

CHAPTER 1

GENERAL CONSIDERATIONS

1-01 AUTHORITY

The Engineering Design and Development Standards, commonly known as "the EDDS," consist of the 3rd Edition, published in June 2003, with revisions issued in 2004 and 2009. A subsequent revision of Chapters 1, 4, 5 and 8 was made in 2010 pursuant to Snohomish County Code (SCC or County Code) 30.63A.120 to comply with and implement the requirements of the County's National Pollutant Discharge Elimination System (NPDES) Phase 1 Municipal Stormwater Permit.

Chapter 36.80 of the Revised Code of Washington (RCW) charges the County Road Engineer with the responsibility to prepare standards of construction for roads and bridges. Chapter 13.05 SCC authorizes the Snohomish County Engineer to adopt and amend the EDDS in accordance with that title and sound engineering practices. SCC 13.05.020 specifies that the EDDS shall govern all new construction and upgrading of transportation facilities, storm drainage facilities and utilities within county rights-of-way, whether occurring under permit or franchise, and other transportation-related improvements mandated by Snohomish County land use codes. Accordingly, the EDDS is written to provide engineering standards for implementation of the authority assigned to the County Road Engineer, hereinafter referred to as "the Engineer," and the Director of Public Works.

1-02 PURPOSE

The purpose of these Engineering Design and Development Standards is to ensure that transportation, drainage and utility facilities constructed in Snohomish County meet appropriate standards for safety, construction, maintenance and water quality. These Standards are published in accordance with the Revised Code of Washington and accomplish the following:

- Provide clear and consistent design standards for construction or modification of transportation, drainage and utility facilities by public or private entities.
- Implement and administer the development regulations contained in Snohomish County Code and the Comprehensive Plan.
- Ensure the design and construction of facilities in the county right-of-way comply with all applicable laws, regulations and standards of good engineering practice.

1-03 APPLICABILITY

The Engineering Design and Development Standards shall govern all new construction, reconstruction and maintenance of transportation, drainage and utility facilities located in county rights-of-way, whether occurring under permit or franchise, and other transportation, drainage or utility facilities mandated by Snohomish County Code.

These Standards apply to both public and private projects to ensure compliance with county code and other regulations.

These Standards support and implement the following objectives of the General Policy Plan of the Snohomish County GMA Comprehensive Plan:

- TR 1.A Prepare, in cooperation with the cities, the Washington State Department of Transportation (WSDOT), regional agencies, Sound Transit, Community Transit, and Everett Transit, standards for public transportation services and facilities consistent with adopted road standards, the land use element, and the natural environment element of the county's comprehensive plan.
- TR 1.C Establish access and on-site circulation standards to maintain the safety and integrity of the arterial roadway system.
- TR 1.D Regulate the design, location and public access of private access ways and roads that impact the public roadway.
- TR 3.A Plan, design, program, construct, and promote use of non-motorized transportation facilities in Snohomish County and in cooperation with WSDOT and the cities.
- TR 4.D Restrict direct vehicle access from public and private property onto designated principal and minor arterials to maintain and improve the integrity of traffic flow.
- TR 4.E Provide and maintain transportation facilities that enhance the safety of motorized and non-motorized transportation.
- NE 3.H Comply with the County's Phase I Municipal Stormwater Permit issued by the Washington State Department of Ecology pursuant to the Clean Water Act and the National Pollutant Discharge Elimination System (NPDES).

Situations may arise where the application of individual standards from this document will not ensure the protection of public health, safety and welfare. Accordingly, the Engineer may impose additional or more stringent standards than those contained in this document, or require the modification of plans, specifications or operations to achieve the necessary public health, safety and welfare. Modifications may include, but are not limited to scheduling, phasing or timing restrictions.

1-04 ADMINISTRATIVE INTERPRETATIONS AND REVISIONS

It is recognized that administrative interpretation of these Standards will be required from time to time. Such interpretations are refinements or explanations of meaning or intent issued by the County Engineer. Requests for administrative interpretations must be submitted in writing to the County Engineer.

