Glossary

Acronyms

ADA / Pedestrian Terms

Main Glossary of Terms
Acronyms

AADT  Annual average daily traffic  HSS  Highways of Statewide Significance
ACCT  Agency Council on Coordinated Transportation  ICA  Intersection Control Analysis
ADA  Americans with Disabilities Act of 1990  ICD  Inscribed circle diameter
ADT  Annual daily traffic  IJR  Interchange Justification Report
HSP  Highway System Program (also SHSP)
ADT  Average daily traffic  IST  Intelligent transportation systems
ALJ  Administrative law judge  L/A  Limited access
AOS  Apparent opening size  LOS  Level of service
APS  Accessible pedestrian signal  MEF  Maximum extent feasible
ARB  Agency Request Billing  MOU  Memorandum of Understanding
AWDVTE  Average weekday vehicle trip ends  MPO  Metropolitan Planning Organization
B/C  Benefit/Cost  MTIP  Metropolitan Transportation Improvement Program
B/EE  Benefit/Environment Evaluation  MUTCD  Manual on Uniform Traffic Control Devices
BAT  Business access transit  NEPA  National Environmental Policy Act
BRT  Bus rapid transit  NHS  National Highway System
BLM  Bureau of Land Management  PAR  Pedestrian access route
BST  Bituminous surface treatment  PC&R  Project Control and Reporting
CE  Categorical Exemption (SEPA)  PCPH  Passenger cars per hour
CE  Categorical Exclusion (NEPA)  PE  Preliminary engineering
CFR  Code of Federal Regulations  PF  Project File
CIP  Capital Improvement and Preservation Program  PPH  Persons per hour
CLB  Current Law Budget  PS  Project Summary
CMP  Corridor Management Plan  PS&E  Plans, Specifications, and Estimates
CPMS  Capital Program Management System  PSRC  Puget Sound Regional Council
CRT  Controlled releasing terminal post  RCW  Revised Code of Washington
CSS  Context Sensitive Solutions  RFP  Request for Proposal
CTR  Commute Trip Reduction  ROD  Record of Decision
CVISN  Commercial Vehicle Information System and Networks  RTID  Regional Transportation Investment District
DCE  Documented Categorical Exclusion (NEPA)  RTIP  Regional Transportation Improvement Program
DD  Design Decisions  RTPO  Regional Transportation Planning Organization
DE  Design exception  RV  Recreational vehicle
DDHV  Directional design hour volume  R/W  Right of way
DDP  Design Documentation Package  SEPA  [Washington] State Environmental Policy Act
DDV  Design hourly volume  SIMMS  Signal Maintenance Management System
DNS  Determination of Nonsignificance (SEPA)  SOV  Single-occupant vehicle
DS  Determination of Significance (SEPA)  SRA  Safety rest area
DVI  Design Variance Inventory  STIP  Statewide Transportation Improvement Program
DVIS  Design Variance Inventory System  STP  Surface Transportation Program
EA  Environmental Assessment (NEPA)  TIP  Transportation Improvement Program
EC  Environmental Classification Summary  TMA  Transportation Management Area
E&EP  Environmental & Engineering Programs Division  TMA  Transportation Management Area
EI  Environmental Impact Statement  TMP  Transportation management plan
ERS  Environmental Review Summary  TRIPS  Transportation Information and Planning Support
EU  Evaluate upgrade  TWLTL  Two-way left-turn lane
FAST  Freight Action Strategy  UPO  [Central Puget Sound] Urban Planning Office
FGTS  Freight and Goods Transportation System  US  United States Code
FHWA  Federal Highway Administration  VE  Value engineering
FONSI  Finding of No Significant Impact (NEPA)  VECP  Value Engineering Change Proposal
FTA  Federal Transit Administration  VIC  Visitor Information Center
GIS  Geographic Information System  VPH  Vehicles per hour
GLO  General Land Office  WAC  Washington Administrative Code
GMA  Growth Management Act  WIM  Weigh in motion
HCP  Highway Construction Program  WSDOT  Washington State Department of Transportation
HMA  Hot mix asphalt  WSPMS  Washington State Pavement Management System
HOT  High-occupancy toll  WTP  Washington Transportation Plan
HOV  High-occupancy vehicle
HQ  WSDOT’s Headquarters in Olympia

### ADA / Pedestrian Terms

**Note:** This grouping of terms is used primarily in Chapters 1510 and 1515.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>accessible</td>
<td>Usable by persons with disabilities (ADA compliant).</td>
</tr>
<tr>
<td>accessible pedestrian signal (APS)</td>
<td>A device that communicates information about the “WALK” phase in audible and vibrotactile (vibrating surface that communicates information through touch, located on the accessible pedestrian signal button) formats.</td>
</tr>
<tr>
<td>accessible route</td>
<td>See pedestrian access route.</td>
</tr>
<tr>
<td>ADA</td>
<td>An abbreviation for the Americans with Disabilities Act of 1990. The ADA is a civil rights law that identifies and prohibits discrimination based on disability. Title II of the ADA requires public entities to design new pedestrian facilities or alter existing pedestrian facilities to be accessible to and usable by people with disabilities.</td>
</tr>
<tr>
<td>alternate pedestrian access route</td>
<td>A temporary accessible route to be used when the existing pedestrian access route is blocked by construction, alteration, maintenance, or other temporary condition(s).</td>
</tr>
<tr>
<td>alteration</td>
<td>A change to a facility in the public right of way that affects or could affect access, circulation, or use. Alterations include, but are not limited to: renovation; rehabilitation; reconstruction; historic restoration; resurfacing of circulation paths or vehicular ways; or changes or rearrangement of structural parts or elements of a facility. Alterations do not include: Spot pavement repair; liquid-asphalt sealing, chip seal (bituminous surface treatment), or crack sealing; or lane restriping that does not alter the usability of the shoulder.</td>
</tr>
<tr>
<td>buffer</td>
<td>A space measured from the back of the curb to the edge of the sidewalk that could be treated with plantings or alternate pavement, or be used for needs such as drainage treatment or utility placement.</td>
</tr>
<tr>
<td>clear width</td>
<td>The unobstructed width within a pedestrian circulation path. The clear width within a pedestrian circulation path must meet the accessibility criteria for a pedestrian access route.</td>
</tr>
<tr>
<td>construction impact zone</td>
<td>The area in which an alteration to an existing facility takes place (also known as the project footprint). If a crosswalk (marked or unmarked) will be reconstructed, paved (overlay or inlay), or otherwise altered as part of a project, then the curb ramps that serve that crosswalk are within the construction impact zone.</td>
</tr>
<tr>
<td>counter slope</td>
<td>The slope of the gutter or roadway at the foot of a curb ramp or landing where it connects to the roadway, measured along the axis of the running slope extended.</td>
</tr>
<tr>
<td>cross slope</td>
<td>The slope measured perpendicular to the direction of travel.</td>
</tr>
<tr>
<td>crosswalk</td>
<td>A marked or unmarked pedestrian crossing, typically at an intersection, that connects the pedestrian access routes on opposite sides of a roadway. A crosswalk must meet accessibility criteria.</td>
</tr>
</tbody>
</table>
### Glossary

#### ADA / Pedestrian Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
</table>
| A crosswalk | Also defined as:  
  - “...the portion of the roadway between the intersection area and a prolongation or connection of the farthest sidewalk line or in the event there are no sidewalks then between the intersection area and a line ten feet therefrom, except as modified by a marked crosswalk” ([RCW 46.04.160](https://app.leg.wa.gov/statutes/title46/section4604160)).  
  - “(a) That part of a roadway at an intersection included within the connections of the lateral lines of the sidewalks on opposite sides of the highway measured from the curbs or in the absence of curbs, from the edges of the traversable roadway, and in the absence of a sidewalk on one side of the roadway, the part of the roadway included within the extension of the lateral lines of the sidewalk at right angles to the center line; (b) any portion of a roadway at an intersection or elsewhere distinctly indicated as a pedestrian crossing by lines on the surface, which might be supplemented by contrasting pavement texture, style, or color” ([MUTCD](https://www.mutcd.org/), 2003; *Guide for the Planning, Design, and Operation of Pedestrian Facilities*, AASHTO, 2004). |
| curb extension | A curb and sidewalk bulge or extension out into the parking lane used to decrease the length of a pedestrian crossing and increase visibility for the pedestrian and driver. |
| curb ramp | A combined ramp and landing to accomplish a change in level at a curb. This element provides street and sidewalk access to pedestrians with mobility impairments.  
  - parallel curb ramp | A curb ramp design where the sidewalk slopes down to a landing at road level with the running slope of the ramp in line with the direction of sidewalk travel.  
  - perpendicular curb ramp | A curb ramp design where the ramp path is perpendicular to the curb and meets the gutter grade break at a right angle. |
| detectable warning surface | A tactile surface feature of truncated dome material built into or applied to the walking surface to alert persons with visual impairments of vehicular ways. Federal yellow is the color used on WSDOT projects to achieve visual contrast. Colors other than federal yellow that meet the light-on-dark/dark-on-light requirement may be used on projects where cities have jurisdiction. (Detectable warning surfaces are detailed in the [Standard Plans](https://www.wsdot.wa.gov/design/standard-plan-manuals/standard-plans).) |
| flangeway gap | The gap for the train wheel at a railroad crossing. The space between the inner edge of a rail and the pedestrian crossing surface. |
| grade break | The intersection of two adjacent surface planes of different grade. |
| landing | A level paved area, within or at the top and bottom of a stair or ramp, designed to provide turning and maneuvering space for wheelchair users and as a resting place for pedestrians. |
| maximum extent feasible (MEF) | From the U.S. Department of Justice, [28 CFR Part 36.402](https://www.justice.gov/crt/title-iii), Alterations. The phrase “to the maximum extent feasible” applies to “the occasional case where the nature of an existing facility makes it virtually impossible to comply fully with applicable accessibility standards through a planned alteration.” This phrase also refers to a stand-alone piece of design documentation that WSDOT uses to record its reasons for not being able to achieve full ADA compliance in alteration projects (called a Maximum Extent Feasible document). |
| midblock pedestrian crossing | A marked pedestrian crossing located between intersections. |
### Glossary

