov/bike/pdf/RacingGuide.pdf>.
4. *Insert specific information regarding additional restrictions, prohibitions, or requirements imposed on approved event operations.*

Exhibit B, Bicycling / Pedestrian Event Agreement
Page 1 of 1



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EXHIBIT C
PARADES EVENT AGREEMENT
AGREEMENT # _____

This Exhibit C, in combination with the Agreement comprises a complete understanding between the Washington State Department of Transportation (WSDOT), the Washington State Patrol (WSP), and the parade event coordinator.

Unless specifically required to participate in the development or deployment of any traffic control plan, WSDOT and WSP will have only incidental involvement with the event.

1. For cities and towns having a population in excess of 25,000, only a traffic control plan is required prior to conducting a parade on a city street that is also a state highway. There are no other terms or conditions.
2. The parade sponsor agrees to hold the State of Washington harmless from any and all claims for any type or nature arising from the EVENT that is the subject of this agreement.
3. Parade events sponsored by cities or towns, and covered by existing insurance policies do not need to comply with the liability insurance articles contained in paragraph 1 of the Liability section of the Agreement.
4. Insert specific information regarding additional restrictions, prohibitions, or requirements imposed on approved event operations.

Exhibit C, Parades Event Agreement
Page 1 of 1



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EXHIBIT E
RCW 47.48.020

(This copy of RCW 47.48.020 has been provided as a courtesy. It may or may not have current amendments. EVENT COORDINATOR is responsible for reading and complying with any subsequent amendments to the statute that are not attached).

RCW 47.48.020

Notice of closure or restriction -- Emergency closure.

Before any state highway, county road, or city street is closed to, or the maximum speed limit thereon reduced for, all vehicles or any class of vehicles, a notice thereof including the effective date shall be published in one issue of a newspaper of general circulation in the county or city or town in which such state highway, county road, or city street or any portion thereof to be closed is located; and a like notice shall be posted on or prior to the date of publication of such notice in a conspicuous place at each end of the state highway, county road, or city street or portion thereof to be closed or restricted: PROVIDED, That no such state highway, county road, or city street or portion thereof may be closed sooner than three days after the publication and the posting of the notice herein provided for: PROVIDED, HOWEVER, That in cases of emergency or conditions in which the maximum time the closure will be in effect is twelve hours or less the proper officers may, without publication or delay, close state highways, county roads, and city streets temporarily by posting notices at each end of the closed portion thereof and at all intersecting state highways if the closing be of a portion of a state highway, at all intersecting state highways and county roads if the closing be a portion of a county road, and at all intersecting city streets if the closing be of a city street. In all emergency cases or conditions in which the maximum time the closure will be in effect is twelve hours or less, as herein provided, the orders of the proper authorities shall be immediately effective.

Exhibit E
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WSDOT Transit Vehicle Stop Zone Guidelines

Transit Vehicle Stop Zone Guidelines



**Washington State
Department of Transportation**

WSDOT Transit Vehicle Stop Zone Guidelines

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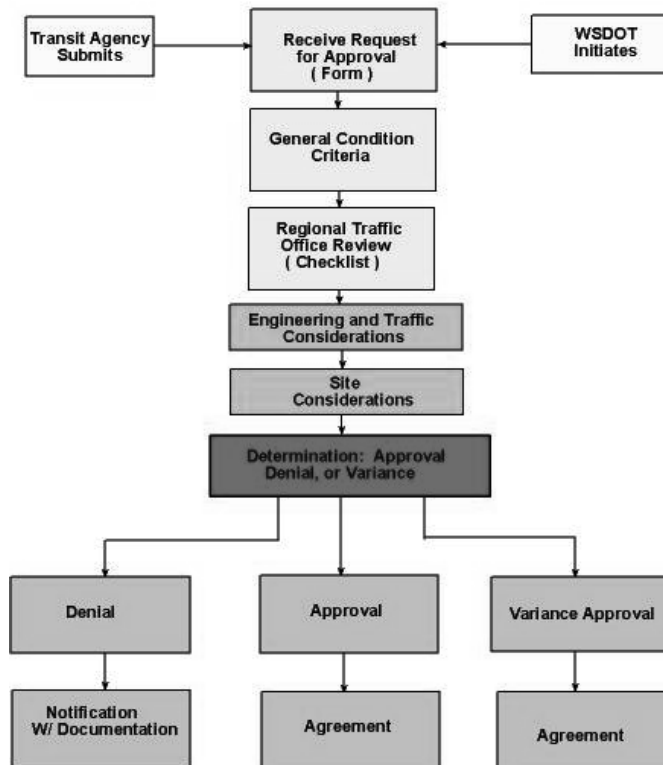
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WSDOT Transit Vehicle Stop Zone Guidelines

Transit Vehicle Stop Zone Guidelines
Approval Process Flow



WSDOT Transit Vehicle Stop Zone Guidelines

I. Introduction

These guidelines provide a standard process for managing approval requests for Transit Vehicle Stop Zones on State Highways outside incorporated areas. The guidelines also promote department wide uniformity by facilitating regional compliance with the requirements of WAC Chapter 468-46, as it applies to Transit Vehicle Stop Zones. In addition, the guidelines blend the operational needs of the department and the public transit authorities with public safety and risk management. The guidelines are a compilation of information from several sources and are intended for use by Regional Traffic Operations personnel involved with non-project, low cost enhancement programs and development review processes. See the WSDOT design manual for information on incorporating transit vehicle stop zones into design projects.

As the department works in partnership with transit agencies to meet the challenges of operating a multi-modal transportation system, providing continued safe and efficient mobility for existing customers is a major priority. These guidelines offer provisions to sanction, by variance, existing stops that do not meet minimum criteria, providing the location is operating safely, as determined by an engineering and traffic investigation. This process allows opportunities to plan funding for upgrades and improvements to these existing stops in normal budgetary programming cycles.

References include:

WSDOT Design Manual, Division 6, Division 10

AASHTO A Policy on Geometric Design of Highways and Streets, Chapter 3

Transportation Research Board TRANSIT COOPERATIVE RESEARCH PROGRAM Report 19 - Guidelines for the Design and Construction of Bus Stops

WAC and RCW

Chapter 468-46 WAC

Transit Vehicle Stop Zones

468-46-010 - The WAC directs the department, upon receipt of a request for approval of a transit stop on a state highway, outside an incorporated area, to conduct "...an engineering and traffic investigation in an attempt to find a suitable location at which transit vehicles may stop wholly off the roadway...."

468-46-020 - The WAC allows the department to approve a temporary in-lane stop if a suitable location, wholly off the roadway, cannot be found within a "...reasonable and practical..." distance from the proposed location, and there is, based on engineering judgment, stopping sight distance as a minimum.

468-46-030 - The WAC requires a transit vehicle stop (bus stop) sign installation at all approved locations. This sign is installed by the public transit authority.

468-46-040 - The WAC requires an advance transit vehicle stop sign installation, consistent with the MUTCD specifications, at all locations where the transit vehicle stop is not visible for a distance of 500' in advance of the stop. This sign is installed by the department.

468-46-060 - The WAC requires that a continuous effort be made to eliminate temporary transit vehicle stops upon the roadway. This effort is subject to the availability of funds.

RCW

Chapter 46.04.500 RCW

Roadway. The RCW defines 'roadway' "...as that portion of the highway improved, designed, or ordinarily used for vehicular travel, exclusive of the sidewalk or shoulder...".

Chapter 46.61.560 RCW

WSDOT Transit Vehicle Stop Zone Guidelines

Stopping, Standing and Parking Outside Business or Residence Districts. The RCW allows transit vehicles on a state highway, outside an incorporated area, to temporarily stop upon the roadway for the purpose of discharging and receiving passengers at a marked transit stop approved by the WSDOT.

46.61.220 RCW

Transit Vehicles. Drivers shall yield right of way to a transit vehicle that has signaled and is reentering the traffic flow in the same direction.

This working document serves as a basic tool, allowing all WSDOT regions to use the same minimum approval criteria, documentation of process, and inventory and review procedures.

II. Overview

A. General

General considerations for locating transit vehicle stops include:

- promote safe pedestrian access
- encourage safe pedestrian crossings
- maximize transit efficiency
- offer proximity to activity centers
- minimize disruptions to traffic
- satisfy general spacing requirements
- provide convenient connections to other transportation modes

The Americans with Disabilities Act (ADA) requires equal access for riders with disabilities. It is critical that as many transit stops as possible be fully accessible. Historically, transit vehicle stop zone studies consisted of a general field review to determine if the roadway geometrics would accommodate a safe stopping area for the transit vehicle. Pedestrian amenities such as sidewalks, roadway crossing opportunities, security lighting, and shelters were not considered in the review process. With the civil guarantee of ADA functionality, and a commitment to making transit stop locations more viable and user friendly, the review process should consider the needs of the pedestrian both before and after using the transit service.

B. Components

When combined, the following components will create a foundation for an ongoing transit vehicle stop zone program.

- The process of receiving, reviewing, and approving/denying requests for transit vehicle stop zones
- Agreements, as funding, maintenance, and operational tools, and as opportunities to partner with public transit authorities in an effort to realize the department's strategic plan
- An ongoing transit vehicle stop zone inventory and review program to be integrated into the department's corporate database
- Commitment to public safety and risk management

C. Definitions

A transit vehicle stop zone is the portion of the roadway that is designated for use by transit vehicles as a temporary stop when loading or unloading passengers. Also referred to as "bus stop" or "transit stop," two configurations are defined in these guidelines:

WSDOT Transit Vehicle Stop Zone Guidelines

“bus turnout”, “bus pullout” - These terms interchangeably refer to an area that is specially constructed or designated for the purpose of transit vehicle stopping. The area is separate from the traveled lanes. This configuration allows through traffic to flow freely without the obstruction of stopped transit vehicles. This coincides with the WAC 468-46-010 terminology “wholly off the roadway”

“in-lane bus stop”, “in-line bus stop” and “in-lane transit stop” - These terms interchangeably refer to an area in the traveled lane designated for the temporary stopping of transit vehicles. This configuration may impede traffic and may create additional safety concerns. This type of stop coincides with the WAC 468-46-020 terminology “temporarily stop upon the roadway” and is compliant with RCW 46.61.560 if the transit vehicle is temporarily stopping at a marked location approved by WSDOT.

Other definitions:

“public transit authority” - This term refers to any city, county, county transportation authority, public transportation benefit area, or regional transit authority authorized to operate public transportation service in Washington State

“transit vehicle” - This term refers to a van, minibus, or bus operated by a public transit authority for the purpose of public transportation

III. GUIDELINES**A. Request for Approval**

Prior to installing a transit vehicle stop on a state highway outside an incorporated area, a public transit authority shall submit a written request for approval to the department. The Regional Traffic Office is responsible for designating a transit liaison specialist to receive requests and follow through with the review process and necessary documentation.

Time required to process requests for approval

Process the requests for approval as quickly as possible. A joint review including regional traffic personnel and transit authority representatives may eliminate any incomplete or inconsistent information. This may also save time by allowing review of several locations, or all locations within a corridor during one visit. A turn around time of 15 working days from the date of receipt of the request is recommended as the goal of the regional traffic operations personnel. Resource limitations within the regions may increase the time required to process requests. Add an additional 5 working days to the turn around time if a special speed study or sight distance determination is required. This does not include the time required for processing an ‘application for general permit.’

Include the following information on the request for approval:

- Name of requesting agency
- Date of request
- Name, address, Tel #, and e-mail address of person submitting request
- State Route, milepost
- Distance/Direction to or from the nearest intersection
- Direction of travel of proposed stop
- Estimated number of transit stop users
- ETA’s of stops at location

3

WSDOT Transit Vehicle Stop Zone Guidelines

- Bus route (note any weaving or multiple lane changes required in the course of the route within one quarter mile of the proposed stop)
- Major traffic generator (school, business, health care facility)
- Transit users requiring special pedestrian focus (children, elderly)
- Type of stop, in-lane or pullout
- Is a parking restriction required?
- Vehicle type, length, gvw, turning radius
- Photo or video of proposed location
- Plan view vicinity drawing showing:
 - North arrow
 - State Highway #, existing lanes of travel, nearest intersections
 - In rural areas, show intersections or roadway features within one quarter mile of the proposed stop
 - In urban or suburban areas show adjacent intersections
 - Location of proposed stop, width of pullout lane, length and rates of tapers
 - Passenger Amenities
 - ADA pad
 - Lighting
 - Shelter
 - Furniture
 - Pedestrian Access
 - walkway
 - roadway crossing opportunities

Request Form

Use a standardized request form to promote a consistent response procedure within the Department. See figure 1.

WSDOT Transit Vehicle Stop Zone Guidelines

WSDOT
Request to Approve Transit Vehicle Stop Zone

Agency submitting request _____ Date _____
Contact Person _____ Tel _____ Fax _____
Mailing address _____ e-mail _____

Proposed Location Information

State Route _____ Milepost _____
Distance/Direction to/from nearest intersection _____
Proposed Stop - Direction of travel ____ Estimated Transit Stop User Volume, Day__ Peak Hour__
List the eta's of scheduled stops at the proposed site _____
Does the Bus Route require changing multiple lanes or weaving at or near the proposed stop? _____
Is the stop at a major pedestrian generator (school, business, health care facility) _____
Are there transit users requiring special pedestrian focus (children, elderly) _____
Type of stop: in-lane or pullout _____
Type of pullout: near side _____ far side _____ mid block _____ other _____
Proposed vehicle type (give length, gvw, turn radius) L _____ W _____ radius _____

Submit a plan view of the proposed site
Include the following features if applicable:

- North Arrow
• Existing lanes of travel
• ADA Pad
• Pedestrian Crossing
• Walkway
• Proposed Stop
• Width
• Tapers
• Signs and Striping
• Amenities
• Shelter
• Lighting
• Furniture
• Other: _____



Figure 1.

WSDOT Transit Vehicle Stop Zone Guidelines

B. General Condition Criteria

These General Condition Tables offer guidance in determining the appropriate type of transit stop (pullout or in-lane). In addition they give direction in planning the Regional Traffic Office Review by calling out other important considerations. Chapter 468-46 WAC requires transit vehicle stops to be wholly off the roadway, wherever “reasonable or practical”. RCW 46.61.560 allows in-lane stops at locations that are approved by WSDOT.

The WSDOT Design Manual chapter 1060 and the TCRP Report 19 guidelines offer concurring recommendations for pullouts at locations where one or more of the following factors are present:

- Curb lane traffic volume exceeds 250 vehicles during the peak hour
- Traffic speed is greater than 45 mph (WSDOT Design Manual), 40 mph (TCRP Report 19)
- Passenger volume at the stop exceeds 20 boardings per hour
- History of accidents at the proposed location

Criteria for approval in general conditions

GENERAL CONDITION

Rural

Two Lane, Low Speed, Low Traffic Volume

Criteria for Approval of New Stops

Review request for approval

Pullout recommended if one or more of the following factors is present:

- If 10 or more buses stop at this location during peak hour
- If 10 or more transit users board the bus per hour
- If accident history indicates risk

Review roadway geometrics and accident history

Transit vehicle stop sign required

ADA pad required if transit vehicle is equipped with accessibility function

ADA sign required if stop is ADA functional

Advance transit vehicle stop sign required if sight distance is less than 500'

WSDOT Transit Vehicle Stop Zone Guidelines

Criteria for approval in general conditions

GENERAL CONDITION

Rural

Two Lane, High Speed, Low Traffic Volume

Criteria for Approval of New Stops

Review request for approval

Pullout recommended if one or more of the following factors is present:

- If 10 or more buses stop at this location during peak hour
- If 10 or more transit users board the bus per hour
- If operational speed is greater than 45 mph
- If accident history indicates risk

Review roadway geometrics and accident history

Transit vehicle stop sign required

ADA pad required if transit vehicle is equipped with accessibility function

ADA sign required if stop is ADA functional

Advance transit vehicle stop sign required if sight distance is less than 500'

GENERAL CONDITION

Rural - Suburban

Two Lane, High Speed, Moderate - High Traffic Volume

Criteria for Approval of New Stops

Review request for approval

Pullout recommended if one or more of the following factors is present:

- If curb lane peak hour volume is greater than 250 vehicles
- If 10 or more buses stop at this location during peak hour
- If 20 or more transit users board the bus per hour
- If operational speed is greater than 45 mph
- If accident history indicates risk

Review roadway geometrics and accident history

Transit vehicle stop sign required

ADA pad required if transit vehicle is equipped with accessibility function

ADA sign required if stop is ADA functional

Advance transit vehicle stop sign required if sight distance is less than 500'

WSDOT Transit Vehicle Stop Zone Guidelines**Criteria for approval in general conditions****GENERAL CONDITION****Suburban****Multilane, Moderate Speed, Moderate - High Traffic Volume****Criteria for Approval of New Stops****Review request for approval****Pullout recommended if one or more of the following factors is present:**

- If curb lane peak hour volume is greater than 250 vehicles
- If 10 or more buses stop at this location during peak hour
- If 20 or more transit users board the bus per hour
- If operational speed is greater than 45 mph
- If accident history indicates risk

Review roadway geometrics and accident history**Transit vehicle stop sign required****ADA pad required if transit vehicle is equipped with accessibility function****ADA sign required if stop is ADA functional****Advance transit vehicle stop sign required if sight distance is less than 500'****Security Lighting recommended****Passenger Shelter recommended****GENERAL CONDITION****Urban - Not incorporated****Multilane, Low Speed, Moderate - High Traffic Volume****Criteria for Approval of New Stops****Review request for approval****Pullout recommended if one or more of the following factors is present:**

- If curb lane peak hour volume is greater than 250 vehicles
- If 10 or more buses stop at this location during peak hour
- If 20 or more transit users board the bus per hour
- If accident history indicates risk

Review roadway geometrics and accident history**Transit vehicle stop sign required****ADA pad required if transit vehicle is equipped with accessibility function****ADA sign required if stop is ADA functional****Advance transit vehicle stop sign required if sight distance is less than 500'****Security Lighting recommended****Passenger Shelter recommended**

WSDOT Transit Vehicle Stop Zone Guidelines**C. Regional Traffic Office Review**

Conduct reviews using the geometric section (Sections 610-650) and the transit benefit facility section (Section-1060) of the WSDOT Design Manual, the AASHTO Policy on Geometric Design of Highways and Streets, and the TCRP Report 19, Guidelines for the Location and Design of Bus Stops.

1. Engineering and Traffic considerations:**a) General**

The horizontal and vertical alignment, design speed, and design stopping sight distance data for existing state highways can be accessed on remote terminals through the TRIPS mainframe. Use Roadway Reports menunb01. The SRVIEW software can help define area environments. The focus of an onsite review may include, but not be limited to, a field test to determine stopping sight distance, a speed study to determine 85th percentile speed, and a review of pedestrian access, pedestrian crossing opportunities, and pedestrian sight distance. Consider the location of proposed bus shelter and ensure clear sight distance at intersections and driveways. In addition, review existing highway features for potential conflicts, including but not limited to:

- Existing utilities, above and below ground
- Existing drainage or sewer installations
- Existing guardrail or barrier
- Existing signs
- Existing vegetation

b) Review Checklist

Use a standardized review checklist to promote a consistent procedure within the Department. See figure 2.

WSDOT Transit Vehicle Stop Zone Guidelines

WSDOT
Transit Vehicle Stop Zone Review Checklist

Region _____

Requested by: Agency _____ **Contact Person** _____ **Tel#** _____

Transit Stop Location - SR _____ MP _____ Location (nearest cross road) _____

Existing Transit Stop - Yes No Previously Approved - Yes No Pullout ___ In lane ___

Placement at intersection: Far side (preferred) ___ Near side ___ Mid block ___

Curb lane traffic volume-peak hour ___ Bus volume-peak hour ___ Passenger volume-peak hour ___

General Condition _____

Roadway Geometry

Number of roadway lanes _____ (include turn lanes) Direction of travel _____

Horizontal Alignment: Horizontal Curve - Left Right or Tangent

Vertical Alignment: Vertical Curve - Sag Crest or Grade % _____

Topography: Flat Rolling Hills Steep Hills

Existing Slope: Ditch ___ Cut ___ Fill _____

Existing Location Features

Existing Shoulder:
 Width _____ ft. Surface material / depth _____ / _____ Condition _____
 Review by regional materials lab _____

Existing Sidewalk:
 Width _____ ft. Material _____ Condition _____

ADA Landing Pad - Yes No Size (5'x8' minimum size) _____ ft. X _____ ft.

Existing street lighting - Yes No Condition of existing vegetation _____

Speed

Operational Speed _____ mph Posted Speed _____ mph Design Speed _____ mph

Stopping Sight Distance

Field Measurement: 1) _____ ft. 2) _____ ft. Ave) _____ ft.