The County Engineer is authorized to revise these Standards in accordance with SCC 13.05.010 and SCC 30.63A.120, and sound engineering practices. Such revisions will be issued as necessary to keep the document current and reduce the scope of subsequent changes. Each EDDS revision will incorporate the administrative interpretations that have been issued since the last revision. Suggestions for future revisions may be submitted in writing to the Engineer using the form provided in Appendix A.

1-05 DEVIATION FROM STANDARDS

These Standards represent appropriate practice under most conditions, based on past experience in Snohomish County and other jurisdictions. They are intended to provide transportation, drainage and other engineering-related facilities that are safe and appropriate for use in Snohomish County.

Engineering design is an endeavor that examines alternative solutions to real world situations. These Standards are not intended to limit the introduction of new ideas. Situations will arise where alternatives to these Standards may better accommodate existing conditions, overcome adverse topography or allow for more cost-effective solutions without adversely affecting vehicle or pedestrian safety, operation of road or drainage systems, maintenance, environmental protection or aesthetics.

Accordingly, the Engineer will consider requests for deviations from these Standards; however, deviations from Chapter 5 drainage standards shall be processed as "modifications" or "waivers," as applicable, in accordance with chapters 30.63A and 30.86 SCC. Deviations required to implement low impact development (LID) shall be processed in accordance with chapter 30.63C SCC.

Deviation requests must be submitted in writing, using the Deviation Request Form provided in Appendix A, and include supporting information demonstrating compliance with the following criteria:

- The deviation will achieve the intent of these design standards;
- The deviation will not adversely affect safety or operations;
- The deviation will provide substantially equivalent environmental protection;
- The deviation will not adversely affect maintenance and its associated cost; and
- The deviation will not adversely affect aesthetic appearance.

A separate deviation request must be submitted for each standard that is proposed for deviation, except where the standards are related and should be evaluated as a single proposal. In such case, a single deviation request may be submitted but complete documentation and justification are required for each standard to be considered.

A deviation request is not required for any of the following circumstances:

- To approve a design that exceeds an EDDS specification, as determined by the Engineer;
- To approve an alternative standard provided in the EDDS; or
- To obtain an "Interim EDDS Administrative Interpretation" of a standard or specification.

It is recognized that the need for and timing of a deviation request may not be predictable. Requests should be submitted as soon as the need becomes known. This may prevent wasted effort in the preparation of plans with non-standard features that cannot be approved. Known deviation requests that affect a project's lot yield, density, or scope must be submitted prior to the SEPA decision or the final administrative decision on the application. This is important for environmental assessment, public notice and participation in the decision process.

Any deviation request concerning a provision of the Uniform Fire Code requires concurrence by the Snohomish County fire marshal prior to the final decision on the request.

The Engineer is the final authority on all EDDS deviation requests. The Engineer reserves the right to direct or deny a deviation from these Standards, at any time, in the interest of public health, safety and welfare. Reconsideration of the Engineer's decision may be requested, provided it is submitted in writing within 15 calendar days following the date of the original decision. The grounds for seeking reconsideration are limited to the following:

- The Engineer's findings, conclusions or conditions are not supported by the record;
- New evidence is discovered, which could not reasonably have been produced and is material to the decision; or
- Changes to the application are proposed in response to deficiencies identified in the original deviation decision.