#### ADA / Pedestrian Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>passenger loading zone</strong></td>
<td>An area provided for pedestrians to board/disembark a vehicle.</td>
</tr>
<tr>
<td><strong>pedestrian</strong></td>
<td>Any person afoot or using a wheelchair (manual or motorized) or means of conveyance (other than a bicycle) propelled by human power, such as skates or a skateboard.</td>
</tr>
<tr>
<td><strong>pedestrian access route (PAR)</strong></td>
<td>A continuous, unobstructed walkway within a pedestrian circulation path that provides accessibility. Pedestrian access routes consist of one or more of the following pedestrian facilities: walkways/sidewalks, curb ramps (excluding flares), landings, crosswalks, pedestrian overpasses/underpasses, access ramps, elevators, and platform lifts. Note: Not all transportation facilities need to accommodate pedestrians. However, those that do accommodate pedestrians need to have an accessible route.</td>
</tr>
<tr>
<td><strong>pedestrian circulation path</strong></td>
<td>A prepared exterior or interior way of passage provided for pedestrian travel. Includes independent walkways, shared-use paths, sidewalks, and other types of pedestrian facilities. All pedestrian circulation paths are required to contain a continuous pedestrian access route that connects to all adjacent pedestrian facilities, elements, and spaces that are required to be accessible.</td>
</tr>
<tr>
<td><strong>pedestrian facilities</strong></td>
<td>Walkways such as sidewalks, walking and hiking trails, shared-use paths, pedestrian grade separations, crosswalks, and other improvements provided for the benefit of pedestrian travel. Pedestrian facilities are intended to be accessible routes.</td>
</tr>
<tr>
<td><strong>pedestrian overpass or underpass</strong></td>
<td>A grade-separated pedestrian facility, typically a bridge or tunnel structure over or under a major highway or railroad that allows pedestrians to cross.</td>
</tr>
<tr>
<td><strong>pedestrian refuge island</strong></td>
<td>An island in the roadway that physically separates the directional flow of traffic, provides pedestrians with a place of refuge, and reduces the crossing distance. Note: Islands with cut-through paths are more accessible to persons with disabilities than are raised islands with curb ramps.</td>
</tr>
<tr>
<td><strong>pedestrian signal</strong></td>
<td>An adaptation of a conventional traffic signal installed at established pedestrian crossings. It is used to provide a protected phase for pedestrians by terminating the conflicting vehicular movements to allow for pedestrian crossings.</td>
</tr>
<tr>
<td><strong>person with disability</strong></td>
<td>An individual who has an impairment, including a mobility, sensory, or cognitive impairment, that results in a functional limitation in access to and use of a building or facility.</td>
</tr>
<tr>
<td><strong>raised median</strong></td>
<td>A raised island in the center of a road used to restrict vehicle left turns and side street access. Note: Islands with cut-through paths are more accessible to persons with disabilities than are raised islands with curb ramps.</td>
</tr>
<tr>
<td><strong>ramp</strong></td>
<td>A walking surface with a running slope steeper than 20H:1V (5%).</td>
</tr>
<tr>
<td><strong>running slope</strong></td>
<td>A slope measured in the direction of travel, normally expressed as a percent.</td>
</tr>
<tr>
<td><strong>sidewalk</strong></td>
<td>A walkway along a highway, road, or street intended for use by pedestrians.</td>
</tr>
<tr>
<td><strong>site</strong></td>
<td>A parcel of land bounded by a property line or a designated portion of a public right of way.</td>
</tr>
<tr>
<td><strong>street furniture</strong></td>
<td>Sidewalk equipment or furnishings, including garbage cans, benches, parking meters, and telephone booths.</td>
</tr>
</tbody>
</table>
### ADA / Pedestrian Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>traffic calming</td>
<td>Design techniques that have been shown to reduce traffic speeds and unsafe maneuvers. These techniques can be stand-alone or used in combination, and they include lane narrowing, curb extensions, surface variations, and visual clues in the vertical plane.</td>
</tr>
<tr>
<td>transitional segments</td>
<td>Segments of a pedestrian circulation path that blend between existing undisturbed pedestrian facilities and newly altered pedestrian facilities. Use of transitional segments may permit the work of the alteration to more nearly meet the new construction standards. At a later time, when other segments of the pedestrian circulation path are altered, the noncomplying transitional segments can be removed and replaced with pedestrian facilities that meet the accessibility criteria.</td>
</tr>
<tr>
<td>universal access</td>
<td>Access for all persons regardless of ability or stature.</td>
</tr>
<tr>
<td>walk interval</td>
<td>That phase of a traffic signal cycle during which the pedestrian is to begin crossing, typically indicated by a WALK message or the walking person symbol and its audible equivalent.</td>
</tr>
<tr>
<td>walkway</td>
<td>The continuous portion of the pedestrian access route that is connected to street crossings by curb ramps.</td>
</tr>
</tbody>
</table>
Main Glossary of Terms

A B C D E F G H I J K L M N O P Q R S T U V W Y

A

**access**  A means of entering or leaving a public road, street, or highway with respect to abutting property or another public road, street, or highway.

**access break**  Any point from inside or outside the state limited access right of way limited access hachures that crosses over, under, or physically through the plane of the limited access, is an access break or “break in access,” including, but not limited to, locked gates and temporary construction access breaks.

**access connection**  An access point, other than a public road/street, that permits access to or from a managed access highway on the state highway system.

**access connection permit**  A written authorization issued by the permitting authority for a specifically designed access connection to a managed access highway at a specific location; for a specific type and intensity of property use; and for a specific volume of traffic for the access connection based on the final stage of the development of the applicant’s property. The actual form used for this authorization is determined by the permitting authority.

**access control**  The limiting and regulating of public and private access to Washington State’s highways, as required by state law.

**Access Control Tracking System Limited Access and Managed Access Master Plan**  A database list, related to highway route numbers and mileposts, that identifies either the level of limited access or the class of managed access: [www.wsdot.wa.gov/design/accessandhearings](http://www.wsdot.wa.gov/design/accessandhearings)

**access deviation**  A deviation (see Chapter 300) that authorizes deferring or staging acquisition of limited access control, falling short of a 300-foot requirement, or allowing an existing access point to stay within 130 feet of an intersection on a limited access highway. Approval by the Director & State Design Engineer, Development Division, is required (see Chapter 530).

**access hearing plan**  A limited access plan prepared for presentation at an access hearing.

**access point**  Any point that allows private or public entrance to or exit from the traveled way of a state highway, including “locked gate” access and maintenance access points.

**access point revision**  A new access point or a revision of an existing interchange/intersection configuration. Locked gates and temporary construction breaks are also access point revisions.

**access point spacing**  On a managed access highway, the distance between two adjacent access points on one side of the highway, measured along the edge of the traveled way from one access point to the next (see also corner clearance).

**access report plan**  A limited access plan prepared for presentation to local governmental officials at preliminary meetings before preparation of the access hearing plan.

**access rights**  Property rights that allow an abutting property owner to enter and leave the public roadway system.

**adaptive lighting system**  A lighting system with a control system connected, allowing for dimming, on/off operation by time of night, and independent scheduling of individual lights for select hours of operation during nighttime hours.
affidavit of publication  A notarized written declaration stating that a notice of hearing (or notice of opportunity for a hearing) was published in the legally prescribed manner.

affidavit of service by mailing  A notarized written declaration stating that the limited access hearing packet was mailed at least 15 days prior to the hearing and entered into the record at the hearing.

alternatives  Possible solutions to accomplish a defined purpose and need. These include local and state transportation system mode and design options, locations, and travel demand management and transportation system management-type improvements such as ramp metering, mass transit, and high-occupancy vehicle (HOV) facilities.

ancillary services  Those secondary services, also considered amenities, provided at safety rest areas that include, but are not limited to, vending machines, picnic areas, interpretive signing, telephones, recreational vehicle (RV) sanitary disposal facilities, trails, scenic viewpoints, commercial and public information displays, and visitor information centers.

annual average daily traffic (AADT)  The total volume of traffic passing a point or segment of a highway facility in both directions for one year divided by the number of days in the year.

annual daily traffic (ADT)  The volume of traffic passing a point or segment of a highway, in both directions, during a period of time, divided by the number of days in the period, and factored to represent an estimate of traffic volume for an average day of the year.

application for an access connection  An application provided by the permitting authority to be completed by the applicant for access to a managed access highway.

approach  An access point, other than a public road/street, that allows access to or from a limited access highway on the state highway system.

approach and access connection  These terms are listed under the specific access section to which they apply. The first section below is for limited access highways and uses the term approach. The second section below is for managed access highways and uses the term access connection. Approaches and access connections include any ability to leave or enter a highway right of way other than at an intersection with another road or street.

(a) limited access highways: approach  An access point, other than a public road/street, that allows access to or from a limited access highway on the state highway system. There are five types of approaches to limited access highways that are allowed:

  • Type A  An off and on approach in a legal manner, not to exceed 30 feet in width, for the sole purpose of serving a single-family residence. It may be reserved by the abutting owner for specified use at a point satisfactory to the state at or between designated highway stations. This approach type is allowed on partial and modified control limited access highways.

  • Type B  An off and on approach in a legal manner, not to exceed 50 feet in width, for use necessary to the normal operation of a farm, but not for retail marketing. It may be reserved by the abutting owner for specified use at a point satisfactory to the state at or between designated highway stations. This approach type is allowed on partial and modified control limited access highways. This approach type may be used for wind farms when use of the approach is limited to those vehicles necessary to construct and maintain the farm for use in harvesting wind energy.
• **Type C** An off and on approach in a legal manner, for a special purpose and width to be agreed upon. It may be specified at a point satisfactory to the state at or between designated highway stations. This approach type is allowed on partial and modified control limited access highways and on full control limited access highways where no other reasonable means of access exists, as solely determined by the department.

• **Type D** An off and on approach in a legal manner, not to exceed 50 feet in width, for use necessary to the normal operation of a commercial establishment. It may be specified at a point satisfactory to the state at or between designated highway stations. This approach type is allowed only on modified control limited access highways.

• **Type E** This type is no longer allowed to be constructed because of the requirements that there be only one access point per parcel on a limited access state highway.

• **Type F** An off and on approach in a legal manner, not to exceed 30 feet in width, for the sole purpose of serving a wireless communication site. It may be specified at a point satisfactory to the state at or between designated highway stations. This approach type is allowed only on partial control limited access highways. (See WAC 468-58-080(vi) for further restrictions.)

(b) **managed access highways: access connection** An access point, other than a public road/street, that permits access to or from a managed access highway on the state highway system. There are five types of access connection permits:

• **conforming access connection** A connection to a managed access highway that meets current WAC and WSDOT location, spacing, and design criteria.

• **grandfathered access connection** Any connection to the state highway system that was in existence and in active use on July 1, 1990, and has not had a significant change in use.

• **joint-use access connection** A single connection to a managed access highway that serves two or more properties.

• **nonconforming access connection** A connection to a managed access highway that does not meet current WSDOT location, spacing, or design criteria, pending availability of a future conforming access connection.

• **variance access connection** A connection to a managed access highway at a location not normally allowed by current WSDOT criteria.

(c) **managed access connection category** There are four access connection permit categories for managed access connections to state highways: Category I, Category II, Category III, and Category IV (see Chapter 540).

**approach design speed** The design speed of the roadway leading into the roundabout.

**approach lanes** The lane or set of lanes for traffic approaching the roundabout (see Chapter 1320).

**area of influence** The area that will be directly impacted by the proposed action: freeway main line, ramps, crossroads, immediate off-system intersections, and state and local roadway systems.

**articulated bus** A two-section bus that is permanently connected at a joint.
**auxiliary aids and services**  (1) Qualified interpreters, notetakers, transcription services, written materials, telephone handset amplifiers, assistive listening devices, assistive listening systems, telephones compatible with hearing aids, open and closed captioning, telecommunications devices for deaf persons (TDDs), videotext displays, or other effective methods for making aurally delivered materials available to individuals with hearing limitations; (2) Qualified readers, taped texts, audio recordings, Brailled materials, large print materials, or other effective methods for making visually delivered materials available to individuals with visual impairments; (3) Acquisition or modification of equipment or devices; (4) Other similar services and actions; and (5) Providing and disseminating information, written materials, and notices in languages other than English, where appropriate.

**auxiliary lane**  The portion of the roadway adjoining the through lanes for parking, speed change, turning, storage for turning, weaving, truck climbing, and other purposes supplementary to through-traffic movement.

**average daily traffic (ADT)**  The total volume during a given time period (in whole days): greater than one day and less than one year, divided by the number of days in that time period.

**average light level**  The average of all light intensities within the design area.

**average weekday vehicle trip ends (AWDVTE)**  The estimated total of all trips entering plus all trips leaving a road approach on a weekday for the final stage of development of the property served by the road approach.