Is SSD criteria met at location - Yes No Advance Transit Stop Sign required - Yes No

Pullout Considerations

Is pullout recommended in the General Condition Criteria - Yes No Is R/W available - Yes No

Comments _____

In-lane Considerations

If a pullout is not recommended in the General Condition Criteria, is an in-lane stop appropriate at this location? Yes No

Comments _____

Pedestrian Considerations

Pedestrian sight distance on approach _____ ft. Pedestrian sight distance on departure _____ ft.

Paved waiting area - Yes No Walkway access - Yes No Distance to intersection _____ ft.

Traffic signal - Yes No Crosswalk - Yes No Refuge area - Yes No

Number of lanes to cross _____ Crossing distance _____ ft.

Accident History Review: _____

Comments

Should Transit Stop Be Approved? - Yes No

Reviewed by _____ Date _____

Figure 2.

WSDOT Transit Vehicle Stop Zone Guidelines**c) Stopping Sight Distance**

The determination of stopping sight distance is a critical issue regarding the WAC requirements for approval of in-lane stops and advance warning signs. Stopping sight distance on an existing roadway provides a vehicle that is traveling at the 85th percentile speed sufficient length to stop before reaching a stationary object in its path. Consider all factors that contribute to the geometric configuration when determining a location specific stopping sight distance.

- Horizontal alignment
- Vertical alignment
- Roadway Section
- Sight Obstructions

(1) Determining the 85th percentile speed.

Use the following order of preference to determine the operating or 85th percentile speed:

- Data developed from a site specific speed study using road tubes or radar
- Data from an existing data base (e.g. corridor study)
- If the 85th percentile speed is not available, and no accident patterns exist which indicate vehicle speeds as a contributing factor, the posted speed limit may be used to determine stopping sight distance

(2) Method for measuring sight distance at a proposed transit location.

This method requires an observer and may require an assistant. Required equipment includes a passenger vehicle (not a van or pickup,) a distance measuring instrument, and a target object clearly marked at 6" above the roadway surface. A measuring wheel with an accuracy of $\pm 1\%$ is an acceptable device for determining distances. The AASHTO Policy on Geometric Design of Highways and Streets Chapter 3 discusses the criteria for measuring sight distance. Testing from a passenger vehicle meets the criteria for the height of the drivers eye (3.5'). The 6" target represents the lowest object on a roadway that a driver may perceive as a hazard.

- The 6" target is placed at the site of the proposed transit stop, near the anticipated location of the rear of the stopped transit vehicle (see figure 1, Request to Approve, vehicle length). If the target is temporarily placed in the traveled way or at a location that will disrupt the normal flow of traffic, install appropriate temporary traffic control.
- The observer drives toward the target in the direction of travel of the proposed transit stop, beginning at a location where the target is not visible. When the target comes into the observers field of view, activate the distance measuring device, or mark the point for measurement with the wheel.
- A measurement is then made from this point to the location of the target. An average of two readings is recommended to ensure accuracy.

WSDOT Transit Vehicle Stop Zone Guidelines

(3) Method for determining stopping sight distance from observed field measurements.

Refer to the stopping sight distance tables in Design Manual Chapter 650 to determine the acceptability of the existing stopping sight distance at a proposed location. Consider the sight distance measured in the field, the 85th percentile speed, and existing roadway geometrics when making this determination. The data can also be analyzed using the *Stopping Sight Distance (Wet Pavement)* table contained in chapter 3 of the AASHTO Policy on Geometric Design of Highways and Streets.

d) Accident Review

A three year accident review is recommended at the proposed location. Accident reports dating from 1993 ahead can be accessed on a remote terminal through the TRIPS mainframe menu**unb01.5.1**. Additional pedestrian accident reviews may be beneficial, and study of a five to ten year history may identify pedestrian accident patterns. This historical data (pre 1993) is available on the TRIPS mainframe menu**55.1**. When entering TRIPS report parameters it is possible to select accidents by vehicle type. The two digit code for bus (non school) is *10*. In addition to running a report on all vehicle types at or near the location of the proposed stop, a bus specific report throughout the corridor that contains the proposed location may indicate a traffic safety pattern for the transit agency. Focus the study on factors contributing to accidents, including but not limited to the location's environment, vehicle speeds, time of day, and type and severity of accidents. If an in-lane stop is considered for approval, focus on rear end accidents at or near the site. If a history of accidents exists at the proposed location, an engineering judgment should be made and documented regarding the potential impact created by adding a transit vehicle stop.

e) Pedestrian Access Review

Review of a proposed transit vehicle stop includes an evaluation of the accessibility and viability of the location for pedestrians. The transit stop may be little more than a sign along a highway, but consider it as a significant pedestrian destination. As a minimum, provide the following *basic* pedestrian amenities at a transit vehicle stop:

- A barrier free approach to the stop, including ADA features, if appropriate
- Appropriate opportunities for pedestrians to cross the roadway
- Clear designation - Bus Stop sign or symbol. Wheelchair accessibility sign if appropriate
- Waiting area that permits standing comfortably away from the traveled lanes. Increased vehicle speed = greater buffer distance
- Waiting area that is well drained and provides a clear, level, hard-surfaced boarding/deboarding area
- Secure environment –The stop should be placed in a non-threatening location. Pedestrians should feel safe and comfortable while approaching the stop and while waiting at the stop

Although additional amenities are not absolute requirements, they will attract pedestrians who might not otherwise consider using transit service. The number of anticipated passengers and frequency of fixed route stops at the location, in combination with the policy of the transit authority will determine the ultimate configuration of the stop. These *additional* amenities may include:

- At-grade walkways or sidewalks at stops, and approaches leading to stops
- A bus shelter may be provided at an existing or proposed location. The transit authority determines appropriate shelter locations based on passenger volume, type of service area, and budgetary considerations. The proposed shelter location must provide a clear sight triangle to minimize impacts on sight distance at intersections.

WSDOT Transit Vehicle Stop Zone Guidelines

- WSDOT Design Manual recommends consideration of additional ‘street lighting’ at transit stops. Lighting is recommended wherever installation is feasible. While not mandatory, this lighting allows the passengers using the facility to see and to be seen, not only at the stop, but at adjacent pedestrian crossings. Lighting provides a perceivable feeling of safety for the transit user. Placing stops near existing street lights may reduce installation costs. On limited access facilities, the public transit agency will be responsible for the initial installation cost of any security lighting. WSDOT will be responsible for any ongoing maintenance costs.
- Furniture – A bench or seat may ease long waits
- Route information – This is an important service for infrequent riders
- Modal connectivity – This encourages combined transportation mode travel

Rural Applications - It is not practical to assume that a public transit authority would configure a rural stop with few passengers to contain all of these elements. However if the passengers are exercising their only mobility option, a need is demonstrated for all of the *basic* amenities listed above.

f) Pedestrian Sight Distance - Crosswalks

Pedestrians must have a clear line of sight to all traffic that may impact pedestrian movements at proposed transit stops. A field review should reveal any potential sight obstructions and allow the reviewer to assume the perspective of the pedestrian. Consider the position of the stopped transit vehicle at a proposed location, as it may be a potential sight obstruction to pedestrians crossing in front of, or behind the vehicle.

Marked crosswalks are generally installed only at controlled intersections. Marked crosswalks may be considered on multilane highways at uncontrolled intersections or mid-block locations if there is sufficient pedestrian volume and median refuge areas have been provided. The department, or appropriate city is responsible for installing and maintaining crosswalks.

2. Site Considerations at Proposed Locations

- The proposed location should not block intersections or driveways - RCW 46.61.570
- The area of passenger boarding and exiting should not conflict with pedestrian flow through the area
- The proposed location should not conflict with other user groups such as bike lanes, ferry holding lanes, emergency vehicle approaches, rail crossings
- The proposed location should be in a well drained area, and should not require installation of drainage features
- Spacing of transit stops can impact overall traffic performance. Spacing should be based on prevailing land use and passenger volumes, with consideration given to maximizing traffic flow on the roadway.

Typical Transit Stop Spacing

<i>Environment</i>	<i>Typical Spacing</i>
Central Core Area of CBD	600 feet
Urban Areas	750 feet
Suburban Areas	1250 feet
Rural Areas	locate @ activity nodes or 2500 feet

WSDOT Transit Vehicle Stop Zone Guidelines

3. Placement of stop at intersection:

The approval of the placement and dimensions of the proposed stop at or near an intersection requires careful analysis, considering many contributing factors, including signalization, channelization, turning movements and pedestrian movements. There are three basic placements for stops at intersections:

- a) **Far-side** - Transit vehicle stops immediately after passing through an intersection
- b) **Near-side** - Transit vehicle stops immediately prior to in intersection
- c) **Midblock** - Transit vehicle stops within the block

When a pullout is warranted at an intersection, a far-side placement is preferred, however, there may be situations where a near-side or mid-block stop is appropriate.

Each placement has advantages and disadvantages

	Advantages	Disadvantages
Far-side	<ul style="list-style-type: none"> • Minimizes conflicts between right turning vehicles and buses • Provides additional right turn capacity by making curb lane available for traffic • Minimizes sight distance problems on approaches to intersections • Pedestrians cross behind the bus • Shorter deceleration distance because bus uses intersection to decelerate • Signal behind bus creates gaps for entering traffic • Boarding passengers assemble at less crowded area of sidewalk 	<ul style="list-style-type: none"> • Traffic queued behind a in-lane bus stop may block intersection • May obscure sight distance for crossing vehicles • May increase sight distance problems for crossing pedestrians • Can cause double stops, for signal, then immediately for far side stop. Double stops are a factor contributing to rear end accidents • May cause right turning conflicts with cross traffic
Near-side	<ul style="list-style-type: none"> • Minimizes interference when traffic is heavy on the far side of the intersection • Allows passengers to access buses closest to crosswalk • Allows passengers to board and alight while the bus is stopped at a red light 	<ul style="list-style-type: none"> • Increases conflicts with right turning vehicles • May result in stopped buses obscuring curbside traffic control devices and crossing pedestrians • May obscure sight distance for cross traffic vehicles stopped to the right of the bus • Increases sight distance problems for crossing pedestrians • May be difficult for buses to re-enter traffic. This may cause bus route schedule delays
Mid-block	<ul style="list-style-type: none"> • Stops located at major passenger generating area • Minimizes sight distance problems for vehicles and pedestrians • May result in passenger waiting areas experiencing less pedestrian congestion • Minimal conflicts with turning traffic 	<ul style="list-style-type: none"> • Requires additional distance for no-parking restrictions • May encourage patrons to cross street at mid-block • Increases walking distance for patrons crossing at intersections

WSDOT Transit Vehicle Stop Zone Guidelines

4. Transit vehicle stop pullout considerations:

- Wherever possible, locate proposed transit vehicle stops in areas where the public right of way is of sufficient width to allow for pullout and sidewalk construction. If the department and the transit agency concur that additional right-of-way is needed to accommodate the pullout, landing pad, sidewalk, relocated drainage ditch, cut slope, or other feature, the department should negotiate the appropriate private property agreement, or obtain a slope easement.
- The recommended minimum pullout lane width is 12 feet, not including curb or sidewalk. This dimension allows a standard 10.5' wide bus to pull completely off the roadway.
- The total length of a pullout should allow room for an entrance taper, a deceleration lane, a stopping area, an acceleration lane, and an exit taper. Dimensions for these features vary with operational speed. Refer to the Design Manual chapter 1060 for these dimensions. Far side pullouts can use the intersection as the deceleration lane. The length of the pullout stopping area is determined by the type and number of transit vehicles using the stop.
- To evaluate the suitability of existing pavement for use as a transit stop, determine surfacing depths and materials at proposed locations. Concentrated loading coupled with the dynamic affect of braking can place high demands on pavement at transit vehicle stops. Base the evaluation of existing and proposed roadway sections on this anticipated axle loading. The Regional Materials Lab may assist in providing parameters for site specific surfacing depths. The OSC Materials Lab has developed the following informational table for minimum surfacing depths.

Minimum Surfacing Depths for Transit Vehicle Pullout

Number of buses per day. (Standard 40' bus)	Subgrade Type	20 Year Design				40 Year Design			
		Asphalt		Concrete		Asphalt		Concrete	
		AC (ft)	Base (ft)	PCC (ft)	Base (ft)	AC (ft)	Base (ft)	PCC (ft)	Base (ft)
0-50	Poor	0.35	1.05	0.60	0.50	0.40	1.15	0.60	0.50
	Ave	0.35	0.65	0.60	0.50	0.40	0.60	0.60	0.50
	Good	0.35	0.65	0.60	0.50	0.40	0.60	0.60	0.50
50-100	Poor	0.40	1.15	0.60	0.50	0.45	1.30	0.65	0.50
	Ave	0.40	0.60	0.60	0.50	0.45	0.65	0.65	0.50
	Good	0.40	0.60	0.60	0.50	0.45	0.55	0.65	0.50

- A 5-foot (measured parallel to the face of curb) by 8-foot (measured normal to the face of curb) at-grade or raised landing pad is required to meet current ADA requirements at proposed or newly re-located transit locations. This is the minimum allowable size. The pad shall be constructed of a stable, firm, slip-resistant surface. The pad shall be sloped to drain but not create an unstable situation for a wheelchair. Consider the possibility of service by a transit vehicle equipped with either a front or rear door wheelchair lift. Although not a requirement, a 10-foot by 10-foot pad increases efficiency of operation.
- When funding is available, provide an ADA accessible, 5ft wide at-grade walkway or raised sidewalk for the length of the pullout, extending to the intersection radius return.

WSDOT Transit Vehicle Stop Zone Guidelines

5. Transit vehicle stop in-lane considerations:

In many urban and suburban low speed areas, in-lane transit stops are a common practice. If in-lane transit stops are WSDOT approved locations, this practice complies with RCW 46.61.560. On state highways, in moderate or high speed areas, in-lane bus stops are not recommended and will be approved only under special conditions. WAC 468-46-020 gives basic criteria for such approval. This approval can be based on the unavailability of a 'wholly off the roadway' location within a 'reasonable and practical' distance of the proposed location, in conjunction with acceptable stopping sight distance. In-lane bus stops decrease the operational capacity of any roadway, and on moderate or high speed highways may result in an increase in rear-end related accidents. WAC 468-46-060 directs the department to make an effort to '...eliminate conditions requiring temporary stops by transit vehicles upon the roadway....' This effort is subject to the availability of funds. From a public safety and risk management perspective, the department's challenge is to work with the transit agencies in an effort to secure funding for transit vehicle pullout improvements on state highways.

D. Transit Vehicle Stop Zone Delineation and Signing

1. Delineation

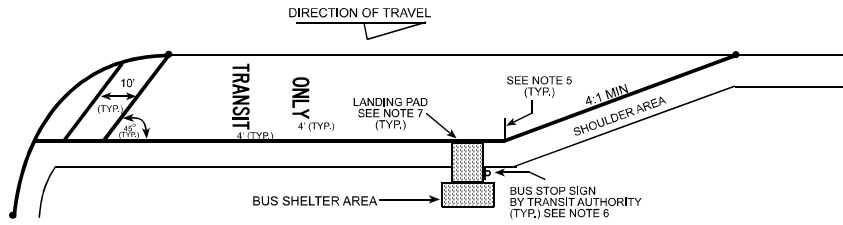
- The transit stop should be clearly delineated to ensure use of the stop area by transit vehicles only and to give the transit operators direction on where to stop
- Striping and pavement marking for pullouts in rural areas should be installed in accordance with figure 3
- Striping and pavement marking for pullouts in urban and suburban areas should be installed in accordance with figure 4
- Curb painting can be used to identify curb side stops in no parking areas. This curb painting is the responsibility of the transit authority

2. Signing

- Each approved stop zone shall have a bus stop symbol sign. This sign is installed by the public transit authority. WAC 468-46-030
- Each stop zone shall have an advance transit vehicle stop sign installation, consistent with the MUTCD specifications, at all locations where the transit vehicle is not visible for a distance of 500' in advance of the stop. This sign is installed by the department. WAC 468-46-040
- Each stop zone equipped with ADA pad, and serviced by transit vehicles equipped with special features to facilitate disabled passengers, shall have the International Symbol for Access for the Handicapped sign displayed. Some transit authorities integrate this symbol into the bus stop sign. This sign is installed by the public transit agency.
- Approved transit stops may also require an accompanying "no parking" traffic regulation to ensure that motorists will not park in the transit stop area. WSDOT will be responsible for all costs and maintenance of these signs.
- On limited access facilities, the appropriate transit authority may be responsible for the costs associated with the initial installation and maintenance of flyer stop signs located on the shelter, and within the flyer stop area.
- The department may consider installing signs which display a message of 'Yield to Entering Transit Vehicles' in an effort to encourage compliance with RCW 46.61.220. See figure 5.

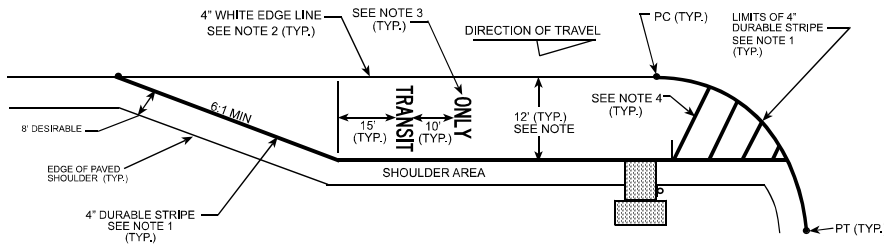
WSDOT Transit Vehicle Stop Zone Guidelines

**TRANSIT VEHICLE STOP PULLOUT
SIGNING AND DELINEATION DETAILS
FOR RURAL AREAS
FIGURE 3**



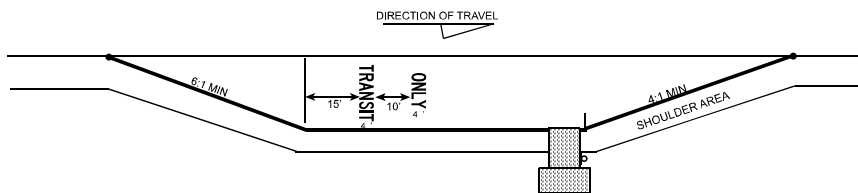
FAR-SIDE TURNOUT (PREFERRED LOCATION)

NOT TO SCALE



NEAR-SIDE TURNOUT

NOT TO SCALE

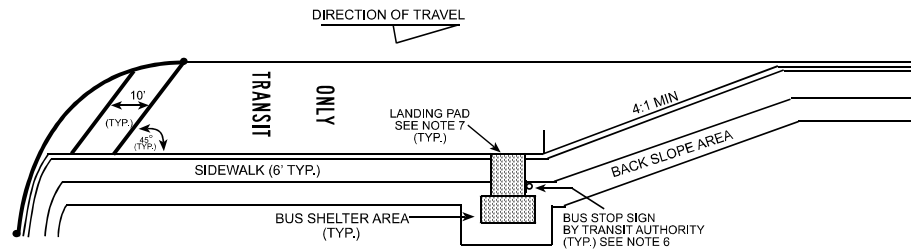


MID-BLOCK TURNOUT

NOT TO SCALE

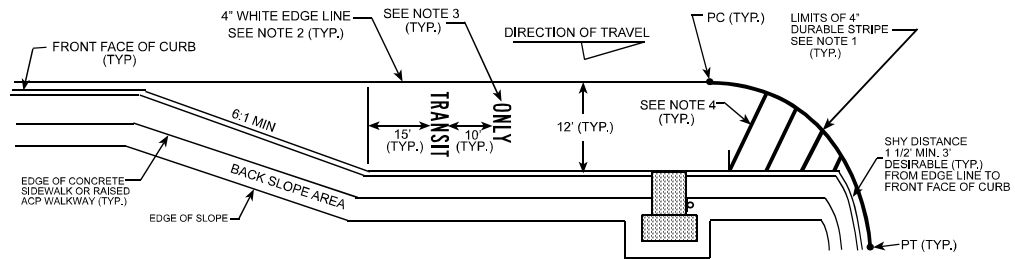
WSDOT Transit Vehicle Stop Zone Guidelines

**TRANSIT VEHICLE STOP PULLOUT
SIGNING AND DELINEATION DETAILS
FOR URBAN AREAS
FIGURE 4**



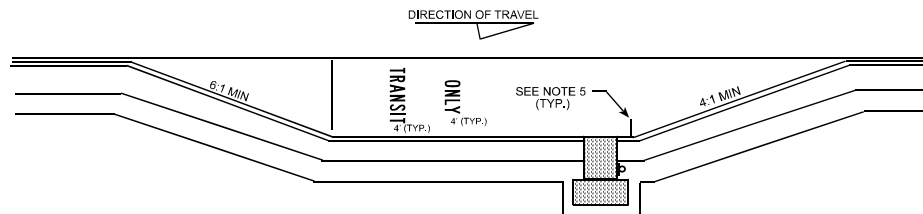
FAR-SIDE TURNOUT (PREFERRED LOCATION)

NOT TO SCALE



NEAR-SIDE TURNOUT

NOT TO SCALE



MID-BLOCK TURNOUT

NOT TO SCALE

WSDOT Transit Vehicle Stop Zone GuidelinesTRANSIT VEHICLE STOP PULLOUT SIGNING AND DELINEATION DETAILS
RURAL - FIGURE 3