1-06 POLICIES

These Standards are intended to be consistent with the following federal and state laws, county codes, policies and rules:

- A. Snohomish County Code (SCC)
- B. Snohomish County Drainage Manual
- C. Snohomish County GMA Comprehensive Plan, General Policy Plan, and Transportation Element
- D. Snohomish County GMA Subarea Plans
- E. Snohomish County Arterial Circulation Map
- F. Washington State Shoreline Management Act
- G. National and State Environmental Policy Acts
- H. Americans with Disabilities Act (ADA)
- I. Federal Clean Air and Clean Water Acts
- J. Department of Public Works' policies and procedures

1-07 REFERENCES

A. General

In the event these Standards and other applicable rules adopted by Snohomish County do not provide necessary design information, the following publications of the Washington State Department of Transportation (WSDOT) may be referenced:

- Standard Plans for Road, Bridge and Municipal Construction ("Standard Plans")
- Standard Specifications for Road, Bridge and Municipal Construction ("Standard Specifications")
- Bridge Design Manual
- Construction Manual

- Design Manual
- Hydraulics Manual
- Highway Runoff Manual
- Roadside Manual
- Traffic Manual
- Utilities Manual

The following references may also be applicable:

- WSDOT Local Agency Guidelines
- WSDOT "Sidewalk Details - A Guide for Washington Local Agencies, Tribes and Nations"
- Transportation Improvement Board (TIB) Guidelines
- Design criteria of federal agencies including the Federal Housing Administration, Department of Housing and Urban Development and the Federal Highway Administration, Department of Transportation
- A Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials (AASHTO)
- LRFD (Load Resistance Factor Design) Bridge Design Specifications (AASHTO)
- Standard Specifications for Highway Bridges (AASHTO)
- Guide Specifications for Design of Pedestrian Bridges (AASHTO)
- Manual on Uniform Traffic Control Devices (MUTCD), (U.S. Department of Transportation, as amended and approved by WSDOT)
- Roadway Lighting Handbook, "Intersection Lighting Evaluation" (Implementation Package 78-15, U.S. Department of Transportation)
- ADA Accessibility Guidelines for Buildings and Facilities (ADAAG, US Department of Justice)
- Snohomish County Utility Accommodation Policy (County Council Motion 92-417, 1992)
- Hydraulic Code Rules (Chapter 220-110 WAC)
- Dam Safety Guidelines (Dam Safety Division, Washington State Department of Ecology)
- Roadside Design Guide (AASHTO)
- A Guide to Land Use and Public Transportation, Volumes I and II (Snohomish County Transportation Authority)
- Residential Streets, 3rd Edition (published by the American Society of Civil Engineers, National Association of Home Builders, and the Urban Land Institute)
- Residential Development Handbook for Snohomish County Communities (1992, Snohomish County Tomorrow)
- Model Code Provisions - Urban Streets & Subdivisions (September 1998, WSCTED)
- International Building Code (IBC, as amended and adopted)
- International Fire Code (IFC, as amended and adopted)
- Transit Oriented Development (TOD) Guidelines (July 1999, Snohomish County Tomorrow)
- Roadway Landscaping Standards (Snohomish County)

- Pedestrian Facilities Guidebook (September 1997, WSDOT, PSRC, CRAB and AWC)
- Fish Passage Design at Road Culverts (Washington Department of Fish and Wildlife, 1999)

In cases where these Standards conflict with the standards or procedures of the Washington State Department of Transportation (WSDOT) or the Federal Highway Administration (FHWA), the state or federal requirements shall take precedence for county road projects with state or federal funding.

1-08 ALTERNATE STANDARDS

Through Snohomish County Tomorrow (SCT), the County and the cities have developed uniform infrastructure standards to be applied to all land development inside unincorporated urban growth areas (UGAs). Minimum road/street standards were adopted by SCT in December 1999. Snohomish County will continue to work with SCT and the cities to implement mutually acceptable design standards.

A development inside an urban growth area (UGA) may be designed using elements of the associated city's engineering design standards. Such a request must be identified during the development review process. A deviation request must be submitted if the particular city standard is considered by Public Works to be a lesser standard than the county standard. The deviation request must be accompanied by a written statement from the city confirming the use and acceptability of the city standard. If the deviation request pertains to a standard in EDDS chapter 5 or the drainage or land disturbing activity requirements of chapters 30.63A or 30.63B SCC, then the deviation shall be processed as a code modification or waiver, as applicable, in accordance with chapters 30.63A and 30.86 SCC.