**B**

**backslope**  A sideslope that goes up as the distance increases from the roadway (cut slopes).

**barrier terminal**  A crash-tested end treatment for longitudinal barriers that is designed to reduce the potential for spearing, vaulting, rolling, or excessive deceleration of impacting vehicles from either direction of travel. Barrier terminals include applicable anchorage.

**baseline**  The existing transportation system configuration and traffic volumes for a specific year against which to compare possible alternative solutions.

**basic number of lanes**  The minimum number of general purpose lanes designated and maintained over a significant length of highway.

**benefit cost (b/c) ratio**  A method for prioritizing highway Improvement projects. The b/c ratio is determined by dividing measurable benefits (based on improvement in performance) by measurable costs for a specific time period.

**bicycle**  Any device propelled solely by human power upon which a person or persons may ride, having two tandem wheels, either of which is 16 inches or more in diameter, or three wheels, any one of which is more than 20 inches in diameter.

**bicycle route**  A system of facilities that is used or has a high potential for use by bicyclists or that is designated as such by the jurisdiction having the authority. A series of bicycle facilities may be combined to establish a continuous route and may consist of any or all types of bicycle facilities.

**bike lane**  A portion of a highway or street identified by signs and pavement markings as reserved for bicycle use.
break  See access break.

bridge project  A bridge project shall include any project where the primary purpose is to construct, reconstruct, rehabilitate, resurface, or restore a bridge (23 CFR 636.103). Notes:

- A VE analysis must be conducted on all federally funded bridge projects with an estimated total cost of $20 million or more.
- WSDOT's policy is also to conduct a VE analysis for any bridge project with an estimated total cost of $20 million or more.

buffer-separated HOV lane  An HOV lane that is separated from the adjacent same direction general-purpose freeway lanes by a designated buffer.

bus  A rubber-tired motor vehicle used for transportation, designed to carry more than ten passengers.

business access transit (BAT) lanes  A transit lane that allows use by other vehicles to access abutting businesses.

bus pullout  A bus stop with parking area designed to allow transit vehicles to stop wholly off the roadway.

bus rapid transit (BRT)  An express rubber tired transit system operating predominantly in roadway managed lanes. It is generally characterized by separate roadway or buffer-separated HOV lanes, HOV direct access ramps, and a high-occupancy designation (3+ or higher).

bus shelter  A facility that provides seating and protection from the weather for passengers waiting for a bus.

bus stop  A place designated for transit vehicles to stop and load or unload passengers.

C

capacity  The maximum sustainable flow rate at which vehicles or persons can reasonably be expected to traverse a point or uniform segment of a lane or roadway during a specified time period under given roadway, geometric, traffic, environmental, and control conditions. Capacity is usually expressed as vehicles per hour (vph), passenger cars per hour (pcph), or persons per hour (pph).

Capital Improvement and Preservation Program (CIPP)  WSDOT's program of projects developed each biennium that delivers capital investments in highway, marine, and rail facilities that have been funded in part or in whole by the state Legislature. The CIPP is submitted to the Governor and, ultimately, by the Governor to the Legislature.

Capital Program Management System (CPMS)  A computer database used to develop and manage the highway and marine construction programs. The CPMS allows users to establish and maintain project data and is used to manage and deliver statewide construction programs.

capture trips  Trips that do not enter or leave the traveled ways of a project's boundary within a mixed-use development.

carpool/vanpool  A group of people who share the use and cost of a car or van for transportation on a regular basis.

Categorical Exclusion (CE) (NEPA) or Categorical Exemption (CE) (SEPA)  Actions that do not individually or cumulatively have a significant effect on the environment.
**Glossary**

**central island**  The area of the roundabout, including the truck apron, surrounded by the circulating roadway.

**central island diameter**  The diameter of the central island, including the truck apron (see Chapter 1320).

**circulating lane**  A lane used by vehicles circulating in the roundabout.

**circulating roadway**  The traveled lane(s) adjacent to the central island and outside the truck apron, including the entire 360° circumference of the circle.

**circulating roadway width**  The total width of the circulating lane(s) measured from inscribed circle to the central island (see Chapter 1320).

**clear run-out area**  The area beyond the toe of a nonrecoverable slope available for use by an errant vehicle.

**clear zone**  The total roadside border area, available for use by errant vehicles, starting at the edge of the traveled way and oriented from the outside or inside shoulder (in median applications) as applicable. This area may consist of a shoulder, a recoverable slope, a nonrecoverable slope, and/or a clear run-out area. The clear zone cannot contain a critical fill slope, fixed objects, or water deeper than 2 feet.

**climbing lane**  An auxiliary lane used for the diversion of slow traffic from the through lane.

**coefficient of retroreflection (Rl)**  A measure of retroreflection.

**collector-distributor road (C-D road)**  A parallel roadway designed to remove weaving from the main line and reduce the number of main line entrances and exits.

**collector system**  Routes that primarily serve the more important intercounty, intracounty, and intraurban travel corridors; collect traffic from the system of local access roads and convey it to the arterial system; and on which, regardless of traffic volume, the predominant travel distances are shorter than on arterial routes (RCW 47.05.021).

**collision rate**  Collisions per one million vehicle miles traveled and fatal rates per one hundred million vehicle miles.

**Commercial Vehicle Information Systems and Networks (CVISN)**  A network that links intelligent transportation systems (ITS) to share information on commercial vehicles. When in operation at a weigh site, it can enable commercial vehicles to clear the facility without stopping.

**complex ramp alignment and grade**  The exit advisory speed is 35 mph or lower than the posted main line speed, or there is a 6% or greater change in grade from existing main line grade to the ramp grade.

**conflict**  An event involving two or more road users in which the action of one user causes the other user to make an evasive maneuver to avoid a collision.

**conflict point**  A point where traffic paths cross, merge, or diverge.

**connection**  See approach and access connection.

**consider**  To think carefully about, especially in order to make a decision. No backup documentation is required.
context sensitive solutions (CSS)  A collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic, and environmental resources while maintaining safety and mobility. CSS is an approach that considers the total context within which a transportation improvement project will exist.

contiguous parcels  Two or more pieces of real property, under the same ownership, with one or more boundaries that touch and have similarity of use.

continuous load  The electrical load on a circuit that lasts for a duration of three or more hours on any day.

controlled releasing terminal (CRT) post  A standard-length guardrail post that has two holes drilled through it so it might break away when struck.

conventional traffic signal  A permanent or temporary installation providing alternating right of way assignments for conflicting traffic movements. At least two identical displays are required for the predominant movement on each approach.

corner clearance  On a managed access highway, the distance from an intersection of a public road or street to the nearest access connection along the same side of the highway. The minimum corner clearance distance (see Chapter 540) is measured from the closest edge of the intersecting road or street to the closest edge of the traveled way of the access connection, measured along one side of the traveled way (through lanes) (see also access point spacing).

corridor analysis  Documentation that justifies a change in design level and/or decisions to include, exclude, or modify design elements. A corridor analysis addresses needs and design solutions within a substantial segment of roadway. A corridor analysis is useful beyond a specific project contained within it, and it is an appropriate document to address design speed.

court reporter  A person with a license to write and issue official accounts of judicial or legislative proceedings.

crash-accepted device  A feature that has been proven acceptable for use under specified conditions, either through crash testing or in-service performance.

critical fill slope  A slope on which a vehicle is likely to overturn. Slopes steeper than 3H:1V are considered critical fill slopes.

crossroad  The minor roadway at an intersection. At a stop-controlled intersection, the crossroad has the stop.

curb section  A roadway cross section with curb and sidewalk.

D

decision sight distance  The distance needed for a driver to detect an unexpected or difficult-to-perceive condition, recognize the condition, select an appropriate maneuver, and complete the maneuver based on design conditions and design speed.

deflection  (in respect to roundabouts)  The change in the path of a vehicle imposed by the geometric features of a roundabout resulting in a slowing of vehicles.
**Glossary**

*delineation* Any method of defining the roadway operating area for the driver.

*departure lanes* The lane or set of lanes for traffic leaving the roundabout (see Chapter 1320).

**Design Approval** Documented approval of the design criteria, which becomes part of the Design Documentation Package. This approval is an endorsement of the design criteria by the designated representative of the approving organization as shown in Chapter 300.

*design-bid-build* The project delivery method where design and construction are sequential steps in the project development process (23 CFR 636.103).

*design-build contract* An agreement that provides for design and construction of improvements by a consultant/contractor team. The term encompasses design-build-maintain, design-build-operate, design-build-finance, and other contracts that include services in addition to design and construction. Franchise and concession agreements are included in the term if they provide for the franchisee or concessionaire to develop the project that is the subject of the agreement (23 CFR 636.103).

*design-builder* The firm, partnership, joint venture, or organization that contracts with WSDOT to perform the work.

**Design Clear Zone** The minimum clear zone target value used in highway design.

**Design Documentation Package (DDP)** See Project File.

*designer* This term applies to WSDOT design personnel. Wherever “designer” appears in this manual, design-build personnel shall deem it to mean: Engineer of Record, Design Quality Assurance Manager, design-builder, or any other term used in the design-build contract to indicate design-build personnel responsible for the design elements of a design-build project, depending on the context of information being conveyed.

*design exception (DE)* A method to document a geometric feature that has been preauthorized to exclude improvement of an existing design element for various types of projects, as designated in the design matrices (see Chapter 1100). A DE designation indicates that the design element is normally outside the scope of the project type (see Chapter 300). Some design exceptions require justification.

*design hourly volume (DHV)* Computed by taking the annual average daily traffic times the K-factor. It can only be accurately determined in locations where there is a permanent traffic recording device active 365 days of the year. It correlates to the peak hour (see peak hour), but it is not equivalent. In some circumstances, it is necessary to use the peak hour data instead of DHV because peak hour can be collected using portable traffic recorders.

*design speed* The speed used to determine the various geometric design features of the roadway.

*design variance* A recorded decision to differ from the design level specified in the Design Manual, such as an evaluate upgrade (EU) not upgraded, a DE, or a deviation. EUs leading to an upgrade are documented but are not considered to be variances. A project or corridor analysis may also constitute a design variance if that analysis leads to a decision to use a design level or design classification that differs from what the Design Manual specifies for the project type.

**Design Variance Inventory (DVI)** A list of design elements that will not be improved in accordance with the Design Manual criteria designated for the project. Only approved variances should be included on this list.
**Design Variance Inventory System (DVIS)** A database application developed to generate the DVI form. The DVIS also provides query functions, giving designers an opportunity to search for previously granted variances. The DVIS was started in the early 2000s and does not identify prior variances. The *Design Manual* is constantly being refined and guidelines change over time. What may have been a design variance previously may not be a deviation today. Previously approved design variances do not carry forward and must be revisited as described in Chapter 300. The DVIS database is intended for internal WSDOT use only, and WSDOT staff access it from the left margin of this website:

http://wwwi.wsdot.wa.gov/design/

**design vehicle** A vehicle used to establish the intersection geometry.

**design year** 20 years from the beginning of construction.

**desirable** Design criteria that are recommended for inclusion in the design.

**Determination of Nonsignificance (DNS) (SEPA)** The written decision by the Regional Administrator that a proposal will not have a significant impact and no EIS is required.

**Determination of Significance (DS) (SEPA)** A written decision by the Regional Administrator that a proposal could have a significant adverse impact and an EIS is required.

**deviation** A documented decision granting approval at project-specific locations to differ from the design level specified in the *Design Manual* (see Chapters 1100 and 300).