NOTES:

1. DURABLE STRIPE TO BE EITHER WHITE METHYLMETHACRYLATE OR WHITE THERMOPLASTIC
2. DO NOT USE RPMS FOR LANE EDGE DELINEATION
3. "TRANSIT ONLY" PAVEMENT MARKING LETTERS MAY BE USED SUPPLEMENTALLY TO DESIGNATE SPECIAL USE LANE. "BUS ONLY" PAVEMENT MARKING LETTERS MAY BE USED IF THE TURNOUT CAN BE USED BY SCHOOL BUSES
4. MAY USE 8" WHITE DURABLE STRIPE ON DIAGONALS WITHIN THE RADIUS RETURN AREA TO DESIGNATE RESTRICTED SHOULDER AREA
5. MAY USE A 4' LONG BY 8" WIDE STRIPE AS A 'REFERENCE' STOP LINE FOR TRANSIT VEHICLES
6. DISPLAY INTERNATIONAL SYMBOL FOR ACCESS TO THE HANDICAPPED PLACARD IF STOP IS ADA FUNCTIONAL. SIGN MAY BE INSTALLED ON APPROACH SIDE OF SHELTER
7. MINIMUM ADA WHEELCHAIR LANDING PAD DIMENSION IS 5'(MEASURED ALONG EDGE STRIPE) BY 8' (MEASURED NORMAL TO EDGE STRIPE)

URBAN - FIGURE 4

NOTES:

1. RADIUS RETURNS AND STRIPING TO BE EITHER WHITE METHYLMETHACRYLATE OR WHITE THERMOPLASTIC
2. DO NOT USE RPMS FOR LANE EDGE DELINEATION
3. "TRANSIT ONLY" PAVEMENT MARKING LETTERS MAY BE USED SUPPLEMENTALLY TO DESIGNATE SPECIAL USE LANE. "BUS ONLY" PAVEMENT MARKING LETTERS MAY BE USED IF THE TURNOUT CAN BE USED BY SCHOOL BUSES
4. MAY USE 8" WHITE DURABLE STRIPE ON DIAGONALS WITHIN THE RADIUS RETURN AREA TO DESIGNATE RESTRICTED SHOULDER AREA
5. MAY USE A 4' LONG BY 8" WIDE STRIPE AS A 'REFERENCE' STOP LINE FOR TRANSIT VEHICLES
6. DISPLAY INTERNATIONAL SYMBOL FOR ACCESS TO THE HANDICAPPED PLACARD IF STOP IS ADA FUNCTIONAL. SIGN MAY BE INSTALLED ON APPROACH SIDE OF SHELTER
7. MINIMUM ADA WHEELCHAIR LANDING PAD DIMENSION IS 5'(MEASURED ALONG FACE OF CURB) BY 8' (MEASURED NORMAL TO THE FACE OF CURB)

WSDOT Transit Vehicle Stop Zone Guidelines

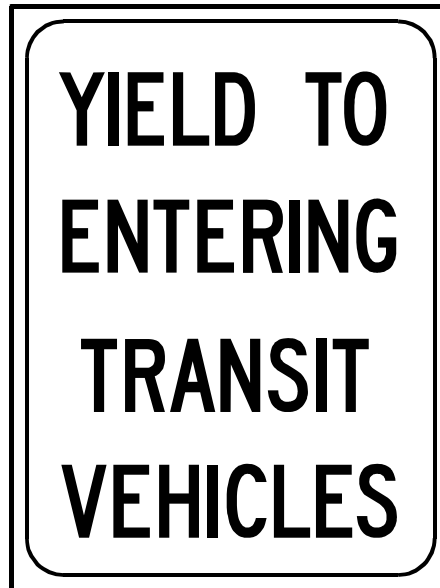


Figure 5
36" x 48"
6" C Letters

WSDOT Transit Vehicle Stop Zone Guidelines**E. Comments from other Agencies and the Public**

In reviewing a proposed transit vehicle stop location, WSDOT personnel may seek input from others. Consideration shall be given to any comments, concerns, or commitments from:

- the local WSDOT maintenance area
- the applying public transit agency
- local jurisdictions or agencies
- WSP or local law enforcement agencies
- the OSC or Regional Administration Staff
- the general public

F. Approval**1. Delegation of Authority to Approve transit vehicle stop zones**

The authority to approve resides with the Secretary of the Department of Transportation or any assistant secretary, or Regional Administrator or designee of the Regional Administrator to whom such authority has been delegated (D55-71). This delegation of approval authority (who signs) should be clearly designated and documented by the regions.

2. Determination of Approval

A comprehensive determination is made regarding the effect a transit stop may have on vehicle and pedestrian traffic, and the environment at a proposed location. This judgment, documented by the results of the engineering and traffic review becomes the basis for the approval or denial of the application for the proposed stop.

3. Variance Approval

The criteria contained in these guidelines should be closely followed to ensure Department wide compliance with the intent of the WAC. A variance may be granted on a case by case basis. The transit liaison specialist shall defer final decisions regarding a variance to the approving authority within the region. An example of a variance could be to 'grandfather' an existing site that does not meet a guideline criterion. The variance must contain written documentation, including the reasons that specific criteria cannot be met, and if necessary, a contingency plan to comply with minimum criteria by upgrading the location within a specified time period.

4. Notification

The Regional Traffic Office shall provide a written letter of notification to the requesting public transit authority regarding the Department's approval, approval with variance, or denial of the application. Information that is the basis for denial or a recommended variance should be included in this letter. Within 15 working days of receipt of an approval/denial notification, a transit agency may bring concerns about the decision to the approving authority within the Region. Any disputed information should be jointly reviewed for accuracy and completeness. The Region's approving authority shall, after analyzing information presented by the transit agency, and information used to document denial/approval, shall uphold or reverse the decision.

5. Application for General Permit

The notification documentation may include an Application for General Permit (DOT form 224-898EF) for the transit authority to complete and submit. This permit covers general and special provisions regarding any work performed within the limits of public right of way, to improve or construct the transit stop. (RCW 47.32.160)

WSDOT Transit Vehicle Stop Zone Guidelines

IV. Agreement

A. General

With the foundation of any successful relationship being mutual understanding and cooperation, a spirit of partnership should guide these agreements, as they cover operational, maintenance, and funding issues pertaining to transit vehicle stop zones. Because the transit authorities serve customers on the state highways, and the department sanctions the approval, installation and maintenance of the transit features required to provide this service, these agreements present a distinct opportunity to demonstrate a commitment to the operation and promotion of *a safe and coordinated transportation system*, as prescribed in the WSDOT Strategic Plan Mission Statement.

B. Transit stops within incorporated cities and towns

Requests for approval of transit vehicle stops on state highways located within incorporated cities and towns should be submitted to the appropriate local agency, with a courtesy copy to the Regional transit liaison. The department may be requested to partner with the local agencies and transit authorities regarding the approval process, and the maintenance and operations agreements. No state regulations exist pertaining to WSDOT sanctioning of transit vehicle stop zones within incorporated areas. The department is authorized by statute to issue permits for construction (RCW 47.32.160) and mandated to maintain the roadway surface (RCW 47.24.020) within these areas.

C. Goals of the agreement

Components of an agreement may include, but are not limited to:

1. Promote transit ridership

The Department and the transit agency should combine efforts to develop and encourage transit ridership in all general condition areas of the regions. The department should endeavor to create and operate an easy to use system for processing requests for approval. The focus should be on the development of user oriented, efficient transit stops that appeal to new and existing customers. To create effective communication, a definitive list of contact persons for both the department and the public transit agencies should be developed and shared between the partners.

2. Identify and develop funding sources

The Department and the transit agency should combine efforts to create avenues for funding improvements of existing stops as well as the design and construction of new sites. Some potential sources include:

- TIB funding (Public Transportation Systems Account)
- Funding available through the WSDOT Public Transportation Office
 - 49 USC Section 5311- can be used for the purchase and installation of passenger shelters and signing in rural areas
 - Rural Mobility Grant Program - can be used for construction of pullouts and shelters
 - STP transfer funds
 - State Infrastructure Bank
 - 49 USC Section 5307 for urban areas
- Low cost enhancement funds administered by the regional Traffic Operations Office
- Funding for improvements to state highways

WSDOT Transit Vehicle Stop Zone Guidelines

3. Maintenance and Operations Plan

The Department and the transit agency may combine efforts to develop a maintenance and operations plan, with clearly defined roles and responsibilities, which includes but is not limited to the following areas:

- Pavement
- ADA landing Pad
- Walkways
- Shelters
- Lighting
- Signs, and delineation
- Vegetation control

4. Joint Performance Review

The Department and the transit agency may combine efforts to develop a program that will periodically review the condition and effectiveness of existing stops. This process could be combined with the Inventory and Review process described in these guidelines with additional input from the transit authorities. The review should include but not be limited to:

- Evaluate the effect of the stop on vehicle and pedestrian traffic. Include accident review
- Evaluate efficiency and safety for transit stop users
- Monitor ridership, passenger volume may merit change, upgrade, removal or relocation
- Evaluate the effectiveness of the maintenance and operations agreement

V. Transit Stop Inventory and Review

Development of a Regional Transit Vehicle Stop Inventory and Review program will increase operational efficiency for the department. Application for approval of a transit vehicle stop zone, copies of any permit issued by the department, and all documentation used to determine approval, denial, or variance should be retained on file by the Regional Traffic Office and integrated into an inventory data base.

A. Inventory

As time and staffing allows, the Regional Traffic Office should inventory all approved fixed route transit stops on state highways outside incorporated areas.

Information from the inventory should be used to develop a Regional Transit Vehicle Stop data base. The data should include the following information for each transit stop:

- Public Transit Authority (owner)
- Date of departmental approval
- SR, mp, travel direction of stop
- Speed, posted and operational (85th percentile) if available
- Intersection configuration and pullout width, type and condition of surfacing
- Sidewalk width, ADA pad dimensions
- Signing, bus stop, wheelchair accessibility, advance transit stop
- Amenities, shelter, lighting, furniture,
- Pedestrian crossing information: marked, unmarked crosswalk, pedestrian signals, mid-block crossing refuge area_

WSDOT Transit Vehicle Stop Zone Guidelines

B. Submitting TRIPS data

Data inventoried from approved transit stops on state highways shall be included in TRIPS, the department's on-line highway system database. The Roadway Data Section of the Planning and Programming Service Center is responsible for updating information in this data base. Forward information to the Transportation Data Office at SCAN 234-6597 or public (360) 753-6597. The required data includes SR, milepost limits, width of pullout and shoulder, type of surfacing.

C. Review

As time and staffing allows, the Regional Traffic Office should review all existing transit stops on state highways outside incorporated areas. Upon review, each site should be placed into one of the following categories and appropriate action should be taken to develop all viable sites to meet the 'approved, meets guideline criteria' status.

- approved, meets guideline criteria
- approved, does not meet guideline criteria
- non-approved, meets guideline criteria
- non-approved, does not meet guideline criteria

1. Existing approved transit stops

On state highways, transit stops may now exist that are approved, but do not meet the minimum requirements of these guidelines. If the stop is determined to be operating safely, based on an engineering and traffic investigation, the Regional Traffic Office should notify the appropriate public transit authority by letter that the non-conforming transit stop is approved with a variance. An agreement to upgrade existing approved transit stops may be required. This plan to upgrade should be consistent with the budgetary programming and planning cycles used by the transit authority and the department. This practice will allow the transit authority time to pursue funding for improvements, as well as continue its day to day operations without the consequence of losing viable stop locations. In addition, the schedule provides risk management for the department, and allows the department time to pursue funding for transit vehicle stop zones as features of construction projects as well as low cost improvements.

2. Existing non-approved transit stops

Transit stops may now exist on state highways that do not have approval. The existence of these locations jeopardizes the Department's position regarding WAC compliance and risk management. The Regional Traffic Office should make every effort to identify transit stops on state highways that are not approved. The public transit authority should be notified by letter of any existing non-approved transit stop. The transit authority should be given 60 days to follow through with the steps required to comply with the approval process contained in these guidelines. If after 60 days, the transit authority has made no effort to seek approval for the site, the Region Traffic Engineer shall order the transit stop closed and remove all appurtenances at the location.

3. Flag Stops

Some public transit agencies provide on demand service in rural settings where fixed route stops are widely separated. The passenger signals a request to stop as the transit vehicle approaches. These non-fixed route stops are referred to as flag stops. These are not approved transit stops. Some transit agencies publicly advertise this service. RCW 46.61.560 allows transit vehicles to stop upon the roadway at marked locations that are approved by WSDOT. WAC 468-46 requires approval of transit stops on state highways. This on demand stop is not pursuant to the WAC or RCW controls regarding transit vehicle stop zones on state highways. Whether stopping on the shoulder or in the traveled lane, this practice is a potential risk to public safety and is not recommended. WSDOT assumes no liability risks from flag stop operations on state highways.

GM 869

INTERPRETIVE SIGNS/MARKERS AGREEMENT

THIS AGREEMENT dated this 19th day of March, 1976, between the WASHINGTON STATE HIGHWAY COMMISSION, hereinafter referred to as Highways, and the WASHINGTON STATE PARKS AND RECREATION COMMISSION, hereinafter referred to as Parks, is being entered into to implement chapter 19, laws of 1967, Extraordinary Session, codified as RCW 43.51.750, entitled, "PRESERVATION OF HISTORIC PROPERTIES".

For the purpose of this agreement, interpretive signs or markers shall include all devices depicting the state's natural and man-made history, providing for the understanding, enjoyment, and education of the public. They are comprehensive in subject treatment, generally providing information to explain the who, what, when, why and how of the event(s) being interpreted.

IT IS HEREBY AGREED AS FOLLOWS:

1. Highways shall give adequate advance notice to Parks of its tentative plans to locate new highways, as well as its plans for viewpoints and rest areas on existing state rights-of-way, prior to actual construction of such proposed highways or sites in order that Parks may study the proposed highway route and sites to determine whether these areas are located on or near areas of interpretive interest. Parks will likewise give Highways adequate notice of its plans to locate interpretive signs or markers along state highway rights-of-way, and will also notify Highways of where interpretive interests are located off highways.
2. Both parties will cooperate in choosing the location of markers along state rights-of-way. In the interest of public safety, Highways shall make the final determination as to the location of sites on existing or proposed state rights-of-way.
3. In the event an interpretive sign or marker site is selected for a location on land which is not part of an existing highway right-of-way, or right-of-way proposed for highway development, Highways and Parks shall jointly determine the nature and extent of each agencies' obligation for acquisition, development, and maintenance of said land, including roadways necessary to reach the marker site.
4. Highways shall construct and maintain necessary turnouts, parking areas, and placing of various signs within the highway rights-of-way to indicate the interpretive signs or markers, and shall maintain the site area. Parks shall furnish and maintain the signs or markers. The number and location of the markers and signs within the confines of the site area shall be mutually agreed upon by Highways and Parks.

5. In the event that a marker must be moved in order that subsequent highway construction may be carried on, Highways shall incur the entire expense of relocation.

6. Other signs, such as those naming local points of interest or for local travel information, shall be the responsibility of Highways, Parks shall provide advice and counsel when requested by Highways as to appropriateness of style, design, and text.

7. The markers covered by this agreement shall be those listed in Attachment Number 1 and hereinafter amended subject to paragraphs 1, 2, and 3 of this agreement.

8. This agreement will be fulfilled to the extent that funds are available to each party for the purposes set forth herein.

9. This agreement supersedes and replaces the Interpretive Markers Agreement entered into between Highways and Parks dated September 23, 1969.

WASHINGTON STATE DEPARTMENT OF HIGHWAYS

By William A. Bulley
William A. Bulley

WASHINGTON STATE PARKS AND RECREATION COMMISSION

By Charles H. Odegard 2/14/76
Charles H. Odegard, Director

APPROVED AS TO FORM:

Jack A. Barland
Assistant Attorney General
State of Washington
Department of Highways

Paul R. ...
Assistant Attorney General
State of Washington
Parks and Recreation Commission

ATTACHMENT NUMBER 1
TO
INTERPRETIVE MARKERS AGREEMENT

<u>MARKER</u>	<u>REMARKS</u>
Deception Pass	Approaches maintained by Highways. Site maintained by Parks in conjunction with maintenance of view points.
Mount Baker	Approach and site maintained by Highways
David Douglas	Approach and site maintained by Highways
Dry Falls	Approach maintained by Highways. Site maintained by Parks (interpretive center) except for snow and ice control performed by Highways on reimbursable basis.
Chief Joseph	Approach and site maintained by Highways
Old Mining Arrastra	Approach and site maintained by Highways
Earthquake Point	Approach and site maintained by Highways
Fort Okanogan	Approach and site maintained by Highways
Destruction Island	Approach and site maintained by Highways
Juan de Fuca	Approach and site maintained by Highways
Discovery Bay	Approach and site maintained by Highways
Totem Symbols	Approach and site maintained by Highways
Mount Rainier	Marker removed to be refurbished by State Parks. To be relocated by Highways to Scatter Creek rest area on I-5.
The Tacoma Narrows	Approach and site maintained by Highways
Hood Canal	Approach and site maintained by Highways
Fort Vancouver	This marker is located next to an Information Center on I-5 in Vancouver. Site Maintenance is performed by the City; approaches from I-5 are maintained by Highways.
First Sawmill	Previously located next to weight station east of Vancouver. Marker being relocated by Highways reason of construction of interchange on I-205.
Columbia River	Approach and site maintained by Highways
Bruceville-Bruceport	Approach and site maintained by Highways
Cowlitz Landing	Approach and site maintained by Highways
Fort Columbia	Approach and site maintained by Highways
Lewis & Clark - Camas/Washougal	Approach to markers from city street other than state highway. Maintenance performed by city.
Spearfish	Approach and site maintained by Highways SR 14 at MP 86.1
Willie Keil's Grave	Approach and site maintained by Highways SR 6 MP 4.4

GM 869

Attachment Number 1 to Interpretive Markers Agreement - Page 2

<u>MARKER</u>	<u>REMARKS</u>
Point Vancouver or Point Broughton	Marker to be installed east of Washougal on SR 14. Highways will maintain
Lewis and Clark - Clarkston	Approach and site maintained by Highways - removed for highway relocation - should be relocated by Highways on SR 12, MP 431.9
Wai-I-Lat-Pu	Approach and site maintained by Highways
Lewis and Clark - Alpowa Summit	Approach and site maintained by Highways
Fort Walla Walla	Approach and site maintained by Highways
Sacajawea - Ainsworth	Approach and site maintained by Highways
Indian Painted Rocks - Yakima	Approach and site maintained by Highways
Ah-Wah-Tum	Approach and site maintained by Highways
Ginkgo Petrified Forest	To be relocated to Ryegrass Hill Safety Rest Area by Highways
Indian Timothy Bridge	Approach and site maintained by Highways - Parks currently developing marker
Celilo Falls	Approach and site maintained by Highways SR 14, MP 93.55
Steptoe Butte	Approach and site maintained by Highways
Kamiak Butte	Approach and site maintained by Highways
The Mullan Road	Approach and site maintained by Highways
David Thompson	Approach and site maintained by Highways

GM 869

8.1 General

The department is directed by state law to regulate advertising signs that are visible to Interstate, Primary, and Scenic state highway systems. Advertising messages may be displayed by one of several methods:

- Billboards and other highway advertising signs may display business logos and advertising print along selected areas of state highways, outside state-owned right of ways. See *Highway Advertising Control M 22-95*.
- Advertising venues exist at a number of rest areas along Interstate highways, and at several Ferry Division locations.
- Motorist information signs display logos for specific types of motorist services on regulated signs within the right of way. See M 55-94.

8.2 Highway Advertising Signs

Federal and state laws regulate signs located on private property or on public right of ways other than state highway right of ways, which are visible to certain state highways. Many of the laws and regulations are written to express what may be done rather than what may not be done. Thus, signs installed contrary to what the law allows are illegal.

This chapter supplements and clarifies the text of the laws and regulations by providing procedural guidelines and technical information. The department uniformly applies the regulatory provisions to support traffic engineering principles, for procedural efficiency, and to treat the business community equitably.

- A. **United States Code, Title 23, Section 131.** Federal laws provide direction to the states through the Federal Highway Administration and the Code of Federal Regulations regarding highway advertising along Interstate and National Highway System (NHS) non-Interstate highways, and at safety rest areas. The states are required to comply with these federal laws and regulations or become subject to a 10 percent reduction in federal aid highway funds.
- B. **RCW 47.42.** State law, which may be referred to as either the *Highway Advertising Control Act*, or the *Scenic Vistas Act of 1971* or the *Act*, authorizes and directs the department to regulate highway advertising signs visible to Interstate, non-Interstate NHS, and Scenic highways in accordance with federal and state regulations. The purpose of the Act is to enhance roadside scenic beauty while assuring that information of specific interest to travelers is presented safely, reasonably, and effectively. RCW 47.42 does not regulate advertising sign installations adjacent to other state highways, county roads, or city streets.