1-09 PERMITS

Other permits, approvals or agreements may be required by the County or other jurisdictions prior to initiating any activities subject to these Standards. Questions regarding such permits, approvals or agreements should be directed to the County Departments of Planning and Development Services or Public Works, as appropriate.

1-10 PLAN REVIEW

Plan review requirements for County-constructed road and drainage projects are governed by policies and procedures of the Department of Public Works.

For developer-constructed projects, all plans, reports, drawings and specifications that support permit or land use applications are to be submitted to Planning and Development Services. Copies of such supporting documentation are forwarded to the appropriate county staff for review.

Construction plan and profile drawings are required for all proposed road-related improvements, including storm drainage facilities and stream channel improvements. See Chapter 10 of these Standards for submittal requirements. Some projects may require that additional engineering data be submitted.

Engineering record drawings (previously known as "as-built" plans) for roads and drainage facilities must be submitted upon completion of construction and prior to final inspection

approval. In some cases, these drawings will be required during the inspection process to approve facilities before the next phase of construction can proceed.

1-11 PROFESSIONAL QUALIFICATIONS

Professionals in the fields of engineering, architecture or surveying who prepare or are responsible for the preparation of plans, drawings, specifications, calculations, technical reports, etc., for the purpose of obtaining County permits or approvals, shall be registered or authorized to practice in the State of Washington in accordance with Title 18 RCW. Registration or authorization to practice shall be in the specific technical area pertinent to the documents being prepared. Exceptions to this requirement are specified in Section 18.43.130 RCW.

Chapter 30.66B SCC details special requirements for the preparation of traffic studies conducted for the purposes of that chapter.

1-12 INSPECTION

The Engineer shall have authority to enforce these Standards as well as other applicable specifications. The Engineer shall appoint personnel as appropriate to inspect work completed pursuant to these Standards; they shall exercise such authority as the Engineer may delegate.

It is the responsibility of the developer, contractor or their agents to have an approved set of plans and permits at the job site wherever work is being accomplished. If the plans cite these Standards without providing the specific text, drawings or details, then a copy of these Standards must also be present at the job site. It is the responsibility of the developer, contractor or their agents to notify the County in advance of the commencement of any authorized work, in accordance with permit requirements.

If requested by the County, the applicant/developer may be required to provide tests to substantiate the adequacy and/or placement of construction materials.

1-13 SECURITIES

Securities and insurance may be required in accordance with County Code.

1-14 ERRORS AND OMISSIONS

At the discretion of the Engineer, any significant errors or omissions in the approved plans or information used as a basis for such approvals may constitute grounds for withdrawal of the approvals and/or stoppage of any or all permitted work. It shall be the responsibility of the developer or contractor to show cause why such work should continue, and make such changes in plans that may be required by the Engineer before the plans are reapproved.

1-15 RIGHT-OF-WAY AND SITE MAINTENANCE

The developer or contractor shall schedule and control work so as to comply with all applicable provisions of Snohomish County land use codes and applicable state and federal codes, to prevent any hazards to public safety, health and welfare.

On existing roads, two-way traffic for vehicles, bicycles and pedestrians shall be maintained at all times unless detour plans or lane closures have been approved in advance by the Engineer.

Roads, bridges, bikeways, and pedestrian facilities shall be kept free of dirt, debris or any obstructions. Paved temporary detour(s) shall be provided during the entire time of repair or construction.

Pedestrian and vehicular access to occupied buildings shall be maintained except where written approval from the building owner has been obtained.

On-site grading shall be done in a manner to minimize off-site erosion and siltation in conformance with all statutory requirements, permits and approved plans.

1-16 PENALTIES

Failure to comply with these Standards will be cause for withholding or withdrawing approval of plans or drawings; withholding of bonds, final inspection approval or occupancy certificates; and/or other penalties as provided by county code or state law.