**directional design hour volume (DDHV)** The traffic volume for the design hour in the peak direction of flow, in vehicles per hour. For example, if during the design hour, 60% of the vehicles traveled eastbound and 40% traveled westbound, then the DDHV for the eastbound direction would be the DHV x 0.60.

**divided multilane** A roadway with two or more through lanes in each direction and a median that physically or legally prohibits left turns, except at designated locations.

**document** (verb) The act of including a short note to the Design Documentation Package that explains a design decision.

**double-lane roundabout** A roundabout with a two-lane circulating roadway and one or more entry or exit legs with two lanes.

**driveway** A vehicular access point that provides access to or from a public roadway.

**drop and ride** An area of a park & ride lot or other multimodal facility where patrons are dropped off or picked up by private auto or taxi.

**durability** A measure of a traffic line’s resistance to the wear and deterioration associated with abrasion and chipping.

**E**

**easement** A documented right, as a right of way, to use the property of another for designated purposes.

**element** An architectural or mechanical component or design feature of a space, site, or public right of way.
**emergency escape ramp**  A roadway leaving the main roadway designed for the purpose of slowing and stopping out-of-control vehicles away from the main traffic stream.

**emergency vehicle signal**  A special adaptation of a conventional traffic signal installed to allow for the safe movement of authorized emergency vehicles. Usually, this type of signal is installed on the highway at the entrance into a fire station or other emergency facility. The signal ensures protected entrance onto the highway for the emergency vehicle. When not providing for this movement, the signal either operates continuously (consistent with the requirements for a conventional traffic signal) or displays continuous green, which is allowed at non-intersection locations only. At least two identical displays are required per approach.

**enforcement observation point**  A place where a law enforcement officer may park and observe traffic.

**entry angle**  The angle between the entry roadway and the circulating roadway measured at the yield point (see Chapter 1320).

**entry curve**  The curve of the left edge of the roadway that leads into the circulating roadway (see Chapter 1320).

**entry width**  The width of an entrance leg at the inscribed circle measured perpendicular to travel (see Chapter 1320).

**Environmental Assessment (EA) (NEPA)**  A document prepared for federally funded, permitted, or licensed projects that are not categorical exclusions (CE), but do not appear to be of sufficient magnitude to require an EIS. The EA provides enough analysis to determine whether an EIS or a FONSI should be prepared.

**Environmental Classification Summary (ECS)**  A form used to evaluate and classify projects for the construction program. The ECS supports a decision of a documented CE.

**Environmental Impact Statement (EIS)**  A detailed written statement of a proposed course of action, project alternatives, and possible impacts of the proposal.

**Environmental Review Summary (ERS)** (see Project Summary)  Part of the Project Summary document, the ERS identifies environmental permits and approvals. It is prepared in the region and is required for Design Approval.

**evaluate upgrade (EU)**  A decision-making process to determine whether or not to upgrade an existing design element as designated in the design matrices. Documentation is required (see Chapter 300).

**exit curve**  The curve of the left edge of the roadway that leads out of the circulating roadway (see Chapter 1320).

**exit width**  The width of an exit leg at the inscribed circle (see Chapter 1320).

**expressway**  A divided highway that has a minimum of two lanes in each direction for the exclusive use of traffic and that may or may not have grade separations at intersections.

**extrude**  A procedure for applying marking material to a surface by forcing the material through a die to give it a certain shape.
facility  All or any portion of buildings, structures, improvements, elements, and pedestrian or vehicular routes located in a public right of way.

feature  A component of a pedestrian access route, such as a curb ramp, driveway, crosswalk, or sidewalk.

Federal Highway Administration (FHWA)  The division of the U.S. Department of Transportation with jurisdiction over the use of federal transportation funds for state highway and local road and street improvements.

Federal Transit Administration (FTA)  The division of the U.S. Department of Transportation with jurisdiction over the use of federal funds for financial assistance to develop new transit systems and improve, maintain, and operate existing systems.

feeder service  Bus service that provides connections with other bus or rail services.

final design  Any design activities following preliminary design; expressly includes the preparation of final construction plans and detailed specifications for the performance of construction work (23 CFR 636.103). Final design is also defined by the fact that it occurs after NEPA/SEPA approval has been obtained.

Finding of No Significant Impact (FONSI) (NEPA)  A federal document indicating that a proposal will not significantly affect the environment and an EIS is not required.

findings and order  A document containing the findings and conclusions of a limited access hearing approved by the Assistant Secretary, Engineering & Regional Operations (see Chapter 210).

findings and order plan  A limited access plan, prepared after a limited access hearing, which is based on the hearing record.

fixed feature (object to be mitigated)  A fixed object, a side slope, or water that, when struck, can result in impact forces on a vehicle’s occupants that may result in injury or place the occupants in a situation that has a high likelihood of injury. A fixed feature can be either constructed or natural.

flare  The widening of the approach to the roundabout to increase capacity and facilitate natural vehicle paths.

flashing beacon assembly  Flashing beacons that are used only to supplement an appropriate warning or regulatory sign or marker. The displays consist of two alternating flashing yellow indications.

flyer stop  A transit stop inside the limited access boundaries.

footcandle (fc)  The illumination of a surface one square foot in area on which a flux of one lumen is uniformly distributed. One footcandle equals one lumen per square foot.

foreslope  A sideslope that goes down as the distance increases from the roadway (fill slopes and ditch inslopes).

freeway  A divided highway that has a minimum of two lanes in each direction for the exclusive use of traffic and with full control of access.

frontage road  An auxiliary road that is a local road or street located beside a highway for service to abutting property and adjacent areas and for control of access.
**functional classification**  The grouping of streets and highways according to the character of the service they are intended to provide.

**G**

**geocomposites**  Prefabricated edge drains, wall drains, and sheet drains that typically consist of a cuspated or dimpled polyethylene drainage core wrapped in a geotextile. The geotextile wrap keeps the core clean so that water can freely flow through the drainage core, which acts as a conduit. Prefabricated edge drains are used in place of shallow geotextile-wrapped trench drains at the edges of the roadway to provide subgrade and base drainage. Wall drains and sheet drains are typically placed between the back of the wall and the soil to drain the soil retained by the wall.

**Geographic Information System (GIS)**  A computerized geographic information system used to store, analyze, and map data. Data may be used with GIS if the data includes the Accumulated Route Mile (ARM) or State Route Milepost (SRMP) programs. Global Positioning System (GPS) technology provides a means of collecting data and is an alternative to ARM and SRMP. WSDOT's primary desktop tool to view and analyze GIS data is ArcGIS software. GIS is used to gather and analyze data to support the purpose and need as described in the Project Summary (http://wwwi.wsdot.wa.gov/gis/supportteam/default.asp).

**geogrids**  A polymer grid mat constructed either of coated yarns or a punched and stretched polymer sheet. Geogrids usually have high strength and stiffness and are used primarily for soil reinforcement.

**geomembranes**  Impervious polymer sheets that are typically used to line ponds or landfills. In some cases, geomembranes are placed over moisture-sensitive swelling clays to control moisture.

**geonets**  Similar to geogrids, but typically lighter weight and weaker, with smaller mesh openings. Geonets are used in light reinforcement applications or are combined with drainage geotextiles to form a drainage structure.

**geosynthetic erosion control**  The minimizing of surficial soil particle movement due to the flow of water over the surface of bare soil or due to the disturbance of soil caused by construction activities under or near bodies of water. This is the primary function of geotextiles used as silt fences or placed beneath riprap or other stones on soil slopes. Silt fences keep eroded soil particles on the construction site, whereas geotextiles placed beneath riprap or other stones on soil slopes prevent erosion from taking place at all. In general, the permanent erosion control methods described in Chapter 630 are only used where more natural means (like the use of biodegradable vegetation mats to establish vegetation to prevent erosion) are not feasible. These functions control some of the geosynthetic properties, such as apparent opening size (AOS) and permittivity, and in some cases load-strain characteristics. The application will also affect the geosynthetic installation conditions. These installation conditions influence the remaining geosynthetic properties needed, based on the survivability level required.

**geosynthetic filtration**  The passage of water through the geosynthetic relatively unimpeded (permeability or permittivity) without allowing passage of soil through the geosynthetic (retention). This is the primary function of geotextiles in underground drainage applications.

**geosynthetic survivability**  The ability of the geosynthetic to resist installation conditions without significant damage, such that the geosynthetic can function as intended. Survivability affects the strength properties of the geosynthetic required.
**geotextiles (nonwoven)** A sheet of continuous or staple fibers entangled randomly into a felt for needle-punched nonwovens and pressed and melted together at the fiber contact points for heat-bonded nonwovens. Nonwoven geotextiles tend to have low-to-medium strength and stiffness with high elongation at failure and relatively good drainage characteristics. The high elongation characteristic gives them superior ability to deform around stones and sticks.

**geotextiles (woven)** Slit polymer tapes, monofilament fibers, fibrillated yarns, or multifilament yarns simply woven into a mat. Woven geotextiles generally have relatively high strength and stiffness and, except for the monofilament wovens, relatively poor drainage characteristics.

**glass beads** Small glass spheres used in highway pavement markings to provide the necessary retroreflectivity.

**gore** The area downstream from the intersection of the shoulders of the main line and exit ramp. Although generally referring to the area between a main line and an exit ramp, the term may also be used to refer to the area between a main line and an entrance ramp.

**gore nose** At an exit ramp, the point at the end of the gore area where the paved shoulders of the main line and the ramp separate (see Chapter 1360) or the beginning of traffic barrier, not including any impact attenuator. Also, the similar point at an entrance ramp.

**H**

**hearing** An assembly to which the public is invited and at which participation is encouraged. Types of hearings include:

- **administrative appeal hearing** A formal process whereby a property owner may appeal WSDOT’s implementation of access management legislation. The appeal is heard by an administrative law judge (ALJ), who renders a decision. (See Chapter 540 for administrative appeal hearing procedures.)

- **combined hearing** A hearing held when there are public benefits to be gained by combining environmental, corridor, design, and/or limited access subjects.

- **corridor hearing** A formal or informal hearing that presents the corridor alternatives to the public for review and comment before a commitment is made to any one route or location. This type of hearing is beneficial for existing corridors with multiple Improvement projects programmed over a long duration.

- **design hearing** A formal or informal hearing that presents the design alternatives to the public for review and comment before the selection of a preferred alternative.

- **environmental hearing** A formal or informal hearing documenting that social, economic, and environmental impacts have been considered and that public opinion has been solicited.

- **formal hearing format** A hearing conducted by a moderator using a formal agenda, overseen by a hearing examiner, and recorded by a court reporter, as required by law. Limited access hearings require the use of the formal hearing format (see Chapter 210).

- **informal hearing format** A hearing where oral comments are recorded by a court reporter, as required by law. An informal hearing often uses the “open house” format (see Chapter 210). A formal agenda and participation by a hearing examiner are optional.

- **limited access hearing** A formal hearing that gives local public officials, owners of abutting properties, and other interested persons an opportunity to be heard about the limitation of access to the highway system.
**Glossary**

**hearing agenda** An outline of the actual public hearing elements, used with formal hearings. (See Chapter 210 for contents.)

**Hearing Coordinator** The Development Services & Access Manager within the HQ Access and Hearings Section: (360) 705-7251.

**hearing examiner** An administrative law judge from the Office of Administrative Hearings, or a WSDOT designee, appointed to moderate a hearing.

**hearing script** A written document of text to be presented orally by department representatives at a hearing.

**hearing summary** Documentation prepared by the region and approved by Headquarters that summarizes environmental, corridor, and design hearings. (See Chapter 210 for content requirements.)