- C. **WAC 468-66 and M 22-95.** The department's manual, *Highway Advertising Control M 22-95*, contains the RCW and WAC rules, regulations, and figures that can be used to help interpret specific laws and regulations, maps to identify the various classes of the state highway system, and graphic appendices that illustrate some of the more complex regulatory language.
1. **Definitions.** WAC 468-66-010 defines specific terms that are key to the regulations. This section clarifies the intent of some of these terms, helping the department uniformly administer highway advertising control.
 - a. **Unzoned Commercial or Industrial Areas.** RCW 47.42.020(9) and WAC 468-66-010(4) in part define an unzoned commercial or industrial area. "Unzoned" means either no zoning or zoning for general uses by county or municipal code. An unzoned commercial or industrial area is comprised of three parts, including the core area described as follows:
 - There are three or more commercial or industrial activities located within a space of 500 feet along a regulated highway. The maximum 500 foot core of the unzoned area is measured parallel to edge of the roadway's main traveled way, and may include activities located on both sides of the roadway.
 - All measurements are made from the outer edges of regularly used buildings, parking lots, or storage or processing areas, rather than from the respective property lines. Measured accordingly, the outer measurements define the unzoned area core, up to 500 feet.
 - The commercial or industrial activities being considered must be located within 660 feet of the nearest edge of the right of way.

The second and third parts of the unzoned commercial or industrial area are 500 foot longitudinal extensions, both upstream and downstream of the unzoned core area, on both sides of the roadway. Thus, an unzoned commercial or industrial area encompasses a space extending a maximum of 1,500 feet along a roadway as shown in Appendix 8-1.

Signs are permissible in unzoned commercial or industrial areas in the same manner as zoned commercial or industrial areas, and are subject to all other regulations for the particular highway's classification and local agency restrictions.

- b. **Highway System Definitions.** For highway advertising control, there are two sets of highway system definitions, one at the federal level and one at the state level. The definitions below are those used by WSDOT and incorporate state RCWs and WACs. Use these in applying highway advertising control regulations.

Interstate System, as defined by WAC 468-66-010(12) refers to “any state highway that is or becomes part of the national system of interstate and defense highways as described.” These highways are specially noted in the *Design Manual* M 22-01, Division 3, Figures 325-2a and 325-2b (listing of National Highway System routes). Highway advertising control regulations apply to all Interstate routes.

Primary System, as defined by RCW 47.42.020(6) and WAC 468-66-010(19), refers to the Federal Aid Primary (FAP) federal highway classification. It includes state highways noted as “Primary” in the June 1, 1991 *Intermodal Surface Transportation Efficiency Act* and any highway not on that system but included on the National Highway System. Congress extended highway advertising control to the primary system in 1965. Prior to 1965, the federal highway advertising control regulations applied only to Interstate routes. Washington State began regulating signs on Primary highways in 1971 following passage of the revised *Highway Advertising Control Act*, aka, *Scenic Vistas Act*; RCW 47.42.

National Highway System (NHS), as referenced in WAC 468-66-010(19), refers to the route system created by the 1991 *Intermodal Surface Transportation Efficiency Act (ISTEA)* and the 1995 *National Highway System Designation Act*. ISTEA extended highway advertising control to all the routes on the National Highway System. The NHS includes Interstate routes and non-Interstate routes. Non-Interstate NHS routes include most of the Federal Aid Primary system together with other routes added by Congress. A list of NHS routes is shown in the *Design Manual*, Division 3, Figure 325-2.

Nuance. While the National Highway System includes the Interstate system, there are unique and specific highway advertising control rules for the Interstate System in federal and state law. Since there are more specific rules for the Interstate system, for the purpose of highway advertising control, the Interstate system is not considered to be part of the National Highway System or the Primary System.

The **Scenic System** is defined as those selected state highways designated by RCW 47.39.020 and RCW 47.42.140. For the purpose of highway advertising control, RCW 47.42.020(7) and WAC 468-66-010(21) further define the scenic system as:

- Any state highway within any public park, federal forest area, public beach, public recreation area, or national monument.
- Any national scenic byway or state highway or portion thereof, designated by the legislature as part of the Scenic System, that lies outside the corporate limits of any city or town.

RCW 47.42.020(7) and WAC 468-66-010(21) also exclude certain state highway segments from the Scenic System:

- Highway sections specifically excluded by RCW 47.42.025.
- On any highway designated by the legislature as Scenic, those portions within the corporate limits of any city or town.
- Any highway designated by the legislature as Scenic that is outside the corporate limits of any city or town, and in areas zoned by the governing county for predominantly commercial and industrial uses and having development visible to the highway, as determined by the department.

The complete list of designated Scenic highways is in RCW 47.39.020. (The RCW 47.42.140 listing of Scenic highways has not been updated to reflect more recent additions to the system.)

WAC 468-66-010(28) defines “visible development” as an area within a space of 500 feet along a highway, determined by the department to have development, both in type and location, that would create an unzoned commercial or industrial area prescribed by RCW 47.42.020(9). Development is deemed non-visible if visually obstructed by vegetation or other natural features on state highway right of way.

- c. **Application of Regulations.** WAC 468-66-010(19) states that “primary system” also refers to “...any highway which is not on such (primary) system but which is on the national highway system.” Because the WAC incorporates non-Interstate NHS routes into the definition of “primary system” for the purpose of highway advertising control, non-Interstate NHS routes are regulated as primary highways.

The NHS system did not automatically include all FAP routes; there are former FAP route segments that are not part of the NHS system. When reviewing a non-Interstate highway segment that is excluded from the Scenic System consider the following:

- If the segment is part of the NHS system, it is regulated.
- If the segment was part of the FAP system as of 6/1/1991, but not included in the NHS System, it is regulated.
- If the segment is not part of NHS system, or, was not part of the FAP system as of 6/1/1991, it is not regulated.

Type 4 and Type 5 signs are prohibited within view of Scenic System highways (RCW 47.42.040). There are two exemptions to this blanket prohibition provided in RCW 47.42.020(7):

- Type 4 or Type 5 signs may be allowed along Scenic System highways where the route is within the boundaries of an incorporated area.
- Type 4 or Type 5 signs may be allowed along Scenic System highways where the route passes through an area zoned for commercial or industrial use, and where there is “Visible Development” as defined in WAC 468-66-010(28). Both the commercial zoning and the commercial activities must be present to establish the exemption.

d. **Sign “Visibility” and Signs on Unregulated Roadways.**

RCW 47.42.065 and WAC 468-66-010(27) define sign visibility. In addition to the WAC definition, note that marginally visible signs located along unregulated highways intersecting with Interstate or other regulated state highways shall be considered “not visible” if they meet at least three of the criteria following:

- The sign faces are not substantially larger or at a substantially higher elevation above the ground line than other signs along the same unregulated intersecting roadway.
- The angles of sign faces are oriented toward unregulated intersecting roadways rather than Interstate or other regulated state highways.
- The length of time that the informative contents of signs can be viewed is substantially greater for travelers on unregulated intersecting roadways than for travelers on Interstate or other regulated state highways.
- The signs are visible to a motorist traveling at the posted speed limit on an Interstate or other regulated state highway, for a period of time that is less than what is required to read the entire sign message.
- The signs are only incidentally visible from Interstate or other regulated state highways.
- The signs advertise activities accessible from unregulated intersecting roadways along which the signs are located.

The Visibility Checklist for Signs on Unregulated Roadways (Appendix 8-2) is helpful when determining whether a sign on an unregulated roadway must be regulated under the *Act*.

2. **General Provisions.** WAC 468-66-030 describes general sign features and characteristics that are regulated on more than one classification of highway advertising sign. Refer to Section 3 of this chapter (Classification of Signs and Specific Provisions) for features and characteristics regulated on only one classification of highway advertising sign.
 - a. **Moving Parts.** Signs visible from the main-traveled way of the Interstate, NHS non-Interstate, and the Scenic System that move or have any animated or moving parts are prohibited. Revolving signs giving public service information, as defined in WAC 468-66-010(20), tri-vision signs operating in compliance with WAC 468-66-030(2), and Type 3 signs visible from primary highways within city limits or commercial or industrial areas are exempt from this regulation.
 - b. **Sign Lighting.** No signs are permitted which:
 - Contain, include, or are illuminated by any flashing, intermittent, or moving lights. Signs providing public service information, as defined in WAC 468-66-010(20), electronic signs operating in compliance with WAC 468-66-050(3)(g), and Type 3 on-premise signs along a primary system highway within city limits or commercial or industrial areas are exempt from this regulation.
 - Have lights that change intensity or color, lasers, strobe lights, or other lights having stroboscopic effect.
 - Use any lighting in any way, unless the lights are shielded to prevent beams or rays of light from being directed at any portion of the traveled way of the highway, or are of such low intensity or brilliance as not to cause glare or impair the vision of the driver of any motor vehicle, or otherwise interfere with any driver's operation of a motor vehicle.
 - c. **Local Agency Regulations.** In addition to meeting state laws and regulations, highway advertising signs must comply with all applicable county, city, or town ordinances and resolutions

The Traffic Control Devices statute (RCW 47.36.180, Forbidden Devices - Penalty) describes additional illegal lighting of signs and other devices and is another resource to assist with highway advertising sign control.

before they may be installed (RCW 47.42.048). Section 8.2.(5)(b) Permit Processing Procedures, discusses the relationship between the department's highway advertising sign permits and local agency regulations.

3. **Classification of Signs and Specific Provisions.** WAC 468-66-050 describes the eight advertising sign classifications authorized by the *Highway Advertising Control Act*, and places specific restrictions on each sign type. The information in this section helps traffic operations staffs address matters pertaining to these eight sign types.

a. **Type 1** – Directional or other official signs or notices divided into three categories:

(1) **Type 1a – Directional Signs.** Publicly or privately owned places may contain directional information about publicly or privately owned places that feature:

- natural phenomena
- historical, cultural, scientific, educational, or religious sites
- areas of scenic beauty
- outdoor recreation areas

Publicly owned places may contain directional information about public places owned or operated by federal, state, or local government, or their agencies.

Privately owned places may contain directional information about non-profit privately owned places that feature scenic attractions that are nationally or regionally known or of outstanding interest to travelers.

See WAC 468-66-050(1) for other regulations about sign size, location, and message content limits.

(2) **Type 1b – Official Signs.** Official signs shall be erected and maintained by public officers or public agencies, such as a county, city, or county commissioners, for the purpose of carrying out an official duty or responsibility.

Official signs shall be located within the governing jurisdiction of the public officer or public agency.

Official signs shall be pursuant to and in accordance with direction or authorization contained in federal, state, or local law.

Authority to Install Official Signs:

- The officer or agency authorizing the sign installation must exercise some form of governmental authority over the area upon which the sign is located – governmental authority means the authority to enact or administer the law.
- The officer or agency authorizing the sign installation must be directed by statute or local law and/or must have the specific authority by statute or local law to erect and maintain signs.

See WAC 468-66-050(1) for other regulations about sign size, location, and message content limits.

Crime Stopper signs are considered Type 1 signs under RCW 47.42.040(1). Crime Stopper signs are most similar to Type 1b signs, although Crime Stoppers International is a partnership between the community, the media, and law enforcement, rather than a public agency. The act limits the Crime Stopper sign message to the Crime Stopper name, logo, and local program phone number. While the signs are not regulated for visibility to highways, zoning requirements, number of signs, or spacing, they are limited to a maximum size of 20 feet in length, width, or height, or a total of 150 square feet in area.

(3) **Type 1c – Service Activity Signs.** These signs contain only a group name, and the location and meeting schedule. These organizations must be nonprofit, such as service clubs or religious organizations. The WAC duplicates a federal regulation that limits the maximum size of Type 1c signs to eight square feet.

b. **Type 2 – For Sale or For Lease Signs.** “FOR SALE” or “FOR LEASE” signs shall only advertise the sale or lease of the parcel or real property upon which the sign is located. The property owner or owner’s agent name and phone number shall not be displayed more conspicuously than the message “FOR SALE” or “FOR LEASE.” WAC 468-66-050(2) allows only the name of the property owner or owner’s agent, and their respective phone number as well as the for sale or lease message. No other message is allowed on the sign. Displaying an off-premise business name or other off-premise activity, in lieu of the name of the owner or his agent is not allowed.

Some current real estate signs may not include the words “FOR SALE” or “FOR LEASE,” especially on signs provided to agencies and agents by national conglomerates. Accordingly, real estate signs may require case-by-case evaluation to determine if they are located on property for sale or lease.

- c. **Type 3 – On-Premise Signs.** These signs are divided into four categories:
- (1) **Type 3a.** This on-premise sign advertises the activity conducted, or products available, on the property where the sign is located.
 - (2) **Type 3b.** This is a business complex on-premise sign that displays the name of a shopping center, mall, or business combination.
 - (3) **Type 3c.** This future site on-premise sign is allowed on properties where a planned business will be operating within a year. Signs will typically display the message “future site of” or similar wording.
 - (4) **Type 3d.** This temporary political campaign sign expresses a property owner’s endorsement of a political candidate or ballot issue.

Each year in April, the Headquarters Traffic Office distributes a campaign sign information packet to all the county auditors. The packet contains copies of the regulations political candidates must follow to assure lawful campaign sign placement. When candidates file for candidacy with the county auditor they receive a copy of the regulations, which are:

- Temporary political campaign signs are limited to a maximum size of 32 square feet.
 - Temporary political campaign signs must be removed within ten days after the election, except that successful candidates during a primary election may leave signs up until 10 days after the following general election.
 - Temporary political campaign signs may not be located on state highway right of ways.
- (5) **Location of On-Premise Signs.** Along the Interstate system, Type 3a signs that exceed 20 feet in length, width, or height, or 150 square feet in area, may not be located more than 50 feet from the advertised activity.

The 50-foot distance is measured from the building, storage area, or other structure or processing area, which is most regularly used and essential to the conduct of the activity.

A Type 3(b) business complex on-premise sign advertising a shopping center, mall, or other combined business activity, may be located within 50 feet of the nearest portion of any

parking area that serves the business combination. The business complex sign does not have a size limitation; however, individual on-premise signs advertising specific businesses within the complex, which are displayed in array with the single on-premise sign, are limited to a maximum size of 150 square feet (Appendix 8.3).

- (6) **Location of On-Premise Signs Within Incorporated Areas and Commercial/ Industrial Areas Along the NHS Non-Interstate System.** Type 3(a) and Type 3(b) on-premise signs located within incorporated cities and towns and commercial and industrial areas, and visible to NHS non-Interstate highways, are not regulated by the Act. However, on-premise signs located in these areas are subject to city or county ordinance or resolution.
- (7) **Crop Identification Signs.** Crop identification signs are considered on-premise signs, and identify specific agricultural crops grown on property adjacent to state highway right of way. Normally, an agriculture-oriented supporting group will present a region with a proposed crop identification sign project.

The regional HAC representative reviews the proposed sign project for compliance with the Act. The sign message is limited to the name of the crop, and the name of the sign sponsor. The crop message letter size should be two or three times larger than the sponsor message, to facilitate crop identification.

- (8) **Electronic Signs.** Electronic signs may be used only to advertise activities conducted, or goods and services available, on the property on which the signs are located (Type 3 signs); or, to present public service information as defined in WAC 468-66-010(20).

WAC 468-66-030(1)(g) in part prohibits signs that contain, include, or are illuminated by any flashing, intermittent, or moving light or lights. This provision does not apply to electronic on-premise signs along Interstate highways and NHS non-Interstate highways, outside the corporate limits of cities and towns or outside commercial and industrial areas, displaying messages in compliance with WAC 468-66-050(3)(g).

- d. **Type 4 and Type 5 Signs.** Off premise advertising signs, differentiated by the location of the advertised activity:

- (1) **Type 4.** The business or activity advertised on a Type 4 sign shall be within 12 air miles of the sign.
- (2) **Type 5.** The off-premise advertising message displayed on the sign must be of specific interest to the traveling public, as described in WAC 468-66-050(5)(b). There is no geographic proximity limitation, such as the 12 air mile limit imposed on Type 4 signs.

The regulations for Type 4 and Type 5 off-premise advertising signs visible to Interstate and non-Interstate NHS highways are provided in WAC 468-66-050(5). Size limits are based on roadway type and detailed in WAC 468-66-050(5)(c).

Type 4 and Type 5 sign locations are limited to commercial and industrial areas, and must meet the WAC prescribed spacing requirements shown in Appendices 8.4, 8.5a, and 8.5b.

WAC 468-66-050(5)(d)(i & v) specify that Type 4 and Type 5 signs visible to Interstate traffic are not permitted within 1,000 feet beyond the furthest point of the intersection of the mainline and the on-ramp. The 1,000-foot measurement begins at the intersection of the right fog line on the on-ramp taper and the right fog line of the mainline.

Additionally, Type 4 and Type 5 signs visible to Interstate traffic are not permitted within 2 miles preceding an interchange exit ramp. The measurement begins two miles before the intersection of the right fog line of the exit roadway and the right fog line of the main traveled way of the Interstate highway.

WAC 468-66-050(5)(g) provides measurement applications for sign spacing along horizontal curves where signs are located on opposite sides of the highway.

- e. **Type 6 – “Landmark” Signs.** These are advertising signs of historic or artistic significance that were lawfully in place prior to October 22, 1965. Currently, there are no permitted Type 6 signs visible to state highways.
- f. **Type 7 – Public Service Signs Located On School Bus Shelters.** Currently, there are no permitted Type 7 signs visible to state highways.
- g. **Type 8 – Temporary, Seasonal Agricultural Signs.** These signs give directional information to specific agricultural activities, and are regulated through a permit process administered by the region. Specific requirements are found in WAC 468-66-050(8).

4. **Non-conforming Signs.** WAC 468-66-200 discusses signs that were lawfully erected and maintained, but later become illegal. These are called non-conforming signs, and are allowed to remain and be maintained (allowed to exist) as prescribed in the WAC. Based on definitions in law, any of the eight sign types could be or could become nonconforming signs. Currently, only Type 4 or Type 5 nonconforming signs are accounted for because of permitting requirements.

A major focus of the 1965 federal HBA was to buy out non-conforming signs. The Act created a June 1, 1971 date for removing existing signs that did not comply with the new laws (non-conforming signs). A three-year extension was later established, creating a May 10, 1974 deadline.

To remove these signs, the law also required that just compensation be paid to the sign owner, with federal funds contributing 75 percent of the compensation. Federal funding was not adequate to buy out all non-conforming signs on the state's highway systems by May 10, 1974. Under RCW 47.42.105, no sign can be required to be removed if the federal share of just compensation to be paid upon removal of the sign is not available. Due to the lack of federal funds, existing nonconforming signs that had not been compensated and removed by May 10, 1974, were allowed to remain and be maintained. These signs created the framework for today's non-conforming sign inventory.

Today, additional non-conforming signs are allowed to exist, as follows:

- Signs lawfully installed after June 1, 1971, and that later became illegal because of changes in state law, state regulation, city or county ordinances or resolutions, state route revisions, or cessation of unzoned commercial or industrial areas, are allowed to remain and be maintained as non-conforming signs. The signs may also be removed through compensation.
- Non-conforming off-premise advertising signs are issued permits as Type 4 or 5 signs, as applicable. Non-conforming signs are included in the highway advertising sign inventory, and counted when evaluating available space for additional sign structures.
- Non-conforming signs that are damaged by weather related incidents, or other acts of nature, may be re-erected, provided that the sign remains at least 50 percent intact. Signs more than 50 percent damaged to the extent that the sign face has fallen to the ground, as determined by the department, may not be re-erected and are subject to permit revocation under WAC 468-66-220.

See Section (5)(h) that follows for discussion about the non-conforming sign inventory.

5. **Highway Advertising Control Permit Procedures.** Advertising sign permit issuance, maintenance, and renewal procedures are described in WAC 468-66-210.

- a. **Signs Subject to Authorizing Permits.** State law and the WAC exempt Type 1, 2, and 3 signs from the permit requirements; therefore, permits are required for sign Types 4 through 8. The vast majority of permits issued are for Type 4 and Type 5 signs. Only a small number of Type 8 sign permits have been issued throughout the state. To date the department has not issued any permits for Type 6 and Type 7 signs; however, the WAC includes these as signs that must be placed under permit.

A department issued permit does not preempt the permit holder's responsibility to comply with local agency rules, regulations, and ordinances pertaining to signs and sign structures (RCW 47.42.048). Accordingly, a department issued permit only grants a permit holder the right to erect a sign if it's also authorized under local law.

b. **Permit Processing Procedures – Type 4 and Type 5 Signs**

- The application (Appendix 8-6) and the non-refundable \$300 permit fee for each Type 4 and Type 5 sign structure are received at the Headquarters Traffic Office, or the region. Applications received at the region are forwarded to the Headquarters Traffic Office. The effective date is the date it is received in Headquarters.
- The Headquarters Traffic Office assigns the application a Log number, and deposits the permit fees into the Motor Vehicle Fund through the department's Accounting Office.
- The Headquarters Traffic Office forwards the application with a permit application transmittal (Appendix 8-7) to the appropriate region and requests a site investigation. A checklist (Appendices 8.8a and 8.8b) is used to assist with investigating proposed sign sites. The region is requested to investigate the proposed sign site within 30 days to determine compliance with the zoning, size and spacing requirements of WAC 468-66-050.