1-17 DEFINITIONS

AASHTO	American Association of State Highway and Transportation Officials.
Acceleration Lane	A speed change lane, including tapered areas, to enable a vehicle entering a roadway to increase its speed to a rate at which it can safely merge with through traffic.
Access Point	Residential or commercial driveway, connecting to the road system.
Access Ways	A collective term for various means of access to property that are neither public nor private roads. Typically privately owned and maintained. Examples include auto courts, drive aisles, woonerfs, etc.
ACP	Asphalt concrete pavement. May also mean the County's Annual Construction Program for Transportation.
ADA	Americans with Disabilities Act of 1991.
ADT	Average daily traffic. The total two-directional volume of traffic 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.
Alley	An access way, typically privately owned and maintained, that provides vehicle access to garages behind residential dwelling units or service access to the rear of buildings.
Applicant	The person who has applied for or is requesting a permit, license or approval from Snohomish County.
Appurtenance	Equipment and/or accessories that are part of an operating system or subsystem.
APWA	American Public Works Association.
ASTM	American Society for Testing and Materials.
ATB	Asphalt-treated base.
Arterial	A transportation facility designated as an arterial in a UGA plan or the comprehensive plan.
Auto Court	A joint-use access way designed to be shared by vehicles, pedestrians and bicyclists within the same circulation space. With a typical maximum length of 150 feet, an auto court is not a through facility; it ends in a "court" used for garage access and other activities of the homeowners.
Auxiliary Lane	The roadway portion adjoining the traveled way for truck climbing, speed change or for other purposes supplementary to through traffic movement.
Backfill	Replacement of excavated material with suitable material compacted as specified.
Best Management Practices (drainage)	The schedules of activities, prohibitions of practices, maintenance procedures, and structural and/or managerial practices, that when used singly or in combination, prevent or reduce the release of pollutants and other adverse impacts to waters of Washington State.

Best Management Practices (critical areas)	Physical, structural or managerial practices which have gained general acceptance by professionals in the appropriate field to minimize and mitigate adverse impacts to the functions and values of critical areas.
Bicycle or Bike	A vehicle propelled solely by human power upon which a person may ride, having two tandem wheels, except scooters and similar devices. "Bicycle" in this document may also be a three or four-wheeled, human-powered vehicle, but not a tricycle for children. A bicycle is considered a "vehicle" under Washington State Law.
Bicycle Facilities	Improvements and provisions to accommodate bicycling.
Bicycle Lanes	That portion of a roadway, which has been designated by striping, signing, and/or pavement marking for use of bicycles.
Biofiltration	Process of reducing pollutant concentrations in water by filtering through biological materials.
Bollard	A post, that may or may not be removable, used to prevent vehicular access.
Boring	Grade and alignment-controlled mechanical method of installing a pipe or casing under a road or stream without disturbing the surrounding medium.
Buffer	Area adjacent to a critical area consisting of naturally occurring or re-established vegetation and having a width adequate to protect the critical area.
Capacity	The maximum number of vehicles that have a reasonable expectation of passing over a given roadway, or section of roadway, in one direction during a given time period under prevailing roadway and traffic conditions.
Casing	A larger pipe enclosing a carrier for the purpose of providing structural or other protection to the carrier and/or to allow for carrier replacement without re-excavation, jacking or boring.
Catchbasin	A chamber or well, usually installed at the curb line of a road, for the transport of surface water to a sewer or subdrain, having at its base a sediment sump designed to retain grit and detritus below the point of overflow.
CBU	Cluster box unit. A multiple mailbox delivery unit approved by the US Postal Service.
Channelization	The separation or regulation of conflicting traffic movements into definite paths of travel by the use of pavement markings, raised islands or other suitable means to facilitate the safe and orderly movement of both vehicles and pedestrians.
Clear Zone	The total roadside border area, starting at the edge of traveled way, available for safe use by errant vehicles. This area may consist of a shoulder, a recoverable slope, a nonrecoverable slope, and/or a clear run-out area. The desired width is dependent upon the traffic volumes, speeds, and the roadside geometry.