**hearing transcript** A document prepared by the court reporter that transcribes verbatim all oral statements made during the hearing, including public comments. This document becomes part of the official hearing record.

**high-occupancy toll (HOT) lane** A managed lane that combines a high-occupancy vehicle lane and a toll lane.

**high-occupancy vehicle (HOV)** A vehicle that meets the occupancy requirements of the facility as authorized by WAC 468-510-010.

**high pavement type** Portland cement concrete pavement or hot mix asphalt (HMA) pavement on a treated base.

**high-speed roadway** A roadway with a posted speed of 45 mph or higher.

**highway** A general term denoting a street, road, or public way for the purpose of vehicular travel, including the entire area within the right of way.

**Highway Construction Program (HCP)** A comprehensive multiyear program of highway Improvement and Preservation projects selected by the Legislature.

**Highway System Plan (HSP)** A WSDOT planning document that addresses the state highway system element of the Washington Transportation Plan (WTP). The HSP defines the service objectives, action strategies, and costs to maintain, operate, preserve, and improve the state highway system for 20 years. The HSP is the starting point for the state highway element of the CIPP and the state Highway Construction Program. It is periodically updated to reflect completed work and changing transportation needs, policies, and revenues. It compares highway needs to revenues, describes the “constrained” costs of the highway programs, and provides details of conceptual solutions and performance in the improvement program.

**Highways of Statewide Significance (HSS)** Highways of Statewide Significance include interstate highways and other principal arterials that are needed to connect major communities in the state. The designation helps assist with the allocation and direction of funding. The HSS was mandated by the 1998 Legislature through enactment of House Bill 1487 and codified into RCW 47.06.140. In 1999, the Legislature passed House Joint Memorial 4006 requesting that WSDOT, with the assistance of Regional Transportation Planning Organizations, update the HSS at least every five years.

The HSS was designated by the Transportation Commission through Resolution #660 on January 21, 2004. The Legislature concurred and adopted the HSS, including a map and route list through Engrossed House Bill 1433 on March 31, 2004. In 2006, the Legislature adopted House Bill 3266, adding SR 169 to the route list of highways of statewide significance. In 2009, the Legislature adopted SB 5642, adding SR 164 to the route list of highways of statewide significance.
HOV direct access ramp  An on- or off-ramp exclusively for the use of HOVs that provides access between a freeway HOV lane and a street, transit support facility, or another freeway HOV lane without weaving across general-purpose lanes.

HOV facility  A priority treatment for HOVs.

I

impact attenuator system  A device that acts primarily to bring an errant vehicle to a stop at a deceleration rate tolerable to the vehicle’s occupants or to redirect the vehicle away from a fixed feature.

incorporated city or town  A city or town operating under RCW 35 or 35A.

inscribed circle  The outer edge of the circulating roadway.

inscribed circle diameter (ICD)  The diameter of the inscribed circle (see Chapter 1320).

intelligent transportation systems (ITS)  An integrated system of advanced sensor, computer, electronics, and communication technologies and management strategies, used to increase the safety and efficiency of the surface transportation system.

interchange  A system of interconnecting roadways, in conjunction with one or more grade separations, providing for the exchange of traffic between two or more intersecting highways or roadways.

Interchange Justification Report (IJR)  The document used to propose a revision to limited access freeways.

intermediate pavement type  Hot mix asphalt pavement on an untreated base.

intersection  An at-grade access point connecting a state highway with a road or street duly established as a public road or public street by the local governmental entity.

intersection angle  The angle between any two intersecting legs at the point the centerlines intersect.

intersection area  The area of the intersecting roadways bounded by the edge of traveled ways and the area of the adjacent roadways to the farthest point: (a) the end of the corner radii, (b) through any marked crosswalks adjacent to the intersection, (c) to the stop bar, or (d) 10 feet from the edge of shoulder of the intersecting roadway (see Chapter 1310).

intersection at grade  The general area where a roadway or ramp terminal is met or crossed at a common grade or elevation by another roadway.

  * four-leg intersection  An intersection formed by two crossing roadways.

  * split tee  A four-leg intersection with the crossroad intersecting the through roadway at two tee intersections offset by at least the width of the roadway.

  * tee (T) intersection  An intersection formed by two roadways where one roadway terminates at the point it meets a through roadway.

  * wye (Y) intersection  An intersection formed by three legs in the general form of a “Y” where the angle between two legs is less than 60°.

intersection control beacon  (also flashing beacon)  A secondary control device, generally suspended over the center of an intersection, that supplements intersection warning signs and stop signs. One display per approach may be used; however, two displays per approach are desirable. Intersection control beacons are installed only at intersections that control two or more directions of travel.
**intersection leg**  Any one of the roadways radiating from and forming part of an intersection.

- **entrance leg**  The lanes of an intersection leg for traffic entering the intersection.
- **exit leg**  The lanes of an intersection leg for traffic leaving the intersection.

**Note:** Whether an intersection leg is an entrance leg or an exit leg depends on which movement is being analyzed. For two-way roadways, each leg is an entrance leg for some movements and an exit leg for other movements.

**intersection sight distance**  The length of roadway visible to the driver of a vehicle entering an intersection.

**Interstate System**  A network of routes designated by the state and the Federal Highway Administration (FHWA) under terms of the federal-aid acts as being the most important to the development of a national system. The Interstate System is part of the principal arterial system.

**island**  A defined area within an intersection, between traffic lanes, for the separation of vehicle movements or for pedestrian refuge.

**J**

**justify**  Preparing a memo to the DDP identifying the reasons for the decision: a comparison of advantages and disadvantages of all options considered. A more rigorous effort than document.

**K**

**K-factor**  The proportion of AADT occurring in the analysis hour is referred to as the K-factor, expressed as a decimal fraction (commonly called “K,” “K30,” or “K100”). The K30 is the thirtieth (K100 is the one-hundredth) highest peak hour divided by the annual average daily traffic. Normally, the K30 or K100 will be in the range of 0.09 to 0.10 for urban and rural areas. Average design hour factors are available on the web in the Statewide Travel and Collision Data Office’s Annual Peak Hour Report.

**L**

**lamp lumens**  The total light output from a lamp, measured in lumens.

**lane**  A strip of roadway used for a single line of vehicles.

**lane control signal**  A special overhead signal that permits, prohibits, or warns of impending prohibition of lane use.

**lane width**  The lateral design width for a single lane, striped as shown in the Standard Plans and the Standard Specifications. The width of an existing lane is measured from the edge of traveled way to the center of the lane line or between the centers of adjacent lane lines.

**lateral clearance**  The distance from the edge of traveled way to a roadside object.

**lead agency**  The public agency that has the principal responsibility for carrying out or approving a project.

**legal road approach**  A road approach that complies with the requirements of Chapter 530 for limited access facilities and Chapter 540 for managed access facilities.

**length of need**  The length of a traffic barrier used to shield a fixed feature.
**level of service (LOS)**  LOS is based on peak hour, except where noted. LOS assigns a rank (A – F) to facility sections based on traffic flow concepts like density, delay, and/or corresponding safety performance conditions. (See the *Highway Capacity Manual* and AASHTO’s *Geometric Design of Highways and Streets* ["Green Book"] for further details.)

**life cycle cost**  The total cost of a project or item over its useful life. This includes all of the relevant costs that occur throughout the life of a project or item, including initial acquisition costs (such as right of way, planning, design, and construction), operation, maintenance, modification, replacement, demolition, financing, taxes, disposal, and salvage value as applicable.

**light emitting diode (LED)**  A two-lead semiconductor light source.

**limited access (L/A)**  Full, partial, or modified access control is planned and established for each corridor and then acquired as the right to limit access to each individual parcel (see Chapter 520).

- **acquired limited access control**  Access rights have been purchased.

- **established limited access control**  An access hearing has been held and the Assistant Secretary, Engineering & Regional Operations, has adopted the findings and order, which establishes the limits and level of control.

- **planned limited access control**  Limited access control is planned for some time in the future; however, no access hearing has been held.

**Limited Access and Managed Access Master Plan**  A map of Washington State that shows established and planned limited access highways: [www.wsdot.wa.gov/design/accessandhearings](http://www.wsdot.wa.gov/design/accessandhearings)

**limited access highway**  All highways listed as “Established L/A” on the Limited Access and Managed Access Master Plan and where the rights of direct access to or from abutting lands have been acquired from the abutting landowners.

- **full access control**  This most restrictive level of limited access provides access, using interchanges, for selected public roads/streets only, and prohibits highway intersections at grade.

- **partial access control**  The second most restrictive level of limited access. At-grade intersections with selected public roads are allowed, and there may be some crossings and some driveway approaches at grade. Direct commercial access is not allowed.

- **modified access control**  The least restrictive level of limited access. Characteristics are the same as for partial access control except that direct commercial access is allowed.

**local roads**  Non-state highways that are publicly owned.

**long tunnel**  A tunnel, lid, or underpass that is greater than 80’ in length and has a length to vertical clearance ratio greater than 10:1.

**low pavement type**  Bituminous surface treatment (BST).

**low-speed roadway**  A roadway with a posted speed of lower than 45 mph.

**lumen**  The unit used to measure luminous flux.

**luminaire**  A complete lighting unit comprised of a light bulb or light emitting Diode (LED) module, wiring, and a housing unit.
**luminance**  The quotient of the luminous flux at an element of the surface surrounding the point and propagated in directions defined by an elementary cone containing the given direction, by the product of the solid angle of the cone and area of the orthogonal projection of the element of the surface on a plane perpendicular to the given direction. The luminous flux may be leaving, passing through, and/or arriving at the surface.

**luminous flux**  The time rate of the flow of light.

**M**

**Major Project**  A project receiving federal financial assistance (1) with an estimated cost of $500 million or more, or (2) that has been identified by the Secretary as being "Major" as a result of special interest (23 U.S.C 106 (h)).

**managed access highway**  Highways where the rights of direct access to or from abutting lands have not been acquired from the abutting landowners.

**managed lane**  A lane that increases efficiency by packaging various operational and design actions. Lane management operations may be adjusted at any time to better match regional goals.

**maximum**  The highest design value allowed without a deviation.

**maximum uniformity ratio**  The average light level within the design area divided by the minimum light level within the design area (see Chapter 1040).

**maximum veiling luminance ratio**  The maximum veiling luminance divided by the average luminance over a given design area for an observer traveling parallel to the roadway centerline (see Chapter 1040).

**mcd/m²/lux**  Pavement marking retroreflectivity is represented by the coefficient of retroreflected luminance (RL) measured in millicandelas per square meter.

**Measures of Effectiveness (MOEs)**  In the context of Chapter 320, examples are: speed, delay, density, LOS, QOS, person or vehicle throughput, cost vs. benefit, and queue. (See FHWA’s MOE List.)

**median**  The portion of a divided highway separating vehicular traffic traveling in opposite directions.

**median opening**  An opening in a continuous median for the specific purpose of allowing vehicle movement.

**Memorandum of Understanding (MOU)**  There is one MOU (Highways Over National Forest Lands) between the United States Forest Service (USFS) and WSDOT that requires the USFS to obtain a road approach permit for new access to a state highway that is crossing Forest Service land.

**metering signal**  A signal used to control the predominant flow rate of traffic at an at-grade facility.

**Methods and Assumptions Document**  A mandatory document developed at the beginning of the IJR phase to record IJR assumptions, methodologies, criteria, and decisions (see Chapter 550).