Consider the following when reviewing the proposed sign installation location:

- Along NHS non-Interstate highways, focus special attention on whether the department has purchased full, partial, or modified access rights, through the procedures required by RCW 47.52. Limited access and non-limited access highway segments have specific sign spacing requirements prescribed in RCW 47.42.062(3) and WAC 468-66-050(4) and (5)(e).

Any highway section without purchased access rights is considered non-limited access for the purpose of sign spacing calculations. Limited access information can be obtained from the regional Real Estate Services work group that conducts limited access purchases and documentation, the Master Plan Limited Access Control Database, or the Headquarters Design Access Office.

- There are locations where permits have been issued, but signs have not been erected. Locations having these “permitted but unbuilt” signs are included in the count when determining available sign space. Consult the current permit inventory (rather than merely counting the existing permitted signs) to assure the department does not issue a permit in error.
- Consider the sign owner’s access to the sign for maintenance or copy change. Various RCW chapters prohibit or limit access to private property from highway right of way. There may be highway segments where it would be extremely difficult, if not impossible, to access a sign from properties other than state highway right of way. For proposed locations appearing to meet the requirements of law, but where access from private property appears to be a challenge, it’s reasonable to require the applicant to supply documentation that describes how the sign will be accessed (for example, the name of a private property owner for limited access highways or a WSDOT permit for managed access highways). Include this documentation in the package returned to Headquarters.
- Contact the local agency having land-use jurisdiction over the proposed sign site to determine if state law or local regulation is more restrictive. If the local regulation is more restrictive, and the location meets state law, encourage the applicant to obtain the local permit before approving the state application. (Also encourage the local agency to approve or deny sign permits based on their own regulation, regardless of status under state law). If a local agency denies the applicant a sign/building permit, the department can deny the state permit application citing RCW 47.42.048.

An applicant may refuse to obtain the local agency permit first. If so, the law does not give the department authority to withhold a permit for a location that meets the state requirements. Thus, the region may approve a permit application knowing that the local agency permit will be denied.

- If the location meets the permit requirements, assign an inventory number to each sign face indicated on the application. Inventory numbers are selected sequentially from a block provided by the Headquarters Traffic Office for a particular highway or highway section. For locations not meeting the permit requirements, the region notes on the checklist that it must be denied, and cites the RCW or WAC provisions not met.
 - Return the application package to the Headquarters Traffic Office. Headquarters will notify the applicant about the permit's approval or denial and send a copy to the appropriate local agency. Headquarters' approval and denial notification letters include supporting discussion about local agency regulation compliance, sign access, and other pertinent matters.
- c. **Procedure for Reviewing Sign Permit Applications near Highway/Railroad At-Grade Intersections.** Many railroads market their right of way to billboard companies for the purpose of erecting signs that are visible to nearby highways. Occasionally, the department receives HAC applications for signs on railroad properties adjacent to state highway/railroad at-grade intersections. In unincorporated areas, billboards are prohibited within 100 feet of a state highway/ railroad at-grade intersection, and also at locations that could obstruct sight distance to an on-coming train. A billboard installation adjacent to a state highway/railroad grade intersection may obstruct the motorist's sight distance, interfere with the train engineer's sight distance, or otherwise compromise safe and efficient traffic operations. Thus, special emphasis is given to a site-specific safety review, in addition to the standard review to determine compliance with RCW 47.42, RCW 47.32.140, and WAC 468-66.

The following definitions and review procedures provide information and guidance to department personnel who review Highway Advertising Control permit applications.

- (1) **Traffic Control System.** The traffic control system is a combination of devices installed at a specific highway/rail grade intersection. Three types of traffic control systems are discussed here:
- Passive systems consist of warning signs, including the crossbuck, and pavement markings. There are no lighted signals associated with the passive system.

- Active systems consist of warning signs, including the crossbuck, pavement markings, and post-mounted or cantilevered flashing lights. Train sensors installed upstream and downstream near the railroad tracks activate and deactivate these signals.
 - Active-gated systems consist of warning signs, including the crossbuck, pavement markings, post-mounted or cantilevered flashing lights, and automatic gates that prohibit crossing the intersection. Train sensors installed upstream and downstream near the railroad tracks activate and deactivate the gates and signals.
- (2) **Clearing Sight Distance.** At all ungated crossings, a driver stopped 15 feet before the nearest rail must be able to see far enough down the track in both directions to determine if sufficient time exists to move their vehicle safely across the tracks to a point 15 feet past the far rail prior to the arrival of a train. Required clearing sight distance along both directions of the track, from the stopped position of the vehicle, is dependent upon the maximum train speed and the acceleration characteristics of the “design” vehicle.
- (3) **Stopping Sight Distance.** Stopping sight distance is the sum of two distances: the distance traversed by the vehicle from the instant the driver sights an object necessitating a stop to the instant the brakes are applied, plus the distance required to stop the vehicle from the instant the brake application begins. This distance varies with vehicle speed.
- (4) **Desired Vehicle Stopping Point.** The point on the highway where a vehicle stops without encroaching into the intersection. This point should be located 15 feet before the nearest rail and is marked by a stop bar in accordance with MUTCD standards. At the stopping point, the driver’s eye location is considered to be an additional 10 feet from the nearest rail.
- (5) **Statutes and Rules.** The following statutes and rules apply to billboards at highway/railroad at-grade intersections:
- RCW 47.32.140 prohibits billboard erection or maintenance within a distance of 100 feet from the point of intersection of a highway and railroad grade crossing. This applies only in unincorporated areas, and allows 30 days for a joint review by the department, the Washington Utilities and Transportation Commission (WUTC), and the railroad to determine if a billboard installation could potentially obscure sight distance of a motorist, or train engineer approaching an intersection.

- WAC 468-66-030(1)(f) and CFR Title 23, Chapter 1, part 750.154(2) prohibit signs that prevent the driver of a vehicle from having a clear and unobstructed view of approaching or merging traffic.

(6) **Review Process.** If a proposed sign location at or near a state highway/railroad grade intersection meets zoning, spacing, and size requirements, and would otherwise qualify for an HAC permit, conduct an engineering study to determine the effect the sign may have on sight distance and safety at the intersection.

The engineering study should focus on vehicle and train speeds, stopping sight distance, clearing sight distance, highway and railroad geometry, and existing traffic control devices including pavement markings. Give special consideration to the traffic control system installed at the intersection, and whether the traffic control devices meet existing standards. Determine traffic volumes (and vehicle classification, if possible), for the state highway.

The WUTC has information about railroad operations including train speeds used in the tables below, railroad alignment (curves approaching the intersection), and number of crossings per day. Headquarters can provide WUTC contact information.

For unincorporated areas, determine whether the proposed sign is located within the 100 foot restricted zone (RCW 47.32.140). If it is, work with the WUTC and railroad to determine if the proposed sign may compromise safety at the intersection. There may be statutes, WAC rules, or policies that are specific to the WUTC or the railroad that will influence their decisions or recommendations. Document these partnership efforts and include all pertinent information in the engineering study records.

For incorporated areas, contact the city or town and work with them to review proposed billboard locations. In addition, ask the WUTC to perform a review of the location and consider their recommendations. There may be local agency rules or ordinances that influence a city's decisions or recommendations. Document these partnership efforts and include all pertinent information in the engineering study records.

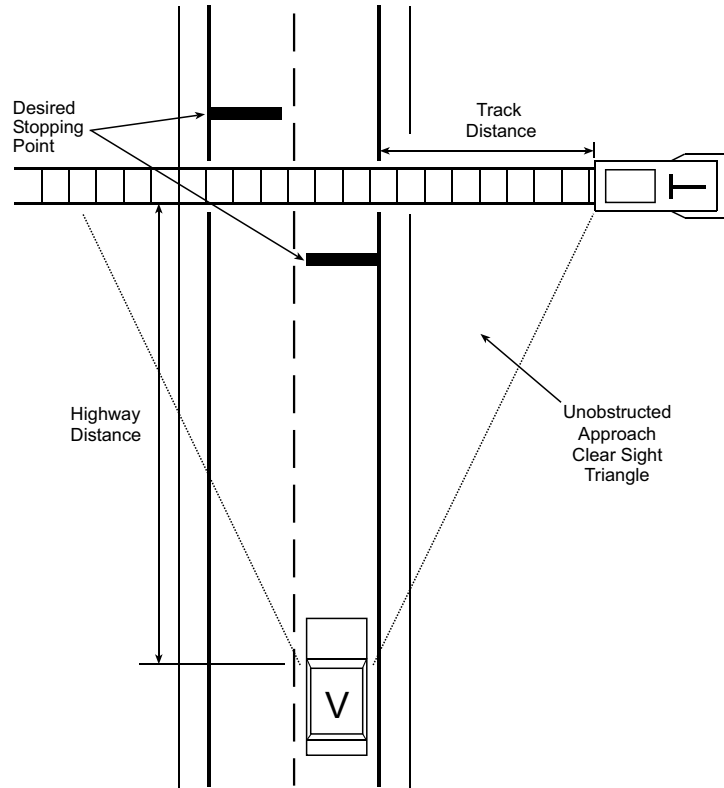
Consider the traffic control system at the intersection. Based on the type of system, use the following tables to determine if a proposed sign location creates an obstruction in the clear sight triangle, or the clearing sight triangle.

Review the proposed sign location under typical traffic operating conditions at the intersection. Place a stake or other object at the proposed sign location to assist with visualizing the potential sight distance obstruction. Drive through the intersection assuming the motorist's perspective from a vehicle approaching the intersection and from one located at the stopping point. Consider the motorist's perspective for driver eye-heights ranging from 3½ feet for a small car to 7 or 8 feet for a cab-over tractor. School buses are required to stop even if signals are not activated,

Passive Traffic Control System. A motorist approaching an intersection with passive control must have adequate sight distance to make decisions when a train is observed in the distance (Figure 8-1). If the proposed sign location lies within the approach clear sight triangle, it will obstruct the motorist's view and compromise clear visibility at the intersection.

Use Table 8-1 to determine the track and highway distances:

- **Track Distance.** The top distance, (shown in normal type) represents the distance upstream or downstream along the railroad tracks that is required for a driver to determine if they can safely cross the tracks or must stop. This distance is measured from the edge of the traveled lane at the crossing.
- **Highway Distance.** The bottom distance (shown in **bold**) represents the clear visibility distance along the highway that is required for a driver to determine if they can safely cross the tracks or must stop. This distance will allow a motorist approaching the intersection at the given speed to safely cross the intersection or to stop the vehicle without encroaching past the stopping point. This distance is measured from the nearest rail.
- When plotted on a plan, or laid out in the field, these two distances create two line segments, each beginning at the intersection. Connect the far ends of the segments to create the clear sight triangle.



Passive Traffic Control System
Figure 8-1

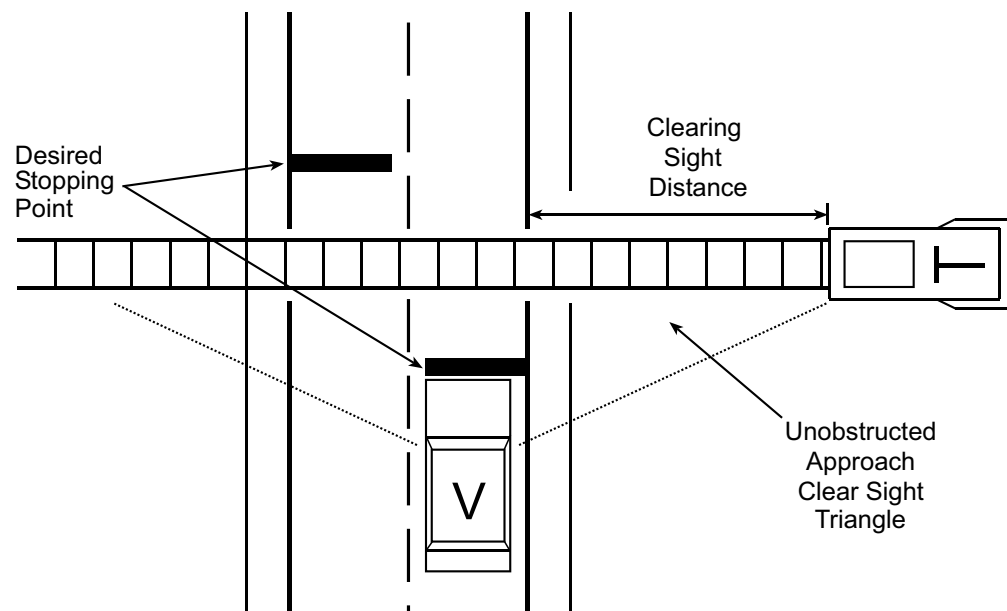
Train Speed	Posted or 85th Percentile Speed					
	10	20	30	40	50	60
10	146 69	106 135	99 220	100 324	105 447	111 589
20	293 69	212 135	198 220	200 324	209 447	222 589
30	439 69	318 135	297 220	300 324	314 447	333 589
40	585 69	424 135	396 220	401 324	419 447	444 589
50	732 69	530 135	494 220	501 324	524 447	555 589
60	878 69	636 135	593 220	601 324	628 447	666 589
70	1024 69	742 135	692 220	701 324	733 447	777 589

Moving Vehicle – Passive Traffic Control System
Table 8-1

Active Traffic Control System. At an un-gated active controlled intersection, the motorist must determine whether a train is approaching the crossing, then further determine if and when it is safe to cross and clear the tracks (Figure 8-2).

Table 8-2 provides clearing sight distances, based on train speed and vehicle type. The clearing sight distance is measured from the intersection along the tracks. Distances given in columns two through seven represent the clearing sight distance measured from the edge of traveled lane upstream or downstream along the tracks. Having clear visibility for this distance will allow a motorist to decide whether it is safe to enter the intersection, and clear the intersection to a point 15 feet beyond the far rail.

A car (column two) is typically used as the vehicle type. However, if available vehicle classification data demonstrates a high percentage of vehicle types, or if school busses or transit use this crossing, consider using that vehicle type to test visibility at the intersection.



Un-gated Active Traffic Control System
Figure 8-2

Train Speed	Car	Single Unit-Truck	Bus	WB-50 Semi-Truck	65-foot Double Truck	Pedestrian **
10	105	185	200	225	240	180
20	205	365	400	450	485	355
25	255	455	500	560	605	440
30	310	550	600	675	725	530
40	410	730	795	895	965	705
50	515	910	995	1,120	1,205	880
60	615	1,095	1,195	1,345	1,445	1,060
70	715	1,275	1,395	1,570	1,680	1,235
80	820	1,460	1,590	1,790	1,925	1,410
90	920	1,640	1,790	2,015	2,165	1,585

Stopped Vehicle – Un-gated-Active System

Table 8-2

Active-gated Traffic Control System. At gated crossings, traffic control devices give clear direction on when to cross the intersection. In unincorporated areas, the 100 foot restricted zone must be maintained (RCW 47.32.140).

- (7) **Summary.** The department does not allow a billboard or other signs within the clear sight triangle for passive traffic control systems, or within the clearing sight triangle for un-gated active traffic control systems. Allowing placement of a billboard or sign within these areas may obstruct the driver's view of approaching trains, compromising crossing safety.

In the event that the WUTC or a railroad company recommends that a sign not be allowed at the proposed location based on statute, law, or policy, the HAC permit application may be denied. If the recommendation to deny is based on the physical location of the proposed sign, e.g., it is located within the clearing sight triangle, or approach clear sight triangle, the department may consider alternate locations on the same parcel that are outside the triangles, under the same permit application. In such cases, a HAC permit may be issued if the WUTC concurs with approval of such alternate location.

Table 8-1 is based on the *2001 AASHTO Policy on Geometric Design of Highways and Streets*, Exhibit 9-104.

Table 8-2 is based on the USDOT publication, *Guidance on Traffic Control Devices at Highway-Rail Grade Crossing*, Table 2.

- d. **Permit Procedures – Type 8 Signs.** Type 8 sign permit applications, along with the \$50 permit fee per sign face, are submitted to the appropriate regional traffic office. Type 8 sign permits are valid for 5 years, and are renewable upon expiration (Appendix 8-9). Headquarters supplies the metal Type 8 permit tags to the regions.
- e. **Annual Permit Renewal Certification.** Prior to December 1 of each year, the Headquarters Traffic Office will mail a permit renewal notice to each sign permit holder. If the permit holder intends to retain the permit in good standing for the upcoming calendar year, they certify that intent by signing the notice and returning it to the Headquarters Traffic Office by December 31 of that same year.

When a renewal notice is not returned to the Headquarters Traffic Office by December 31, the permit expires. The Headquarters Traffic Office may initiate legal proceedings to cause the removal of any sign constructed under the permit, as an illegal unpermitted sign.

- f. **Change of Sign Ownership, Transfer of Sign Permit.** WAC 468-66-210(7) requires a permit holder to notify the department when permits in good standing are assigned to another sign owner. When the regions receive notification of a change in permit ownership, forward that information to the Headquarters Traffic Office for written permit reassignment and to facilitate inventory updating. There is no fee to the permit owner(s) for permit transfer.
- g. **Sign Relocations.** When an existing permitted sign is intended for relocation, the sign owner must submit a new permit application and permit fee and the region will review the new location for approval (WAC 468-66-210(8)). The department will rescind the permit for the existing sign intended for relocation upon approval of the new permit, or upon the effective date of the existing lease termination, whichever occurs first.
- h. **Inventories.** The Headquarters Traffic Office maintains an inventory of all Type 4, 5, and 8 sign permits. It is available to the regions in electronic format. The inventory is revised when the Headquarters Traffic Office receives notification from a permit holder, or when a region discovers changes during field review. The inventory must be updated when:
- New permits are issued.
 - Existing permits are rescinded or revoked.

- Revisions are made to existing permitted signs, including changes in sign size, milepost location, sign owner/permit holder, compass direction of read, or sign removal.
- A region notifies HQ of a newly created non-conforming sign.

Non-conforming permitted Type 4 and Type 5 signs (Section 4) are included in the inventory, and noted in a searchable data field.

- Inventory of Signs on Local Jurisdiction NHS Roadways.** The *National Highway System Act* of 1995 (NHS) extended highway advertising control to all NHS routes. This means that signs on private property and visible to NHS routes, including NHS routes under local agency jurisdiction, are regulated under the *Highway Advertising Control Act*.

The Headquarters Traffic Office maintains an inventory of off-premise highway advertising signs (Types 4 and 5) visible to local NHS roadways. Although the control of such signs is the responsibility of the local jurisdiction or agency, the department is committed to providing technical assistance to a local agency when requested. Periodically the region HAC personnel conduct a review of local NHS routes to assure that the department's inventory is up to date.

- Integrating Sign Information after Changes to the Scenic Highway System.** The Legislature occasionally **adds** state highways or highway segments to the Scenic System as defined in RCW 47.42.020 and WAC 468-66-010. Headquarters will request the regions to conduct a field review of any newly designated route(s) to provide a record of the advertising signs that existed at the time of enactment. The region compiles photos, location information (milepost, side of the roadway, direction of read, sign spacing), sign size, zoning designation, and other pertinent information and sends it to Headquarters.

Headquarters will integrate the data into the HAC files, place the signs under permit if the route was not regulated prior to the Scenic designation, and update the permit database. Headquarters correspondence with the sign and property owners will discuss information pertinent to the individual sign including:

- *Highway Advertising Control Act* requirements concerning permits.
- Permit renewals.
- Legal sign status (located in an area exempt from Scenic classification).

- Non-conforming sign status.
- Other information pertinent to the individual sign
- Possible sign removal if appropriate

The Legislature may also **delete** highways or highway segments from the Scenic System. However, the route is still regulated as a scenic route if federal “Scenic” funds paid for any improvements on the route. Headquarters can help determine if “Scenic” federal funds paid for improvements to former Scenic highway segments that may otherwise appear eligible for signs. Such expenditures would prohibit the department from issuing new permits for those areas.

- k. **Integrating Sign Information after Changes to the National Highway System.** Changes are sometimes made to the National Highway System, and are generally initiated by the department, the military, or through Congressional action. See the primary system definition in WAC 468-66-010.

When NHS system additions are made, Headquarters will request that the regions conduct a field review of any newly designated route or segment(s) to provide a record of the advertising signs that existed at the time of enactment. The region compiles photos, location information (milepost, side of the roadway, direction of read, sign spacing), sign size, zoning designation, and other pertinent information and sends it to Headquarters. Headquarters will integrate the data into the highway advertising control files, place the signs under permit, and update the permit database. Headquarters correspondence with the sign and property owners will discuss information pertinent to the individual sign including:

- *Highway Advertising Control Act* requirements concerning permits.
- Permit renewals.
- Legal sign status.
- Non-conforming sign status.
- Other information pertinent to the individual sign.
- Possible sign removal if appropriate.

Highways deleted from the National Highway System are still regulated as NHS routes if federal funds paid for any improvements on the route. Headquarters can help determine if “NHS” federal funds paid for any part of the improvements to former NHS highway segments that may otherwise appear eligible

for signs. Such expenditures would require continued adherence with the highway advertising sign requirements applicable to NHS routes.

6. **Permit Revocation, Remaining Signs Illegal.** WAC 468-66-220 discusses sanctions and penalties that may be applied against permit holders who maintain signs that do not comply with the provisions of the Act or the WAC. After a hearing conducted under the *Administrative Procedures Act* (RCW 34.05, WAC 10-08, WAC 468-10) HQ may revoke a permit, without refund, for any of the following reasons:
 - Making false or misleading statements on either a permit application or a permit renewal, when the statements remain uncorrected for 30 days after the permittee receives a letter notifying him/her about them.
 - Allowing a permitted sign to remain in disrepair for 30 days after the permittee receives a letter notifying him/her about the sign's condition.
 - Maintaining a permitted sign, that violates any provision of the Act or WAC 468-66, when the violation remains for 30 days after the permittee receives a letter notifying him/her about the violation(s).
 - Allowing a nonconforming sign to remain, following written notice after it has become abandoned or destroyed, as defined by WAC 468-66-010.
 - Allowing a discontinued sign, as defined by WAC 468-66-010, to remain without advertising content for 90 days after the permittee receives a letter notifying him/her about the absence of advertising.

The Headquarters Traffic Office will write the letters and, in consultation with the Attorney General's Office, coordinate scheduling the administrative hearing. The regions' role in this process is to conduct timely field reviews and provide supporting documentation and pictures as requested by the Headquarters Traffic Office. After a permit is revoked, any sign constructed under the permit is declared to be illegal. If a permit holder is convicted of violating the *Highway Advertising Control Act*, RCW 47.42.090, provides that the department may revoke other permits held by that person.

7. **Illegal Sign Removal.** RCW 47.42.080 states that any sign constructed or maintained contrary to the *Highway Advertising Control Act* or its companion regulation, WAC 468-66, is illegal and a public nuisance. The statute also describes illegal sign abatement procedures.

The department is directed by law to contact the permittee (or the property owner if there is no permittee) about illegal sign removal. In most cases the signs being investigated are not permitted, so the department must contact the property owner. It may be effective to also contact the business advertised on the sign, or the sign owner.

Initial contact may be made by way of a phone call or mail, at the discretion of department staff doing the investigation. Use the certified fifteen-day voluntary compliance letter as the mail contact or to follow up a phone call. Send to the property owner, sign owner, and advertiser on the sign, with a complimentary copy to the local agency having land use jurisdiction (Appendices 8.10a and 8.10b).

In the 15-day voluntary compliance letter (and any initial phone call), cite:

- Illegal aspects of the sign.
- Options available.
- Actions that must be taken to bring the sign into compliance with the law.
- That failure to comply will compel the department to seek abatement assistance from the Attorney General's Office.

The sign owner or property owner must comply with the provisions of the abatement notice within 15 days after receiving the region's certified letter. If compliance is not attained, the region Traffic Engineer requests abatement assistance from the State Traffic Engineer. Submit a completed "Transmittal Checklist, Request for AG Assistance to Remove Illegal Signs" (Appendix 8-11) and an abatement assistance request letter with the following information:

- A copy of all correspondence between the department and the sign owner and/or property owner including phone call logs and a brief summary discussion of any other conversations.
- Cite all applicable RCWs and WACs, and explain how they are violated.
- Include color photos of the sign and any other features that display the nature of the violation. Dated photos are most desirable.
- Include photos that demonstrate that the sign was not removed by the date certain established by the 15-day letter. Dated photos are most desirable.
- Include sketches, measurements, and other pertinent data that provide confirming evidence of the violation.

The State Traffic Engineer and the Assistant Attorney General (AAG) assigned to highway advertising control work together to secure sign removal. The AAG will prepare an ORDER TO REMOVE (OTR) letter authorized under RCW 47.42.080(2), for signature by the State Traffic Engineer. The order requires the property owner to remove the illegal sign within 15 days, and states that any review of the order must be filed in Thurston County Superior Court within 30 days after the order is served.

The region HAC representative conducts a follow-up review 15 calendar days after the property owner receives the OTR, to determine if the property owner has complied by removing the sign. The region reports findings back to the State Traffic Engineer, including photographs, videotape, or other documentation confirming the sign's status. If the sign remains, the State Traffic Engineer may request in writing that the AAG pursue a legal remedy.

When WSDOT Highway Advertising Control personnel are contacted by any public or private person regarding matters that have been referred to the Attorney General's Office, advise the caller that the department has engaged counsel and information is only available from the Assistant Attorney General. Obtain the caller's name and phone number and explain that you will ask the AAG to contact them.

If a caller demands immediate attention, provide them the AAG's name, phone number, and address. Then immediately advise the Assistant Attorney General about the development. It is not appropriate to refer a person to the AAG for any other highway advertising control question or interpretation.

- a. **Surveillance.** Regularly scheduled surveillance programs are conducted by the regions (annually) to identify signs installed contrary to the requirements of the *Highway Advertising Control Act*. A more aggressive review schedule, perhaps quarterly, is recommended for areas of prolific illegal sign activity.

Use the HAC Field Review form (Appendix 8-12) to document any sign that may be non-compliant. Take two photos of each sign; one photo as a close-up of the sign that provides legible reading of the copy, and one that is far enough away from the sign to include a landmark of some kind. The landmark could be a street intersection, a group of trees, a building, utility pole, etc.; typically, things that could be identified on historical photos or video.

Route surveillance preparation includes right of way research. Having right of way information in the field is a necessary tool for identifying encroachments. Contract channelization/paving plans help identify highway centerline location where a highway segment is not constructed symmetrically about the centerline.

During a review, if electronic changeable message sign (ECMS) violations are observed, document the sign imagery violations using digital video or VHS tape and store as evidence. Sign operations that create safety concerns due to driver distraction, signs encroaching on state highway right of way, and signs with illegal off-premise advertising messages are the primary violations that require the department's attention.

- b. **Illegal Sign Inventory.** The regions maintain a current inventory of all illegal sign action activities. The FileMaker program (IllegalSignInv.FP5) is available to all region HAC personnel, and is the standard method of tracking illegal sign activities within the region.

Using the Illegal Signs Inventory, Data Entry Panel (Appendix 8.13), create a record for each illegal sign immediately after personal observation or after confirming an apparent violation reported by others.

All information, such as the name of the sign owner and the property owner, and a summary of all contact with the owner(s), whether by phone or letter, must be included on the form. Two digital images can be stored for each record.

- c. **Illegal Sign Abatement on State Highway Right of Way.** The *Highway Advertising Control Act* declares that any unauthorized sign placed on the right of way of a regulated state highway is a public nuisance (RCW 47.42.080(5)). The department is authorized to immediately remove these illegal signs without notice. Signs removed from the right of way are stored for 30 days (7 days after an election, for illegal political campaign signs) or until they interfere with operations at the storage site. When contacted by a sign owner about recovering a sign that has been removed, advise the caller where the sign is stored, and that it may be recovered if it has not already been destroyed. Dispose of usable materials obtained from these signs in accordance with *Disposal of Personal Property* M 72-91.

In addition, WAC 468-30-100 states that no permits may be issued for any signs on any state highway right of way. Only traffic control signs consistent with the MUTCD (as well as state historical markers) are allowed. Thus, on both regulated and unregulated state route right of way, the department is authorized to immediately remove illegal signs.

- d. **Illegal Sign Abatement on Highway Right of Way within Incorporated Cities and Towns.** RCW 47.42.080(5) declares signs placed on state highway right of way, contrary to the

Highway Advertising Control Act, to be public nuisances and authorizes the department to remove the signs without notice. The responsibility for removing illegal signs from state route right of way in an incorporated city or town depends on the access control designation for the highway segment being considered. The statute is clear when considering limited access highways established and purchased under the provisions of RCW 47.52. For routes where full, partial, or modified limited access control has been established and purchased, the department may remove illegal signs in the same manner as any other state highway right of way. RCW 47.24.020(2) states, "...within incorporated cities and towns the title to a state limited access highway vests in the state, and... the department shall exercise full jurisdiction, responsibility, and control to and over such facility."

For managed access control routes, RCW 47.24.020(2) states, "The city or town shall exercise full responsibility for and control over any such street beyond the curbs and if no curb is installed, beyond that portion of the highway used for highway purposes." Because the department is responsible under federal law for the compliance of all signs visible to Interstate, Primary, or Scenic highway systems, coordination with the cities is needed to assure compliance along managed access routes within incorporated cities and towns.

The region may provide an explanatory letter to the city asking it to abate a sign that is under its control, but visible to a regulated route (Appendix 8-14). As an alternative, the department may enter into an inter-local agreement with the city (RCW 39.34) that authorizes the department to remove illegal signs. In the latter case, the agreement needs to specify that the city will pay all of the department's costs.

- e. **Documentation of Illegal Sign Abatement Activities.** Annually, the Headquarters Traffic Office provides the Director of the Maintenance and Operations Division with a summary of illegal sign abatement activities conducted during the previous year. A copy is also sent to the Federal Highway Administration (FHWA), Olympia Division, Right of Way Office.

The FHWA Division Right of Way Office is a valuable resource when responding to questions or investigating apparent ambiguities within the highway advertising control laws and regulations. For matters of statewide significance or implication, allow the Headquarters Traffic Office to provide liaison with the FHWA to help assure that any information gathered is equally shared.

8. Other Guidelines

a. **Billboards on Indian Trust Lands.** The states have no regulatory authority over billboards on Indian Trust land. A March 7, 1986 Federal Highway Administration (FHWA) memorandum contained information about advertising signs on Indian lands. It cited a United States Supreme Court ruling that upheld a California Supreme Court decision. The California court decision found the following:

- The California Department of Transportation could not use the state's highway advertising control act to regulate billboards erected on reservation land held in trust by the United States for the beneficial use of the Morongo Indian Band.
- The *Federal Highway Beautification Act* (HBA) preempts the state's regulatory authority in the area of highway advertising control on Indian reservations.
- The Federal Department of the Interior (Bureau of Indian Affairs) is the appropriate agency to enforce the HBA provisions on Indian land.

These decisions set a precedent that remains today. The department has not included signs on Indian land in its Type 4 and Type 5 sign inventory since 1986. However, off-premise advertising signs located on Indian land, and visible to state highways controlled under the *Highway Advertising Control Act*, should be included when determining the applicable sign space available for proposed sign sites.

b. **Advertising on Transit Shelters and Bus Benches.** RCW 47.36.141 authorizes commercial advertising displays on transit authority bus shelters within state highway right of way, subject to applicable federal regulations. The law also provides that advertising panels may not exceed 24-square feet on each side of the shelter, and may not be placed on the shelter's roof or the side facing oncoming traffic.

Small advertising plaques are sometimes placed on bus benches or other street furniture located within right of way in cities and towns. Such signs are typically mounted on the back of the furniture and oriented toward pedestrian traffic so they are visible when the bench is in use. Because the primary purpose of the bench is as street furniture and because of the small size and directional orientation of street furniture signing, the department does not regulate bus bench advertising under the *Highway Advertising Control Act*; however, local agency regulations do apply.

- c. **Advertising on Commercial Trailers.** Advertising on commercial vehicles and trailers for normal business use is not regulated under the *Highway Advertising Control Act*. This includes times when these vehicles are intermittently parked at off-premise locations visible to state highways.

When a commercial vehicle or trailer is parked at an off-premise location visible to the state highway for an extended period, it must be determined whether it's intended purpose is for off-premise advertising. Investigate and abate the commercial vehicles or trailers in the same manner as illegal advertising signs. An expired vehicle registration is a primary indicator that the vehicle is most likely being used for off-premise advertising.

- d. **Digital or Lighted Signs Used for Advertising on Vehicles (Signs in Motion).** The Washington State Patrol WAC 204-65, Vehicle Lighting and Equipment, prohibits displaying any digital or lighted advertising sign from motor vehicles on state highway right of way. This includes any sign device towed behind a motor vehicle. The prohibition does not include messages displayed on traffic control vehicles, taxicabs, or destination placards on public transportation vehicles.

- e. **Accessing Signs from State Highway Right of Way.** WAC 468-66-210(3)(b) in part assumes that sign maintenance will be accomplished from private property rather than state highway right of way. The highway advertising sign permit application contains the property owner's signature on the statement that he/she consents to the sign installation and maintenance.

On limited access facilities, highway advertising sign maintenance activities conducted on or across the right of way are illegal and a misdemeanor under RCW 47.52.120. When department personnel observe illegal sign maintenance activities occurring, immediately contact the Washington State Patrol and document the date, time, place, license number, and any identifying name on the service vehicle. Support the documentation with photos or videotape if possible. Notify the regional HAC representative and provide a copy of the documentation and visual records.

For non-limited access facilities, highway advertising sign maintenance activities are also conducted from private property. However, there may be locations where the maintenance could be accomplished from state highway right of way without interfering with traffic or damaging highway property. For these locations, a department issued General Agreement may be used in addition to the property owner's statement and signature on the highway advertising sign permit application.

- f. **Sign Area Measurement.** The department's highway advertising control agreement with the FHWA provides that sign area shall be measured by the smallest square, rectangle, triangle, circle, or combination thereof that encompasses the entire sign.
- g. **Sponsorship Logos on Motorist Call Boxes.** Sponsorship logos placed on emergency call boxes are authorized in Section 111 of the United States Code. The *National Highway System Designation Act* of 1995 included the provisions, which were incorporated into the MUTCD appendix beginning with the 2003 edition.

The United States Code provisions are:

- The states may permit motorist call boxes to be placed on the right of way of the National Highway System. The call box installations may include identification and sponsorship logos.
- Call box installations displaying sponsorship logos shall be approved by the agency having jurisdiction over the highway where the boxes are installed.
- A sponsorship logo may be placed on the call box, in a dimension not to exceed the size of the call box, or 12 inches by 18 inches.
- A sponsorship logo not to exceed 12 inches by 30 inches may be displayed on a call box identification sign affixed to the call box post. Sponsorship logos affixed to an identification sign on a call box post are limited to not more than one every 5 miles.
- The identification signs shall have a blue background with a white legend and border. The sponsorship logo can be either the sponsor's identification symbol/trademark or a word message. Word messages should also be a white legend on a blue background.

Incidental to highway advertising control, the 1995 *NHS Designation Act* also placed four location or structural related regulations to call box installations:

- The call boxes and their location, posts, foundations, and mountings shall be consistent with the MUTCD or other federal requirements deemed necessary to assure that call boxes do not become a safety hazard.
- Supports for call boxes are required to meet the safety breakaway requirements of the *AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals*.

- Within a state, at least 20 percent of the call boxes displaying sponsorship logos shall be located on highways outside of urbanized areas with a population greater than 50,000.
- AASHTO recommends one-half mile spacing for call boxes as an optimum interval. On high volume roads with average daily traffic flows of 100,000 or more vehicles, one-quarter mile spacing may be considered. On certain rural roads, one mile spacing may be appropriate.

8.3 Advertising at Rest Areas and on Washington State Ferries

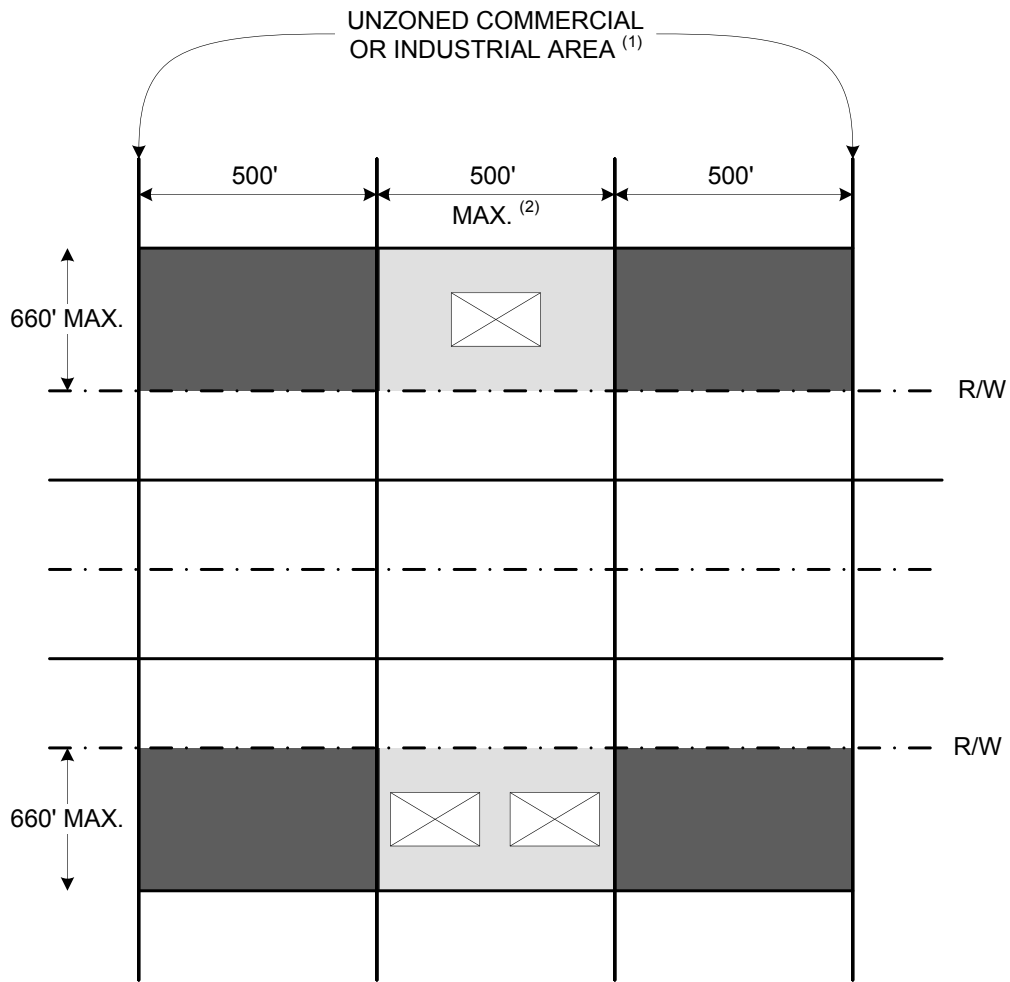
- A. **Advertising at State Highway Rest Areas.** Businesses may purchase advertising space on displays in 20 rest areas located along Interstate 5, Interstate 90, Interstate 82, US 2, and US 395. The rest area advertising program features lighted display kiosks. In rest areas, the only requirement is that services advertised be of interest to travelers. For more information about this program, contact:

Storeyco, Inc.
PO Box 357
East Olympia, WA 98540
360-412-0066 or 800-558-7867
www.storeyco.com




- B. **Advertising on Washington State Ferries.** Businesses may purchase advertising space on several Washington State ferry runs and at 20 terminals. The state ferry advertising program features lighted display boards. For more information about this program, contact WSDOT's sales contractor:

Certified Folder Display, Inc.
2407 South 200th Street
SeaTac, WA 98198
(206) 870-2470
weldonv@certifiedfolder.com

www.certifiedfolder.com
(800) 799-7373



UNZONED COMMERCIAL OR INDUSTRIAL AREA
WAC. REF. 468-66-010(4)

-  - Commercial or Industrial Activity
-  - Qualifying Commercial/Industrial Area
-  - Additional Buffer Area – Where Applicable

- (1) Billboards may be permitted within this 1500' max. area, measured parallel to the highway
- (2) Three or more separate and distinct commercial and/or industrial activities are required within 500'. Activities may be located on either or both sides of the highway and must be within 660' of the right of way line to qualify.

**WSDOT OAC Program
Visibility Checklist for Signs on Unregulated Roadways**

In addition to the definition provided in WAC 468-66-010(27), consider the following information about signs located on unregulated roadways. Signs, located along unregulated roadways that intersect with interstate or other regulated state highways shall be considered 'not visible' if they meet at least three of the following criteria.