**Metropolitan Planning Organization (MPO)**  A lead agency designated by the Governor to administer the federally required transportation planning process in a metropolitan area with a population over 50,000. The MPO is responsible for the 20-year long-range plan and Transportation Improvement Program (TIP).

**mil**  Unit of measurement equivalent to 0.001 inches.

**minimum**  The lowest design value allowed without a deviation.

**minimum average light level**  The average of all light intensities within the design area, measured just prior to relamping the system (see Chapter 1040).
**minimum light level**  The minimum light intensity of illumination at any single point within the design area measured just prior to relamping the system (see Chapter 1040).

**minor arterial system**  A rural network of arterial routes linking cities and other activity centers that generate long distance travel and, with appropriate extensions into and through urban areas, form an integrated network providing interstate and interregional service (RCW 47.05.021).

**minor operational enhancement projects**  These projects usually originate from the Q2 component of the Q Program and are quick responses to implement low-cost improvements. They are typically narrow in scope and focus on improvements to traffic operations and modifications to traffic control devices. Guidance on the type of work included in the Q subprograms is in the *Chart of Accounts*.

**monument**  As defined in Chapter 410, a monument is any physical object or structure that marks or references a survey point. This includes, but is not limited to, a point of curvature (P.C.), a point of tangency (P.T.), a property corner, a section corner, a General Land Office (GLO) survey point, a Bureau of Land Management (BLM) survey point, and any other permanent reference set by a governmental agency or private surveyor.

**monument removal or destruction**  The physical disturbance or covering of a monument such that the survey point is no longer visible or readily accessible.

**mounting height – luminaire**  The vertical distance between the surface of the design area and the center of the light source of the luminaire. Note: This is not to be confused with pole height (H1), but is the actual distance that the luminaire is located above the roadway edge line.

**movable bridge signal** (also drawbridge signal)  A signal installed to notify traffic to stop when the bridge is opened for waterborne traffic. Movable bridge signals display continuous green when the roadway is open to vehicular traffic.

**multiline approach**  An approach that has two or more lanes, regardless of the lane use designation.

**multimodal connection**  The point where multiple types of transportation activities occur; for example, where transit buses and van pools drop off or pick up passengers (including passengers with bicycles).

**N**

**National Highway System (NHS)**  The NHS was developed by the U.S. Department of Transportation (DOT) in cooperation with the states, local officials, and metropolitan planning organizations (MPOs).

The NHS includes the following subsystems of roadways (note that a specific highway route may be on more than one subsystem):

- **Interstate:** The Eisenhower Interstate System of highways retains its separate identity within the NHS.
- **Other Principal Arterials:** These are highways in rural and urban areas that provide access between an arterial and a major port, airport, public transportation facility, or other intermodal transportation facility.
- **Strategic Highway Network (STRAHNET):** This is a network of highways that are important to the United States' strategic defense policy and that provide defense access, continuity, and emergency capabilities for defense purposes.
- **Major Strategic Highway Network Connectors:** These are highways that provide access between major military installations and highways that are part of the Strategic Highway Network.
- **Intermodal Connectors:** These highways provide access between major intermodal facilities and the other four subsystems making up the National Highway System.
natural vehicle path  The natural path that a driver navigates a vehicle given the layout of the intersection and the ultimate destination.

need  A statement that identifies the transportation problem(s) that the proposal is designed to address and explains how the problem will be resolved. An existing or anticipated travel demand that has been documented through a study process to require a change in access to the state’s limited access freeway system.

negative illumination  Lighting the background and leaving the object dark to contrast with the light behind it as the driver views it.

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).

no-build condition  The baseline, plus state transportation plan and comprehensive plan improvements, expected to exist, as applied to the year of opening or the design year.

nonconforming road approach  A road approach that does not meet current requirements for location, quantity, spacing, sight distance, or geometric elements.

nonrecoverable slope  A slope on which an errant vehicle might continue until it reaches the bottom, without having the ability to recover control. Fill slopes steeper than 4H:1V, but not steeper than 3H:1V, are considered nonrecoverable.

nonseparated HOV lane  An HOV lane that is adjacent to and operates in the same direction as the general-purpose lanes with unrestricted access between the HOV lane and the general-purpose lanes.

notice of appearance  A form provided by WSDOT for anyone wanting to receive a copy of the findings and order and the adopted limited access plan (see Chapter 210).

notice of hearing (or hearing notice)  A published advertisement that a public hearing will be held.

notice of opportunity for a hearing  An advertised offer to hold a public hearing.

O

occupancy designation  The minimum number of occupants required for a vehicle to use the HOV facility.

operating speed  The speed at which drivers are observed operating their vehicles during free-flow conditions. The 85th percentile of the distribution of observed speeds is most frequently used.

order of hearing  The official establishment of a hearing date by the Director & State Design Engineer, Development Division.

outer separation  The area between the outside edge of traveled way for through traffic and the nearest edge of traveled way of a frontage road or collector-distributor (C-D) road.

overlapped displays  Overlapped displays allow a traffic movement to operate with one or more nonconflicting phases. Most commonly, a minor street’s exclusive right-turn phase is overlapped with the nonconflicting major street’s left-turn phase. An overlapped display can be terminated after the parent phase (the main phase the overlap is associated with) terminates. An overlapped display programmed for two or more parent phases continues to display until all of the parent phases have terminated. An overlap is made up of two or more phases—not one phase controlling two movements.
P

**painted nose**  The point where the main line and ramp lanes separate.

**“pass-by” trips**  Pass-by trips are intermediate stops between an origin and a primary trip destination; for example, home to work, home to shopping.

**passenger loading zone**  An area provided for pedestrians to board/disembark a vehicle.

**passing lane**  An auxiliary lane on a two-lane highway used to provide the desired frequency of passing zones.

**passing sight distance**  The distance (on a two-lane highway) needed for a vehicle driver to execute a normal passing maneuver based on design conditions and design speed.

**pavement marking**  A colored marking applied to the pavement to provide drivers with guidance and other information.

**peak hour**  The 60-minute interval that contains the largest volume of traffic during a given time period. If a traffic count covers consecutive days, the peak hour can be an average of the highest hour across all of the days. An a.m. peak is simply the highest hour from the a.m., and the p.m. peak is the highest from the p.m. The peak hour correlates to the DHV, but is not the same. However, it is close enough on items such as intersection plans for approval to be considered equivalent.

**permit holder**  The abutting property owner or other legally authorized person to whom an access connection permit is issued by the permitting authority.

**permitted access connection**  A connection for which an access connection permit has been issued by a permitting authority.

**permitting authority**  The agency that has legal authority to issue managed access connection permits. For access connections in unincorporated areas, the permitting authority is WSDOT; for access connections within corporate limits, the permitting authority is a city or town.

**physical nose**  The point, upstream of the gore, with a separation between the roadways of 16 to 22 feet (see Chapter 1360).

**planning**  Transportation planning is a decision-making process required by federal and state law used to solve complex, interrelated transportation and land use problems (see Chapter 120).

**Plans, Specifications, and Estimates (PS&E)**  The project development activity that follows Project Definition and culminates in the completion of contract-ready documents and the engineer’s cost estimate.

**pole height (H1)**  The vertical distance from the light source to the pole base. This distance is specified in contracts and used by the pole manufacturers to fabricate the light standard.

**policy point**  There are eight policy points addressed in the IJR:

- Need for the Access Point Revision
- Reasonable Alternatives
- Operational & Collision Analyses
- Access Connections & Design
- Land Use & Transportation Plans
- Future Interchanges
- Coordination
- Environmental
**portable traffic signal**  A type of conventional traffic signal used in work zones to control traffic. This signal is most commonly used on two-way two-lane highways where one lane has been closed for roadwork. This signal is most commonly operated in pairs, with one signal at each end of the work zone. This eliminates the need for 24-hour flagger control. The traffic signal provides alternating right of way assignments for conflicting traffic movements. The signal has an adjustable vertical support with two three-section signal displays and is mounted on a mobile trailer with its own power source.

**positive illumination**  Lighting the surface of the object as the driver views it.

**posted speed**  The maximum legal speed as posted on a section of highway using regulatory signs.

**prehearing packet**  A concise, organized collection of all necessary prehearing data, prepared by the region and approved by the HQ Development Services & Access Manager prior to the hearing (see Chapter 210).

**preliminary engineering (PE)**  A term used to describe the Project Delivery process from project scoping through PS&E review.

**principal arterial system**  A connected network of rural arterial routes with appropriate extensions into and through urban areas, including routes designated as part of the Interstate System, that serves corridor movements with travel characteristics indicative of substantial statewide and interstate travel (RCW 47.05.021).

**priority array**  A collection of similar needs identified in the HSP, prioritized based on the methodology adopted by WSDOT to meet the requirements of RCW 47.05.

**Priority Array Tracking System (PATS)**  A database that allows tracking of highway needs and their solutions. The system is designed to ensure WSDOT addresses the highest-ranked transportation needs. Deficiencies are tracked for each strategy in the HSP.

**product or service**  Any element of a project from concept through maintenance and operation. In all instances, the required function should be achieved at the lowest life cycle cost based on requirements for performance, maintainability, safety, environment, and aesthetics.

**project**  A portion of a highway that WSDOT or a public authority proposes to construct, reconstruct, or improve as described in the preliminary design report or applicable environmental document. A project is roadway/highway improvement within the logical termini identified in the environmental document and may consist of several contracts, or phases of a project or contract, that are implemented over several years.

**Project Analysis**  Documentation that justifies a change in design level and/or decisions to include, exclude, or modify design elements specific to a project only (see also Chapter 1100).

**Project Change Request Form**  A form used to document and approve revisions to project scope, schedule, or budget from a previously approved Project Definition (see Project Summary). Include copies in the Design Documentation Package.

**Project Control and Reporting (PC&R)**  The Headquarters (HQ) Project Control and Reporting Office is responsible for monitoring, tracking, and reporting delivery of the Highway Construction Program in coordination with the Program Management offices in each of the six WSDOT regions and the Urban Corridors Office.

**Project Definition**  (see Project Summary)
**Project Development Approval**  Final approval of all project development documents by the designated representative of the approving organization prior to the advertisement of a capital transportation project (see Chapter 300).

**Project Engineer**  This term applies to WSDOT personnel. Wherever “Project Engineer” appears in this manual, the design-builder shall deem it to mean “Engineer of Record.”

**Project File (PF)**  A file containing all documentation and data for all activities related to a project (see Chapter 300).

- **Design Documentation Package (DDP)**  The portion of the Project File, including Design Approval and Project Development Approval, that will be retained long term in accordance with WSDOT document retention policies. Depending on the scope of the project, it contains the Project Summary and some or all of the other documents discussed in Chapter 300. Technical reports and calculations are part of the Project File, but they are not designated as components of the DDP. Include estimates and justifications for decisions made in the DDP (see Chapter 300). The DDP explains how and why the design was chosen and documents approvals.

**project management plan**  A formal, approved document that defines how the project is executed, monitored, and controlled. It may be in summary or detailed form and may be composed of one or more subsidiary management plans and other planning documents. For further information, see the Project Management Online Guide:

- [http://www.wsdot.wa.gov/projects/projectmgmt/onlineguide/preconstruction.htm](http://www.wsdot.wa.gov/projects/projectmgmt/onlineguide/preconstruction.htm)

**Project Scoping**  See Chapter 300.

**Project Summary**  A set of documents consisting of the Design Decisions (DD), Environmental Review Summary (ERS), and Project Definition (PD). The Project Summary is part of the design documentation required to obtain Design Approval and is ultimately part of the design documentation required for Project Development Approval (see Chapter 300).