Sign Location – Visible from SR _____ **MP** _____ **Located on** _____

Existing Permitted Sign Y N **Permit #** _____

- The sign faces are *not* substantially larger or at a substantially higher elevation above the ground line than other signs along the same unregulated intersecting roadways Y N
- The angles of sign faces are generally oriented toward unregulated intersecting roadways rather than interstate or other regulated state highways Y N
- The length of time that the informative contents of signs can be viewed is substantially greater for the travelers on unregulated intersecting roadways than from interstate or other regulated state highways Y N
- The signs are visible to a motorist traveling at the posted speed on the interstate or other regulated state highway, for a period of time that is less than that required to read the entire sign message Y N
- The signs are only incidentally visible from interstate or other regulated state highways Y N
- The signs advertise activities accessible from unregulated intersecting roadways along which the signs are located Y N

Determination

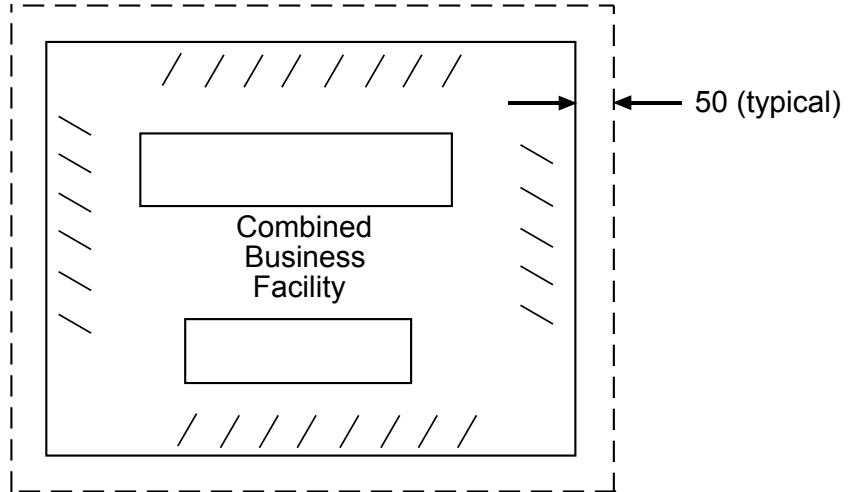
Sign Visible **Sign not Visible**

Date _____

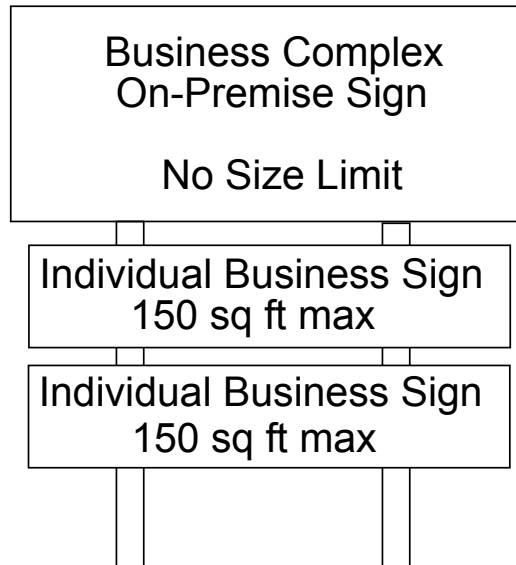
Reviewer _____

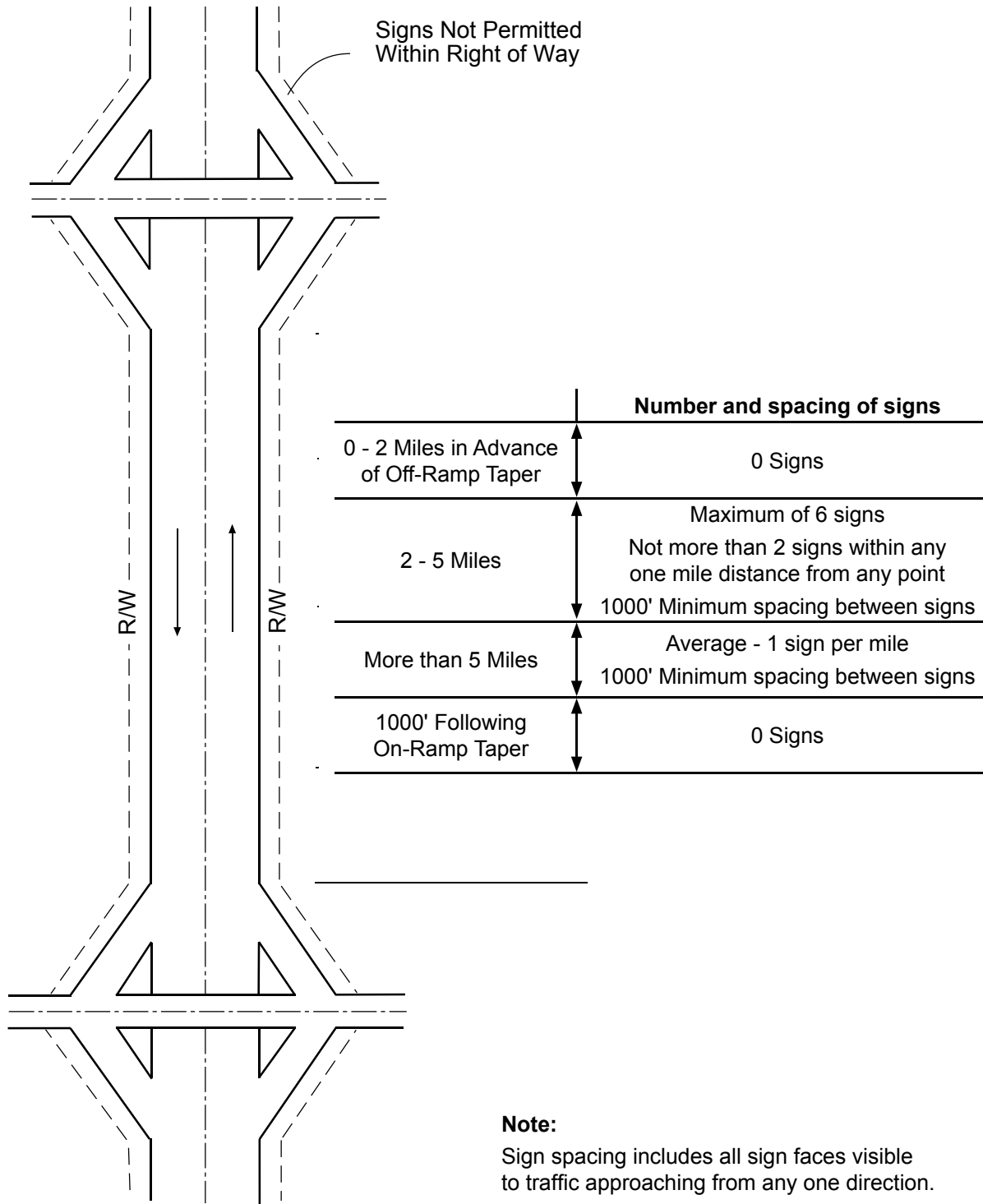
WAC 468-66-050 (3)(b)

Business Complex On-Premise Sign may be placed
within 50 feet of combined parking area



(Plan View)



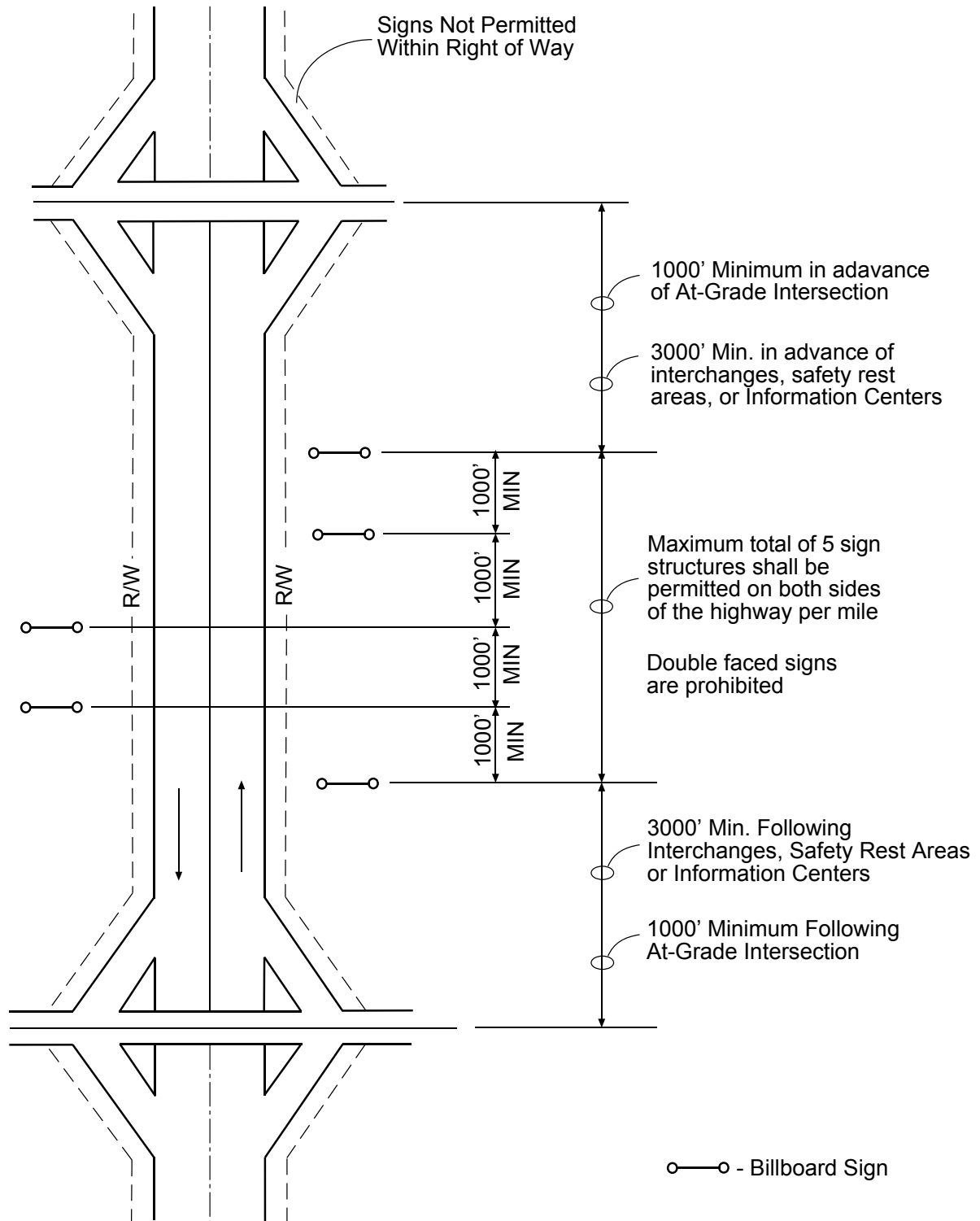


INTERSTATE
(Type 4 & 5)
WAC REF 468-66-050(5)(d)

Note:
Sign spacing includes all sign faces visible to traffic approaching from any one direction.

Off Premise Sign Spacing –

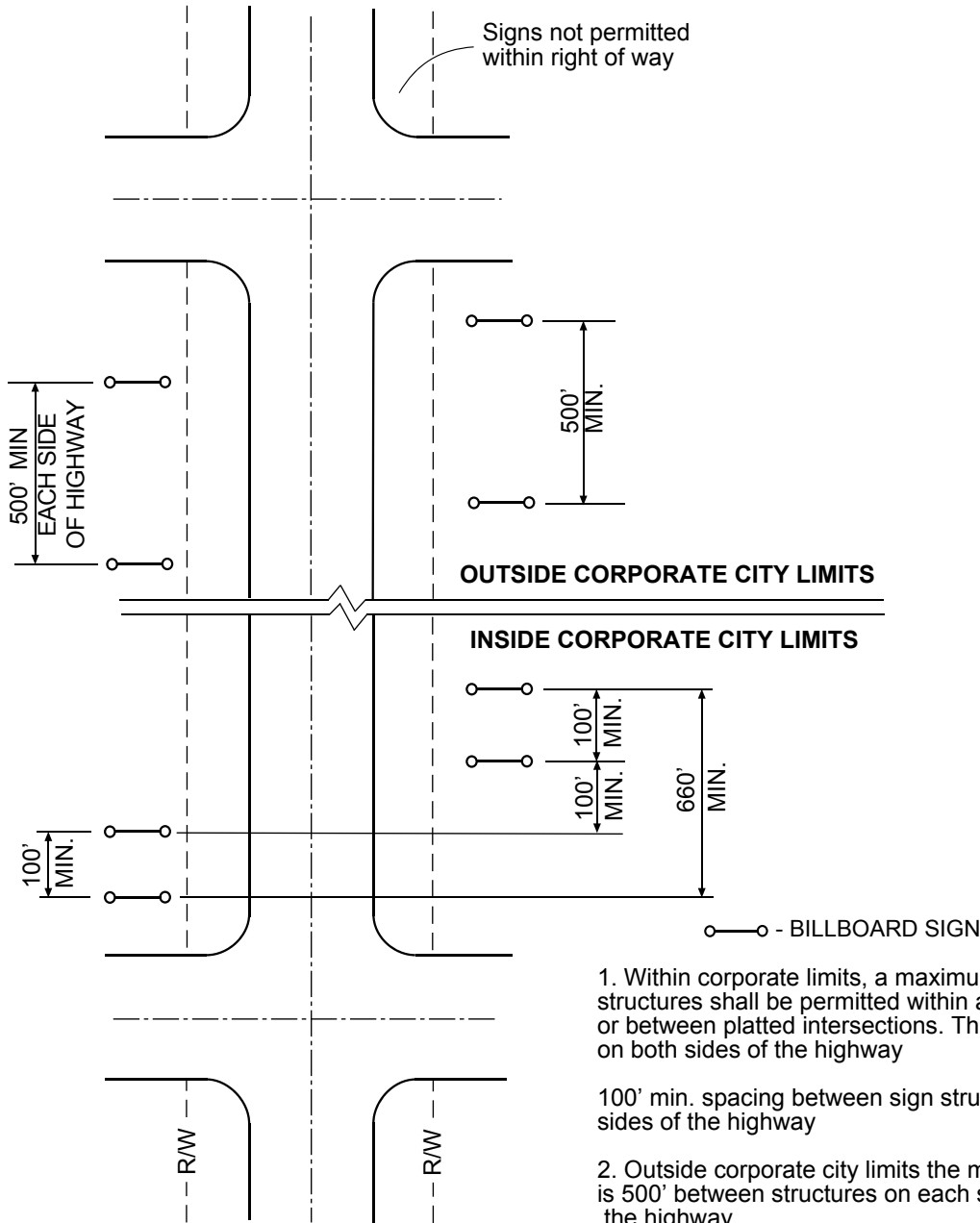
Appendix 8-5a NHS Non-Interstate Controlled Access



NHS NON-INTERSTATE CONTROLLED ACCESS
 (Type 4 & 5)
 WAC 468-66-050(5)(e)(i)

Appendix 8-5b

**Off Premise Sign Spacing – NHS
Non-Interstate Non-Controlled Access**



1. Within corporate limits, a maximum of 4 sign structures shall be permitted within a space of 660', or between platted intersections. This includes signs on both sides of the highway

100' min. spacing between sign structures on both sides of the highway

2. Outside corporate city limits the minimum spacing is 500' between structures on each side of the highway

NHS Non-interstate Noncontrolled Access

(Type 4 & 5)

WAC. REF. 468-66-050(5)(e) (ii) & (iii)

3. In areas where one side of a highway is within corporate limits and the other side of the highway is outside corporate limits, the appropriate sign spacing shown above applies



Application - Outdoor Advertising Sign Permit

Name		
Address		
City	State	Zip Code
Phone	Date 10/17/2007	

For WSDOT Use Only	
Log Number	_____
Date Received	_____
Region	_____
Permit Number	_____
Year	_____
Date Permit Issued	_____
Inventory Number	_____
SR Milepost	_____
<input type="checkbox"/> Nonconforming	<input type="checkbox"/> Limited Access

Location of Sign

State Highway Number _____

Side of Highway N E S W

Sign Facing N E S W

Distance and Direction from Center of Nearest Cross Road

Distance _____ ft. Direction N E S W

Cross Road Name _____

Sign Description

Size _____ ft. X _____ ft. Total Area _____ sq. ft.

TriVision

Shape Rectangular Octagonal Other

Square Round _____

Application Fee:
\$300.00 Per Sign Structure
 Make checks or remittance payable to:
"Department of Transportation"
 Mail with proper fee to:
Washington State
Department of Transportation
Outdoor Advertising Control
PO Box 47344
Olympia, WA 98504-7344

I, the undersigned applicant, declare under penalty of perjury under the laws of the State of Washington that the information provided herein, concerning the location of sign, sign description, and property owner/lessee, is accurate and true. I also acknowledge that any discrepancy in such information discovered hereafter is cause for the Department of Transportation to revoke this sign permit; and, further declare that, after permit revocation, I shall remove without compensation any sign erected under such permit.

Print Applicant Name _____

Applicant Signature _____

Date _____ Place _____

Name of Property Owner			
Address	City	State	Zip Code
Phone	Property Tax I.D. No.		

I, the undersigned, have consented to the erection and maintenance of the above described outdoor advertising sign on property which (I own) (I Lease) in conformance with the Washington Outdoor Advertising Control Act of 1961 as amended by the Scenic Vistas Act of 1971 (RCW 47.42) and the Department of Transportation rules and regulations for outdoor advertising control along interstate, primary, and

A Copy of a Completed Lease Accepted in Lieu of Signature

Signature _____
Property Owner

This permit shall not be considered to allow a sign to be erected or maintained that is otherwise prohibited by Statute or by the Resolution or Ordinance of any county, city or town of the State of Washington. By issuance of this permit the Department of Transportation does not warrant that this sign is not prohibited by such Statute, Resolution, or ordinance.

Signature of Department of Transportation representative validates this permit and acknowledges receipt of fee paid. By _____
For Department of Transportation



**Washington State
Department of Transportation**
Paula J. Hammond, P.E.
Secretary of Transportation

Transportation Building
310 Maple Park Avenue S.E.
P.O. Box 47300
Olympia, WA 98504-7300
360-705-7000
TTY: 1-800-833-6388
www.wsdot.wa.gov

DATE: Date

FROM: HQ Traffic Office

PHONE: 360-705-7296

SUBJECT: Highway Advertising Control
Sign Permit Application

TO: Regional HAC Representative LOG # _____

We are enclosing _____ sign permit applications from _____ that have been received by this office. Please return the completed application to this office no later than mm/dd/yy.

Please investigate the legality of the signs with respect to size, spacing, property owner consent and highway right of way limits and furnish your recommendations for approval at your earliest opportunity, together with all necessary information for issuance or reply to the applicant.

If there are any discrepancies that arise concerning the permit application, please have them clarified by the sign owner.

Approved: Y N

Reason for disapproval:

**Checklist for Outdoor Advertising Permits
New Sign on Interstate System**

SR _____ Milepost _____ Direction of Travel _____ Sign Type _____ Date _____

Proposed Location _____

Nature of Sign Site:

Scenic Area Y N Commercial/Industrial Area Y N

Size:

Sign Length (20' max) _____ Sign Height (20' max) _____ Sign Area (150' max) _____

Spacing:

Distance Between Interchanges	Number/Spacing of Signs	Does site comply?
0-2 miles	No Signs Allowed	Y <input type="checkbox"/> N <input type="checkbox"/>
2-5 miles	Max of 6 signs. Max of 2 within any 1 mile 1000' min between signs	Y <input type="checkbox"/> N <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>
More than 5 miles	Average 1 sign per mile 1000' min between signs	Y <input type="checkbox"/> N <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>
Within 1000' of on-ramp terminal	No Signs Allowed	Y <input type="checkbox"/> N <input type="checkbox"/>
Within 2 miles of off-ramp taper	No Signs Allowed	Y <input type="checkbox"/> N <input type="checkbox"/>

Sign Owner/Operator: _____

Property Owner: _____

Comments: _____

Appendix 8-8b **NHS Non-Interstate or Scenic System Sign Permit Review Checklist**

Checklist for Outdoor Advertising Permits New Sign on NHS Non-Interstate or Scenic System

HQ Log Number _____

SR _____ Milepost _____ Direction of Travel _____ Sign Type _____ Date _____

Proposed Location _____

Nature of Sign Site:

Scenic Area Y N Commercial/Industrial Area Y N

Size:

Sign Length (50' max) _____ Sign Height (25' max) _____ Sign Area (672' max) _____

Spacing:

A. Inside Corporate Boundaries of City or Town – Not Controlled Access

Including this sign, and counting both sides of the roadway, how many sign structures are located within any platted intersection; or any 660 ft.* section? _____ (4 max)

Is the proposed sign location at least 100 ft.* from any existing sign? Y N

B. Outside Corporate Boundaries – Not Controlled Access

Is the proposed sign location at least 500 ft.* from an existing sign structure? Y N

C. Limited Access Highways

Is the proposed sign location at least 1000 ft.* from any existing sign, or any at grade intersection? Y N

Is the proposed sign location at least 3000 ft.* from any interchange, safety rest area, or information center? Y N

Is the sign double-faced? Y N (not allowed on limited access roadways)

Including this sign, and counting both sides of the roadway, how many signs are located within any 1 mile* section? _____ (5 max)

Local Agency Approval Y N

*All distances measured parallel to edge of the highway's main traveled way.