- **Design Decisions (DD)**  A document that records major design decisions regarding roadway geometrics, roadway and roadside features, and other issues that influence the project scope and budget.

- **Environmental Review Summary (ERS)**  A document that records the environmental classification (class of action) and considerations (consequences of action) for a specific project.

- **Project Definition (PD)**  A document that records the purpose and need of the project, along with program level and design constraints.

**proposal**  The combination of projects/actions selected through the study process to meet a specific transportation system need.

**public art**  An enhancement to a functional element, feature, or place within a transportation facility to provide visual interest. The enhancement could be an addition to a functional element, integrated into a design, or for purely aesthetic purposes. An element is considered “public art” if it is beyond WSDOT standard practice for architectural treatment.

**public involvement plan**  A plan to collaboratively involve the public in decision making, tailored to the specific needs and conditions of a project and the people and communities it serves. It is often part of a broader communications plan.
public transportation  Passenger transportation services available to the public, including buses, ferries, rideshare, and rail transit.

purpose  General project goals such as improve safety, enhance mobility, or enhance economic development.

Q

Quality of Service (QOS)  Defined by the Highway Capacity Manual or by agreement. Intended to describe how well a facility or service operates or functions from the perspective of the user.

queue cutter traffic signal  A traffic signal used at highway-rail grade crossings where the queue from a downstream traffic signal is expected to extend within the Minimum Track Clearance Distance. It is used to keep vehicles from an adjacent signalized intersection from queuing on the railroad tracks.

R

ramp connection  The pavement at the end of a ramp, connecting to a main lane of a roadway.

ramp (in relation to a roadway)  A short roadway connecting a main lane of a highway with another facility, such as a road, parking lot, or transit stop, for vehicular use.

ramp meter  A traffic signal at a freeway entrance ramp that allows a measured or regulated amount of traffic to enter the freeway.

ramp terminal  An intersection at the end of a ramp.

Record of Decision (ROD)  Under the National Environmental Policy Act, the Record of Decision accompanies the Final Environmental Impact Statement; explains the reasons for the project decision; discusses alternatives and values considered in selection of the preferred alternative; and summarizes mitigation measures and commitments that will be incorporated in the project.

recoverable slope  A slope on which the driver of an errant vehicle can regain control of the vehicle. Slopes of 4H:1V or flatter are considered recoverable.

recovery area  The minimum target value used in highway design when a fill slope between 4H:1V and 3H:1V starts within the Design Clear Zone.

Recreational Vehicle Account  In 1980 the RV account was established for use by the department of transportation for the construction, maintenance, and operation of recreational vehicle sanitary disposal systems at safety rest areas (RCW 46.68.170). A recreational vehicle sanitary disposal fee is required for registration of a recreational vehicle (RCW 46.17.375). Adjustments to the recreational vehicle fee by the department of transportation may be implemented after consultation with the citizens’ representatives of the recreational vehicle user community (RCW 47.01.460).

Regional Transportation Planning Organization (RTPO)  A planning organization authorized by the Legislature in 1990 as part of the Growth Management Act. The RTPO is a voluntary organization with representatives from state and local governments that are responsible for coordinating transportation planning activities within a region.

relocation assistance program  A program that establishes uniform procedures for relocation assistance that will ensure legal entitlements and provide fair, equitable, and consistent treatment to persons displaced by WSDOT-administered projects, as defined in the Right of Way Manual.
**Request for Proposal (RFP)**  The document package issued by WSDOT requesting submittal of proposals for the project and providing information relevant to the preparation and submittal of proposals, including the instructions to proposers, contract documents, bidding procedures, and reference documents.

**rest area**  An area to the side of a path.

**résumé**  An official notification of action taken by WSDOT following adoption of a findings and order (see Chapter 210).

**retroreflection**  The phenomenon of light rays striking a surface and being returned directly back to the source of light.

**retroreflectometer**  An instrument used to measure retroreflectivity.

**right of way (R/W)**  A general term denoting land or interest therein, acquired for or designated for transportation purposes. More specifically, lands that have been dedicated for public transportation purposes or land in which WSDOT, a county, or a municipality owns the fee simple title, has an easement devoted to or required for use as a public road/street and appurtenant facilities, or has established ownership by prescriptive right.

**right of way and limited access plan (R/W and L/A plan)**  A right of way plan that also shows limited access control details.

**road approach**  An access point, other than a public road/street, that allows access to or from a limited access highway on the state highway system.

**road approach design template**  The design geometric criteria for a road approach based on the usage, types of vehicles, and traffic volume.

**roadside park**  A roadside user facility for safe vehicular parking off the traveled way and separated from the highway by some form of buffer. These sites might be equipped with features or elements such as points of interest, picnic tables, and/or vault toilet buildings. Unlike a safety rest area, a roadside park does not always provide a permanent restroom building.

**roadway**  The portion of a highway, including shoulders.

**roadway luminance**  The light projected from a luminaire that travels toward a given area, represented by a point on the pavement surface, and then back toward the observer, opposite to the direction of travel. The units of roadway luminance are footcandles.

**roundabout**  A circular intersection at grade with yield control of all entering traffic, channelized approaches with raised splitter islands, counter-clockwise circulation, and appropriate geometric curvature to force travel speeds on the circulating roadway generally to less than 25 mph.

**rumble strips**  Rumble strips are grooves or rows of raised pavement markers placed perpendicular to the direction of travel to alert inattentive drivers.

**rural design area**  An area that meets none of the conditions to be an urban design area.

**rural intersection**  An intersection in a rural design area (see Chapter 1140).
S

**safety rest area (SRA)** A roadside facility equipped with permanent restroom building(s), a parking area, picnic tables, refuse receptacles, illumination, and other ancillary services. SRAs typically include potable water and might include traveler information and telephones.

**Safety Rest Area Strategic Plan** Developed in 2008 under a stakeholder-coordinated effort of executive and advisory team members, this plan provides guidance for current and future management of the SRA program.

**sawtooth berth** A series of bays that are offset from one another by connecting curb lines, constructed at an angle from the bus bays. This configuration minimizes the amount of space needed for vehicle pull in and pull out.

**scoping phase** The first phase of project development for a specific project, the scoping phase follows identification of the need for a project and precedes detailed project design. It is the process of identifying the work to be done and developing a cost estimate for completing the design and construction. The Project Summary, engineering and construction estimates, and possibly several technical reports (geotechnical, surfacing, bridge condition, and so on) are developed during this phase.

**security lighting** A minimal amount of lighting used to illuminate areas for public safety or theft reduction. Security lighting for walkways is the lighting of areas where shadows and horizontal and vertical geometry obstruct a pedestrian’s view.

“**select zone” analysis** A traffic model run, where the related project trips are distributed and assigned along a populated highway network. This analysis isolates the anticipated impact on the state highway network created by the project.

**separated HOV facility** An HOV roadway that is physically separated from adjacent general-purpose lanes by a barrier or median, or is on a separate right of way.

**service life** The service life of a pavement marking is the time or number of traffic passages required for its retroreflectivity to decrease from its initial value to a minimum threshold value indicating that the marking needs to be refurbished or replaced.

**shared roadway** A roadway that is open to both bicycle and motor vehicle travel. This may be a new or existing roadway/highway, a street with wide curb lanes, or a road with paved shoulders.

**shared-use landing** A level (0 to 2% grade cross slope and running slope) paved area within the shared-use path, designed to provide turning and maneuvering space for wheelchair users and as a resting place for pedestrians.

**shared-use path** A facility physically separated from motorized vehicular traffic within the highway right of way or on an exclusive right of way with minimal crossflow by motor vehicles. Shared-use paths are primarily used by bicyclists and pedestrians, including joggers, skaters, and pedestrians with disabilities, including those who use nonmotorized or motorized wheeled mobility devices. With appropriate design considerations, equestrians may also be accommodated by a shared-use path facility.

**short tunnel** A tunnel, lid, or underpass that is shorter than 80’ in length and has a length to vertical clearance ratio of 10:1 or less.
**shoulder**  The portion of the roadway contiguous with the traveled way, primarily for accommodation of stopped vehicles, emergency use, lateral support of the traveled way, and where allowed, use by pedestrians and bicycles.

**shoulder width**  The lateral dimension of the shoulder, measured from the edge of traveled way to the edge of roadway or the face of curb.

**shy distance**  The distance from the edge of the traveled way beyond which a roadside object might not be perceived by a typical driver as an immediate feature to be avoided to the extent that the driver will change the vehicle’s placement or speed.

**sight distance**  The length of highway visible to a driver.

**Signal Maintenance Management System (SIMMS)**  A database used for traffic signals, illumination, and Intelligent Transportation Systems (ITS). SIMMS is used to establish an inventory base, enter work reports, print timesheets, and store maintenance records for electrical/electronics systems within WSDOT right of way.

**signed shared roadway**  A shared roadway that has been designated by signing as a route for bicycle use.

**single-lane roundabout**  A roundabout having single-lane entries at all legs and one circulating lane.

**single-occupant vehicle (SOV)**  Any motor vehicle other than a motorcycle carrying one occupant.

**site**  A parcel of land bounded by a property line or a designated portion of a public right of way.

**slip base**  A mechanical base designed to allow the light standard to break away from the fixed foundation when hit by a vehicle traveling at the design speed and traveling at a departure angle less than or equal to the design departure angle.

**slip lane**  A lane that separates heavy right-turn movements from the roundabout circulating traffic (see Chapter 1320).

**slip ramp**  A connection between legs of an intersection that allows right-turning vehicles to bypass the intersection or a connection between an expressway and a parallel frontage road. These are often separated by an island.

**slow-moving vehicle turnout**  A shoulder area widened to provide room for a slow-moving vehicle to pull out of the through traffic, allow vehicles to pass, and then return to the through lane.

**spacing**  The distance in feet measured on centerline between adjacent luminaires.

**speed limit sign beacon**  A beacon installed with a fixed or variable speed limit sign. The preferred display is two flashing yellow indications.

**splitter island**  The raised island at each two-way leg between entering and exiting vehicles, designed primarily to control the entry and exit speeds by providing deflection. They also discourage wrong-way movements, and provide pedestrian refuge.

**spraying**  A procedure for applying marking material to a surface as a jet of fine liquid particles.

**state highway system**  All roads, streets, and highways designated as state routes in compliance with RCW 47.17.

**Statewide Transportation Improvement Program (STIP)**  A planning document that includes all federally funded projects and other regionally significant projects for a three-year period.

**static scale**  A scale that requires a vehicle to stop for weighing.
**stopping sight distance**  The distance needed for a driver to stop a vehicle traveling at design speed based on design conditions.

**stop sign beacon**  A beacon installed above a stop sign. The display is a flashing red indication.

**study area**  The transportation system area to study in the study process and for an IJR. The study area is a minimum of one interchange upstream and downstream from the proposal. The study area shall also include the intersecting roadway in the area to the extent necessary to ensure its ability to collect and distribute traffic to and from the interchange. The study area should be expanded as necessary to capture operational impacts of adjacent interchanges in the vicinity that are, or will be, bottlenecks or chokepoints that influence the operations of the study interchange.

**study plan**  A term associated with environmental procedures, this plan proposes an outline or “road map” of the environmental process to be followed during the development of a project that requires complex NEPA documentation (see Chapter 210 and the Environmental Manual).

**suburban area**  A term for the area at the boundary of an urban design area. Suburban settings may combine higher speeds common in rural design areas with activities more common to urban settings.