Sign Owner/Operator: _____

Property Owner: _____

Approve: _____ Disapprove: _____ Comments: _____



Permit Application - Temporary
Agricultural Directional Sign

Name		
Address		
City	State	Zip Code
Phone	Date	Federal Tax I.D. Number

For WSDOT Use Only	
Date Received	_____
Region	_____
Permit Number	_____
Date Permit Issued	_____
Expiration Date	_____
CS Mile Post	_____
SR Mile Post	_____

Location of Sign

State Highway No. _____ Side of Highway N E S W
 Sign Facing N E S W
 Direction and Distance from Center of Nearest Cross Road or Street
 Name _____
 Direction N E S W Distance _____ ft.

Sign Description

Size _____ ft. X _____ ft. Total Area _____ sq. ft.
 Shape Rectangular Octagonal Other _____
 Square Round

Description of Sign Copy _____
 Product(s) Being Advertised _____
 Name and Address of Advertised Activity _____

Application Fee:
\$50.00 Per Sign Face
 Make checks or remittance payable to:
"Department of Transportation"
See Instructions for correct mailing address.

The applicant agrees to remove the sign(s) at the expiration of this temporary permit or cover the sign(s) during the times when no sales occur, and further agrees to provide and maintain follow-through signing if required by the Department of Transportation. In addition, if the sign(s) remain up in non-compliance for longer than 10 days after notification to the applicant thereof, the applicant does hereby authorize the Washington State Department of Transportation and its agents or employees to remove and dispose of such sign(s) and waives all claims for damages against the Washington State Department of Transportation and its agents or employees for such removal and disposal of each sign(s).

This permission and waiver is granted in order to permit the removal of such sign(s) as required by the Washington Highway Advertising Control Act of 1961 as amended by the Scenic Vistas Act of 1971 (Chapter 47.42 RCW).

Signature _____
Sign Owner

Land Owner Name	Phone	Property Tax I.D. No.	
Address	City	State	Zip Code

I, the undersigned, have consented to the erection and maintenance of the above described outdoor advertising sign on property which (I own) (I Lease) in conformance with the Washington Outdoor Advertising Control Act of 1961 as amended by the Scenic Vistas Act of 1971 (RCW 47.42) and the Department of Transportation rules and regulations for outdoor advertising control along interstate, primary, and scenic routes.

A Copy of Lease Accepted in Lieu of Signature Signature _____
Property Owner

This permit shall not be considered to allow a sign to be erected or maintained that is otherwise prohibited by Statute or by the Resolution or Ordinance of any county, city or town of the State of Washington. By issuance of this permit the Department of Transportation does not warrant that this sign is not prohibited by such Statute, Resolution, or ordinance.

Signature of Department of Transportation representative validates this permit and acknowledges receipt of fee paid. By _____
For Department of Transportation

DOT Form 224-068 EF
 Revised 7/07

Instructions: Complete and sign this form and mail with the processing fee to the Department of Transportation. Send a picture, drawing, or sketch of the temporary sign(s) you desire along with this application. The Department will have final approval on any design of a temporary sign. Mail this application to the appropriate Region Administrator. The Region addresses are shown below.



Northwest Region
 Region Administrator
 15700 Dayton Avenue North
 PO Box 330310
 Seattle, WA 98133-9710

North Central Region
 Region Administrator
 1551 North Wenatchee Avenue
 PO Box 98
 Wenatchee, WA 98807-0098

Olympic Region
 Region Administrator
 5720 Capitol Blvd. (Tumwater)
 PO Box 47440
 Olympia, WA 98504-7440

Southwest Region
 Region Administrator
 11018 NE 51st Circle
 PO Box 1709
 Vancouver, WA 98682-6682

South Central Region
 Region Administrator
 2809 Rudkin Road (Union Gap)
 PO Box 12560
 Yakima, WA 98909-2560

Eastern Region
 Region Administrator
 2714 North Mayfair Street
 Spokane, WA 99207-2090

DOT Form 224-068 EF
 Revised 7/07



**Washington State
Department of Transportation**
Paula J. Hammond, P.E.
Secretary of Transportation

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P.O. Box 47300
Olympia, WA 98504-7300
360-705-7000
TTY: 1-800-833-6388
www.wsdot.wa.gov

Date

Inside Address

CERTIFIED

Dear Mr. and/or Mrs./Ms.

The Department of Transportation is directed by state law to regulate signs on private property and visible to certain state highways. The statutes and regulations governing allowable visible signs are provided in Chapter 47.42 of the Revised Code of Washington (RCW), the Scenic Vistas Act, and Chapter 468-66 of the Washington Administrative Code (WAC), respectively.

Accordingly, the department conducts periodic reviews of state highway corridors to fulfill its statutory obligation. A recent review of SR *WX* in the vicinity of milepost *YZ* revealed that an advertising sign, displaying the message *type the message here*, is maintained on your property.

Please be advised that the sign is illegal because it can't meet the eligibility requirements for permissible off-premise signs visible to *note highway type*, and is thus prohibited by RCW 47.42.030. *Insert description of illegal aspects of the sign, e.g., spacing, sign type, sign size, zoning, etc., and cite all applicable RCWs and WACs.* Further, under RCW 47.42.080, the sign is declared a public nuisance and must be removed within 15 days of the date you received this letter.

The department desires to provide you with the opportunity to voluntarily remove the sign without issuing a formal complaint or initiating enforcement action against you. Failure to remove the sign will cause the department to begin formal abatement procedures through the Attorney General's Office.

Please call Mr./ Ms. *name of Regional Highway Advertising Control Representative* of my staff, phone (123) 456-7890, should you have any questions or to notify the department that the sign has been removed.

Sincerely,

Regional Traffic Engineer

cc: *Name of Sign Owner*

Name of Assistant Attorney General

Name of Headquarters Highway Advertising Control Specialist



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360-705-7000
TTY: 1-800-833-6388
www.wsdot.wa.gov

Illegal Signs, Certified Letter, Sign Owner

Date

Inside Address

CERTIFIED

Dear Mr. and/or Mrs./Ms.

The Department of Transportation is directed by state law to regulate signs on private property and visible to certain state highways. The statutes and regulations governing allowable visible signs are provided in Chapter 47.42 of the Revised Code of Washington (RCW), the Scenic Vistas Act, and Chapter 468-66 of the Washington Administrative Code (WAC), respectively.

Accordingly, the department conducts periodic reviews of state highway corridors to fulfill its statutory obligation. A recent review of SR *WX* in the vicinity of milepost *YZ* revealed that you maintain an advertising sign, displaying the message *type the message here*, on property owned by *Mr./Ms. name of property owner*.

Please be advised that the sign is illegal because it can't meet the eligibility requirements for permissible off-premise signs visible to *note highway type*, and is thus prohibited by RCW 47.42.030. *Insert description of illegal aspects of the sign, e.g., spacing, sign type, sign size, zoning, etc., and cite all applicable RCWs and WACs.* Further, under RCW 47.42.080, the sign is declared a public nuisance and must be removed within 15 days of the date you received this letter.

The department desires to provide you with the opportunity to voluntarily remove the sign without issuing a formal complaint or initiating enforcement action against you. Failure to remove the sign will cause the department to begin formal abatement procedures through the Attorney General's Office.

Please call Mr./ Ms. *name of Regional Highway Advertising Control Representative* of my staff, phone (123) 456-7890, should you have any questions or to notify the department that the sign has been removed.

Sincerely,

Regional Traffic Engineer

cc: *Name of Property Owner*
Name of Assistant Attorney General
Name of Headquarters Highway Advertising Control Specialist

Appendix 8-11

**Request for AG Assistance
to Remove Illegal Signs**

Order to Remove – Transmittal Checklist
Region to HQs: Request for AG Assistance to Remove Illegal Signs

Sign Description _____

Activity Advertised _____

State Route _____ Milepost _____ Lt _____ Rt _____

Sign Owner _____ Phone/E-mail _____

Address _____

Property Owner _____ Phone/E-mail _____

Address _____

Cite RCW/WAC Violation _____

Correspondence included:

15-day certified letter Y N Date of signed receipt _____

15-day window expired Y N Date of follow up review _____

Other correspondence/communication: _____

Narrative/Timeline included? Y N Dated photos included? Y N

Map or Sketch of Vicinity showing:

North Arrow? Y N

State Route and Milepost? Y N

Location of sign? Y N

Property Boundaries? Y N

Offset Distances? Y N

Other Information _____

Appendix 8-12

**Highway Advertising
Control Field Review**

Date _____ Region _____ Highway Type _____

State Route _____ Milepost _____

Size of Sign _____ Lighted _____

Which Side of Highway? Rt _____ Lt _____ Visible to: Inc. _____ Dec _____

Type of Structure V-Type _____ Back2Back _____ Single _____ Flanking _____

Permitted Sign? _____ Permit # _____ Permit Tag Visible Y N

Does sign location match physical description on permit? Y N

Comments: _____

Photo # _____

On/Off R/W _____ R/W Distance _____ Distance Measured to Sign _____

For Signs That Are Not Permitted

Advertised Activity _____

Phone # _____ Parcel # _____

E-mail _____ Zoning _____

Property Owner _____

Comments _____



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Secretary of Transportation

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P.O. Box 47300
Olympia, WA 98504-7300
360-705-7000
TTY: 1-800-833-6388
www.wsdot.wa.gov

Date

City of
Address

RE: Illegal sign located within the public right of way of *SR X* within incorporated *name of city or town*.

Dear Mr. or Ms.:

The Washington State Department of Transportation is directed by federal and state law to regulate signs visible to the state highway system. The Highway Beautification Act, Title 23, United States Code (USC), Section 131 and the Scenic Vistas Act, RCW 47.42, and WAC 468-66 contain these laws. These statutes generally regulate signs placed on private property, but the Scenic Vistas Act also limits which types of signs may be located within the public right of way. Only directional or official signs required or sanctioned by law are authorized. Federal law also specifies that the national standards contained in the Manual of Uniform Traffic Control Devices (MUTCD) apply to all traffic control devices (including signing) on any public street or highway. Cities and towns are required to follow these standards. All advertising signs are prohibited in the public right of way.

RCW 47.24, City Streets as Part of State Highways, assigns jurisdiction and control for city streets that are part of the state highway system. As a *highway type*, signing along *SR X* within *city or town's* corporate limits and located beyond the curb or main traveled way is the responsibility of *city or town*. The department interprets 47.24.020(2) to mean that *city or town* is responsible for abating any illegal signs in such locations and is requesting that *city or town* remove this illegal sign at its earliest convenience. As an alternative, the department would be pleased to discuss an inter-local agreement (per RCW 39.34) by which the department can remove the sign provided that *city or town* pays the department's costs.

Washington State is subject to a 10 percent reduction in federal highway fund monies if the department does not pursue the expeditious removal of illegal signs. The sign in question is clearly in violation of the Highway Beautification Act, the Scenic Vistas Act and the MUTCD because it is located on the public right of way and is not a type authorized by the MUTCD. I am enclosing pictures and maps that identify the sign and its location to assist in sign removal. Please call *WSDOT Contact* of my staff at *phone/e-mail* should you have any questions, or to notify the department that this sign has been removed.

Thank you for your assistance in this matter.

Sincerely,

Region Traffic Engineer

Enclosures

9.1 General

The Safety Management System (SMS) is a systematic process designed to assist decision makers allocate limited transportation safety resources. Through SMS, the state defines, prioritizes, and measures the effectiveness of safety efforts.

SMS consists of two key processes. The *Collaboration Process* provides statewide organizations with a reference network for sharing various available safety resources. The *Decision-making Process* ensures that all needs and opportunities are given due consideration in all phases of our plans and programs, and compatibility with the other management systems (Pavement, Bridge, Congestion, Public Transportation, and Intermodal) is maintained. The five steps of the Decision-making Process are:

- Needs Identification
- Solution/Resource Development
- Investment Prioritization and Implementation
- Investment Tracking
- Investment Evaluation

As resources allow, within their own existing processes, all jurisdictions within the state are encouraged to (1) take part in the SMS Collaboration Process, and (2) implement the SMS Decision-making Process. This occurs through the appropriate existing partnership and assistance forums for each jurisdiction. Examples: a city might work with WSDOT TransAid; a county might work with the County Road Administration Board; or the Department of Health might work with the Traffic Safety Commission.

There are three main goals of SMS:

1. Prevent and reduce the number and severity of roadway collisions;
2. Ensure that traffic safety will be considered at all phases of roadway-related programs;
3. Provide for partnership among citizens, statewide agencies, regional organizations, and local jurisdictions on traffic safety efforts.

There are also two main coverage elements of the SMS:

1. All public roads within the state.
2. All roadway, traveler, and vehicle safety-related elements.

While the SMS covers all public roads, the extent of SMS requirements (such as data collection, analyses, and standards) vary depending on roadway functional classification. Also, because each jurisdiction within the state implements SMS within their own individual processes and programs, describing each of them within this manual is not feasible. As an example, the following subsections describe WSDOT's implementation of SMS.

9.2 SMS Collaboration Responsibilities Within WSDOT

The region offices may contact the following Olympia Service Center offices for information, resources, and assistance regarding safety-related decisions:

Office (Service Center) — SMS Responsibilities

Transportation Planning (P&P) — Develops/Maintains the Systems Plan: Service Objectives and Performance Indicators, needs identification, solutions/strategies, and financial responsibility.

Transportation Data (P&P) — Maintains traffic and highway crash statistics and technical assistance on safety data analysis.

Research (P&P) — Provides for research projects and reporting on highway safety issues.

Traffic (E&E) — Leads Development/Maintenance of the statewide SMS, leads standing committee for Workzone Safety, provides technical assistance/training on safety investment and benefit/cost analysis, and coordinates safety investment tracking and evaluation efforts.

Program Management (P&P) — Directs/Coordinates program activities, such as targeting region allocations and providing programming instructions to the regions.

Design (E&E) — Develops/Maintains design approach to effective safety design features/standards for transportation projects.

Maintenance (Operations) — Develops/Maintains effective approach to safety maintenance activities.

Construction (Operations) — Provides for implementation of transportation projects, and provides guidelines for workzone safety.

TransAid (TransAid) — Provides support and coordination with local transportation jurisdictions on highway safety issues.

Staff Development (Personnel) — Provides for training/staff development on highway safety for all program areas.

Communication and Public Involvement Office — Provides for public information and media coverage on traffic safety (i.e., “Give ‘Em a Brake” campaign)

9.3 SMS Needs Identification Within WSDOT

Needs identification is the first step to ensure that safety is considered in all phases of traffic and roadway related efforts focused on the goal of preventing and reducing the number and severity of collisions. This basically means an identification of historically or potentially hazardous conditions, or identification of any cause/effect issues that contribute to collisions.

Measurable service objectives are established for all WSDOT programs and subprograms. These service objectives provide a baseline for needs identification in our long-range (20-year) system plan. Some examples of safety-related service objectives within WSDOT are:

Maintenance

- Ensure safe, reliable roadway surfaces.
- Maintain the visibility and operation of traffic control and safety devices.
- Provide safe travel through work zones.

Preservation

- Repave highways at regular intervals to minimize long-term costs.
- Restore existing safety features.

Improvements

- Improve highway sections that have a high accident history.
- Improve roadways where geometrics, traffic volumes, and speed limits indicate a high accident potential.
- Improve geometrics of the Interstate system per the FHWA/WSDOT Stewardship Agreement.

9.4 SMS Solution and Resource Development Within WSDOT

As safety needs are identified through the State Systems Plan for each biennium, solution and resource development is performed throughout the WSDOT program structure. This is generally carried out as scoping work by region project development staff (as determined by each region) for the Preservation and Improvements programs, and region/area maintenance staff for the Maintenance program.

Each region provides to Transportation Planning (P&P), resource estimates for safety related activities that address the identified needs. Supported by the other Olympia Service Centers, Transportation Planning then checks for financial feasibility. If the solution costs do not match expected revenues, the service objectives are reviewed and modified. Once the solution costs are in balance with revenues, the Systems Plan is updated. This occurs every two years.

9.5 SMS Investment Prioritization/Implementation Within WSDOT

Prioritization is based on (1) the anticipated benefits of preventing and reducing collisions (focusing of identified needs) and (2) the cost and duration of implementing the solution. Many safety activities may overlap with solutions developed for other program/subprogram needs. Therefore, individual project prioritization should also be coordinated with those other efforts.

Prioritization of safety projects, funded from the Improvement Program, is based upon project benefit-cost ratios. First, the statewide System Plan needs are ranked from greatest to least, using societal costs of collisions per year as a common denominator. Then, starting at the top of the list, benefit-cost methods are applied to the solutions which adequately address the identified needs. To be considered for implementation, a safety solution must have a projected benefit value equal to or greater than the solution cost.

This analysis is repeated until the available safety improvement resources for a two year program have been allocated to the array of safety solutions which maximize the projected benefits.

Implementation includes the specific funding, scheduling, and management of the prioritized solution activities. Examples include: programming, design, construction or manufacturing, maintenance, operations, enforcement, and driver safety instruction.

9.6 SMS Investment Tracking Within WSDOT

As safety solutions are implemented under SMS they become safety investments. A variety of safety investment data will be tracked by location, funding source, projected benefit/cost, type of investment, and roadway safety feature to ensure that each investment can be easily identified for the purpose of monitoring and evaluation. The regions will uniformly track safety investments.

The basic elements of tracking are:

1. **Need Addressed.** For example: crash reduction, risk of leaving roadway, etc.

2. **Description.** A description of the identifiable safety related activity (e.g. straighten curve, install illumination, slope flattening, public ads on work zone traffic control, etc.), including location, region, roadway classification, etc.
3. **Date.** The date(s) the safety related activity is effectively implemented.
4. **Resources.** Funding (staff, equipment, time, etc.) requirements dedicated to each safety related activity.
5. **Projected Benefits.** Identification of expected benefits for identified needs from each safety related activity.
6. **Actual Benefits.** The actual benefits derived from the activity (e.g., societal costs of collisions, public education benefits, etc.)
7. **Investment Type.** The investment category of the activity. (General headings: System Management, Traffic control, Roadside, Roadway.)
8. **State Program Source.** The program/subprogram (Maintenance, Preservation, Improvements) from which the investment was made.

The guidelines for safety investment tracking are currently being developed.

9.7 SMS Investment Evaluation Within WSDOT

Safety investments should be monitored and evaluated to determine whether appropriate and cost-effective investments were made. Monitoring and evaluating provides new insight for future problem identification, solution development, and solution prioritization and implementation. The districts will monitor and evaluate all safety investments.

All evaluations will be documented in a standardized format provided by the Olympia Service Center Traffic Office and should address each of the five items listed below:

1. Need addressed.
2. Total resource investment for all safety-related activities.
3. Projected benefits for each activity, based on the prevention and reduction in number and severity of collisions.
4. Actual benefits for each activity, based on the prevention and reduction in number and severity of collisions.
5. Associated collision rates and societal costs applicable to the “before/after” evaluation period.

As the evaluation data is compiled regionally and statewide, new trend data becomes available for future decision-making.

9.8 WSDOT Programming for Safety Preservation and Improvements

Programming safety dollars must be consistent with several plans, procedures and systems: SMS, Statewide Systems Plan, State Prioritization and Programming Law (RCW 47.05), and Federal Regulations for standards and the FHWA/WSDOT Stewardship Plan.

The programming instructions for the Roadway Preservation subprogram identifies typical safety “restoration” type items which are to be addressed on our Preservation projects. This is funded with a 12 percent program maximum allocation. The longer safety improvements which address System Plans safety needs in reduction or prevention of collisions are funded from the Improvements program. The Safety Improvement Projects Workbook guides the regions in the process of prioritizing safety improvements within the Safety Improvements subprogram.

9.9 References

Section 1034 (Public Law 102-240) of the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) calls for each state to develop six inter-related transportation management systems and a traffic monitoring system. By October 1, 1994, the state shall develop a work plan for SMS which will be fully operational by October 1, 1996.

Washington State Law, C 406 L 93, directs that measurable, outcome based objectives shall be used to track the performance of agencies with traffic safety responsibilities.

RCW 47.05 requires WSDOT to develop a six year program and financial plan for highway improvements specifying program objectives. The program and plan shall be based upon the improvement needs for state highways as determined by WSDOT.

Under RCW 47.01.250 the State Patrol, Washington Traffic Safety Commission (WTSC), County Road Administration Board, and the Department of Licensing shall consult with the Transportation Commission and WSDOT to ensure that their transportation related responsibilities, goals, and activities are fully coordinated. Results of this interaction shall be reported to the Governor and the Legislature.

Among other duties listed in RCW 43.59, the WTSC shall plan and manage at both the state and local level, safety activities and programs for the prevention of accidents on roads, streets, and highways. WTSC shall confer with and advise the political subdivisions and all agencies of Washington State government whose programs and activities are within the scope of traffic safety.