**superelevation**  The rotation of the roadway cross section in such a manner as to overcome part of the centrifugal force that acts on a vehicle traversing a curve.

**superelevation runoff**  The length of highway needed to accomplish the change in cross slope from a section with adverse crown removed (level) to a fully superelevated section, or vice versa.

**superelevation transition length**  The length of highway needed to change the cross slope from normal crown or normal pavement slope to full superelevation.

**support team**  An integral part of the IJR process consisting of an assemblage of people from the regions, FHWA (for Interstates), WSDOT HQ Access and Hearings, and other representatives organized to develop and analyze alternatives to meet the need of a proposal, including approval authorities.

**Surface Transportation Program (STP)**  A federal program established by Congress in 1991 that provides a source of federal funding for highway and bridge projects.

**T**

**tangent runout**  The length of highway needed to change the cross slope from normal crown to a section with adverse crown removed (level).

**temporary traffic signal**  A conventional traffic signal used during construction to control traffic at an intersection while a permanent signal system is being constructed. A temporary traffic signal is typically an inexpensive span-wire installation using timber strain poles.

**Total Project Costs**  The costs of all phases of a project, including environmental, design, right of way, utilities, and construction.

**traffic barrier**  A longitudinal barrier, including bridge rail or an impact attenuator, used to redirect vehicles from fixed features located within an established Design Clear Zone, help mitigate median crossovers, reduce the potential for errant vehicles to travel over the side of a bridge structure, or (occasionally) protect workers, pedestrians, or bicyclists from vehicular traffic.
**traffic barrier/longitudinal barrier**  A device oriented parallel or nearly parallel to the roadway whose primary function is to contain or safely redirect errant vehicles away from fixed features or to (occasionally) protect workers, pedestrians, or bicyclists from vehicular traffic. Beam guardrail, cable barrier, bridge rail, concrete barrier, and impact attenuators are barriers, and they are categorized as rigid, rigid anchored, unrestrained rigid, semirigid, and flexible. They can be installed as roadside or median barriers.

**traffic calming**  Design techniques that have been shown to reduce traffic speeds and unsafe maneuvers. These techniques can be stand-alone or used in combination, and they include lane narrowing, curb extensions, surface variations, and visual clues in the vertical plane.

**Traffic Impact Analysis (TIA) (sometimes called Traffic Impact Study (TIS))**  If a traffic analysis is not an IJR, it is a TIA. TIAs are used for environmental reviews and developer projects (see Chapter 320).

**traffic paint**  A pavement marking material that consists mainly of a binder and a solvent. The material is kept in liquid form by the solvent, which evaporates upon application to the pavement, leaving the binder to form a hard film.

**transit**  A general term applied to passenger rail and bus service used by the public.

**transit facility**  A capital facility that improves the efficiency of public transportation or encourages the use of public transportation.

**transit flyer stop**  A multimodal connection located within the boundaries of a limited access facility.

**transition**  A section of barrier used to produce the gradual stiffening of a flexible or semirigid barrier as it connects to a more rigid barrier or fixed object.

**transit lane**  A lane for the exclusive use of transit vehicles.

**transit stop**  A facility for loading and unloading passengers that is set aside for the use of transit vehicles only.

**transit vehicle**  A bus or other motor vehicle that provides public transportation (usually operated by a public agency).

**Transportation Improvement Program (TIP)**  A three-year transportation improvement strategy required from MPOs by Congress, which includes all federally funded or regionally significant projects.

**Transportation Information and Planning Support (TRIPS)**  A mainframe computer system designed to provide engineering, maintenance, planning, and accounting staff with highway inventory, traffic, and accident data.

**Transportation Management Area (TMA)**  Urbanized areas with populations of 200,000 or greater are federally designated as Transportation Management Areas.

**transportation management plan (TMP)**  A set of traffic control plans, transportation operations plans, and public information strategies for managing the work zone impacts of a project. A TMP is required for all projects to address work zone safety and mobility impacts.

**Transportation Planning Studies**  These studies identify the current functions of a corridor and forecast future demands on the system. Data collection and public involvement are used to forecast future needs that will improve the function of a state route.
travel demand  The demand travelers will make on the system based on the number and types of trips they will take and the mode and routes they will use. Local travel demand represents short trips that should be made on the local transportation system, such as intracity roads and streets. Regional travel demand represents long trips that are made on the regional transportation system, such as Interstate, regional, and/or intercity/interregional roads, streets, or highways.

traveled way  The portion of the roadway intended for the movement of vehicles, exclusive of shoulders and lanes for parking, turning, and storage for turning.

traveler information  Commercial and noncommercial information that informs and orients the traveling public. This includes access information for food, gas, lodging, local attractions, regional tourist attractions, roadway conditions, and construction schedules.

traveling public  Motorists, motorcyclists, bicyclists, pedestrians, and pedestrians with disabilities.

trips  Short trips are normally local. Long trips are normally interstate, regional, or interregional.

truck apron  The optional mountable portion of the central island of a roundabout between the raised nontraversable area of the central island and the circulating roadway (see Chapter 1320).

turning radius  The radius that the front wheel of the design vehicle on the outside of the curve travels while making a turn (see Chapter 1320).

turning roadway  A curve on an open highway, a ramp, or the connecting portion of the roadway between two intersecting legs of an intersection.

two-way left-turn lane (TWLTL)  A lane, located between opposing lanes of traffic, to be used by vehicles making left turns from either direction, from or onto the roadway.

U

undivided multilane  A roadway with two or more through lanes in each direction on which left turns are not controlled.

uniformity ratio  The ratio of the minimum average light level on the design area to the minimum light level of the same area (see Chapter 1040).

urban area  An area designated by the Washington State Department of Transportation (WSDOT) in cooperation with the Transportation Improvement Board (TIB) and Regional Transportation Planning Organizations (RTPO), subject to the approval of the Federal Highway Administration (FHWA).

urban design area  An area where urban design criteria are appropriate, that is defined by one or more of the following:

- An urban area.
- An area within the limits of an incorporated city or town.
- An area characterized by intensive use of the land for the location of structures, that receives urban services such as sewer, water, and other public utilities, as well as services normally associated with an incorporated city or town. This may include an urban growth area defined under the Growth Management Act (see RCW 36.70A, Growth management – Planning by selected counties and cities), but outside the city limits.
- An area with not more than 25% undeveloped land.

urban intersection  An intersection in an urban design area (see Chapter 1140).

urbanized area  An urban area with a population of 50,000 or more.

usable shoulder  The width of the shoulder that can be used by a vehicle for stopping.
Value Engineering (VE) Analysis  The systematic process of reviewing and assessing a project, during the planning and design phases, by a multidisciplinary team not directly involved in the planning and design phases of the project, that follows the VE Job Plan and is conducted to provide recommendations for:

- Providing the needed functions, considering community and environmental commitments, safely, reliably, efficiently, and at the lowest overall life cycle cost.
- Improving the value and quality of the project.
- Reducing the time to develop and deliver the project.

Value Engineering Change Proposal (VECP)  A construction contract change proposal submitted by the construction contractor based on a VECP provision in the contract. The intent of these types of proposals is to (1) improve the project's performance, value, and/or quality, (2) lower construction costs, or (3) shorten the delivery time, while considering their impacts on the project's overall life-cycle cost and other applicable factors.

Value Engineering (VE) Job Plan  A systematic and structured action plan (see Chapter 310) for conducting and documenting the results of the VE analysis. While each VE analysis shall address each phase in the VE Job Plan, the level of analysis conducted and effort expended for each phase should be scaled to meet the needs of each individual project. The VE Job Plan shall include and document the following seven phases:

1. Information Phase: Gather project information, including project commitments and constraints.
2. Function Analysis Phase: Analyze the project to understand the required functions.
3. Creative Phase: Generate ideas on ways to accomplish the required functions, which improve the project's performance, enhance its quality, and lower project costs.
4. Evaluation Phase: Evaluate and select feasible ideas for development.
5. Development Phase: Develop the selected alternatives into fully supported recommendations.
6. Presentation Phase: Present the VE recommendation to the project stakeholders.
7. Resolution Phase: Evaluate, resolve, document, and implement all approved recommendations.

Post-analysis Job Plan activities include the implementation and evaluation of the outcomes of the approved recommendations. These post-analysis phases are conducted in accordance with the policies stated below and as described in paragraph 4f of FHWA Order 1311.1A, FHWA Value Engineering Policy.

Veiling luminance  The stray light produced within the eye by light sources produces a veiling luminance that is superimposed on the retinal image of the objects being observed. This stray light alters the apparent brightness of an object within the visual field and the background against which it is viewed, thereby impairing the ability of the driver to perform visual tasks. Conceptually, veiling luminance is the light that travels directly from the luminaire to the observer's eye.

Viewpoint  A roadside stopping opportunity with a view of some point of interest or area scenery. This area is not typically separated from the traveled way by some form of highway buffer.

Violation rate  The total number of violators divided by the total number of vehicles on an HOV facility.

Visitor Information Center (VIC)  A staffed or nonstaffed booth or separate building that displays and dispenses free tourist travel maps and brochures. These are typically located at border-entry SRAs to provide travel information to highway users as they enter the state.
**Glossary**

**W**

**warning beacon** A beacon that supplements a warning or regulatory sign or marking. The display is a flashing yellow indication. These beacons are not used with STOP, YIELD, or DO NOT ENTER signs or at intersections that control two or more lanes of travel. A warning identification beacon is energized only during those times when the warning or regulation is in effect.

**warrant** A minimum condition for which an action is authorized. Meeting a warrant does not attest to the existence of an unsafe or undesirable condition. Further justification is required.

**Washington State Pavement Management System (WSPMS)** A computer system that stores data about the pavement condition of all the highways in the state. Information available includes the latest field review and past contracts for every main line mile of state highway. Calculations are used to determine whether a given section of pavement is a past due, due, or future due preservation need.

**Washington Transportation Plan (WTP)** A WSDOT planning document developed in coordination with local governments, regional agencies, and private transportation providers. The WTP addresses the future of transportation facilities owned and operated by the state as well as those the state does not own but in which it has an interest. It identifies needed transportation investments, which are defined by service objectives and specific desired outcomes for each transportation mode.

**weaving section** A length of highway over which one-way traffic streams cross by merging and diverging maneuvers.

**weigh in motion (WIM)** A scale facility capable of weighing a vehicle without the vehicle stopping.

**wet film thickness** Thickness of a pavement marking at the time of application without glass beads.

**work zone** An area of a highway with construction, maintenance, or utility work activities. A work zone is identified by the placement of temporary traffic control devices that may include signs, channelizing devices, barriers, pavement markings, and/or work vehicles with warning lights. It extends from the first warning sign or high-intensity rotating, flashing, oscillating, or strobe lights on a vehicle to the END ROAD WORK sign or the last temporary traffic control device (MUTCD).

**work zone impact** Highway construction, maintenance, or utility work operations in the traveled way, adjacent to the traveled way, or within the highway’s right of way that creates safety and mobility concerns for workers or the traveling public.

**work zone traffic control** The planning, design, and preparation of contract documents for the modification of traffic patterns due to work zone impacts.

**wye (Y) connection** An intersecting one-way roadway, intersecting at an angle less than 60°, in the general form of a “Y.”

**Y**

**yield-at-entry** The requirement that vehicles on all entry lanes yield to vehicles within the circulating roadway.

**yield point** The point at which entering traffic must yield to circulating traffic before entering the circulating roadway (see Chapter 1320).