CMP	Corrugated metal pipe.
Commercial Use	A use providing goods, merchandise or services for compensation. Residential developments with three or more dwelling units (triplex and above) per parcel.
Compaction	The densification of a fill by mechanical means.
Conduit	Enclosed tubular runway for protecting wires or cables.
Construction Plans	Project drawings subject to county review and approval prior to construction that show the location, character and dimensions of the proposed work such as layouts, profiles, cross-sections, details, methods and general notes.
Conveyance System	A system of drainage facilities, natural or artificial, which collects, contains and conducts the flow of stormwater runoff. The elements of a natural conveyance system include, but are not limited to, swales, wetlands, drainage courses, streams, and rivers. The elements of an artificial conveyance system include, but are not limited to, gutters, ditches, pipes, constructed open channels and detention facilities.
Controlled Density Fill	A mixture of Portland cement, fly ash, aggregates, water and admixtures proportioned to provide a non-segregating, self-consolidating, free-flowing and excavatable material that will result in a hardened, dense, non-settling fill.
Control Zone	That roadside area defined by the "Control Zone Distance Table", found in Appendix 5 of the WSDOT Utilities Manual, within the road right-of-way in which placement of utility objects is controlled.
County Council	The Snohomish County legislative authority.
County Engineer, County Road Engineer, The Engineer	The County Road Engineer for Snohomish County with authority and duties as designated in RCW 36.75 and RCW 36.80, or his/her authorized designee. Also referred to as "the Engineer" herein.
Cover	Depth to top of pipe conduit, casing or gallery below the grade of a road or ditch.
Critical Area	The following areas and ecosystems: wetlands; areas with a critical recharging effect on aquifers used for potable water; fish and wildlife habitat conservation areas; frequently flooded areas; and geological hazardous areas.
CSBC	Crushed surfacing base course.
CSTC	Crushed surfacing top course.
Cul-de-sac	A road closed at one end, where the closed end is a circular or near circular shape providing a permanent turnaround.
Deceleration Lane	A speed change lane, including tapered areas, to enable a turning vehicle to slow to a safe turning speed after it has left the main stream of faster moving traffic.

Design Speed	A selected speed used to determine the various geometric design features of the roadway. The assumed design speed should be a logical one with respect to the topography, anticipated operating speed, the adjacent land use, and the functional classification of the roadway. Used to determine Stopping Sight Distance and Intersection Sight Distance requirements for new roadways.
Design Storm	A rainfall event of a size approved by the Director, used for the purpose of sizing and designing drainage facilities, stated in terms of a recurrence interval and a time period over which the rainfall amount is measured or analyzed (i.e. a 2-year, 24-hour storm).
Detention	The temporary storage of stormwater runoff to control peak discharge rates and allow settling of stormwater sediment.
Detention Facility	An open or closed drainage facility, such as a pond or tank, that temporarily stores stormwater runoff and releases it at a slower rate than it is collected by the drainage facility. The facility includes the flow control structure, the inlet and outlet pipes, and all maintenance access points.
Developer	A property owner, or his/her agents or contractors, responsible for applying for or receiving a permit or approval for development.
Deviation	A modification of these Standards approved by the County Engineer.
DHV	Design hour volume. Hourly traffic volume used for road design and capacity analysis, usually one or more peak hours during a 24-hour period.
Director	The Director of the Snohomish County Department of Public Works or his/her authorized representative.
DPW	Snohomish County Department of Public Works.
Drainage	The collection, conveyance, containment or discharge of stormwater runoff.
Drainage Facility	A system of collecting, conveying and storing stormwater runoff. Drainage facilities include, but are not limited to, all stormwater conveyance systems, and containment facilities including pipelines, channels, dikes, ditches, closed depressions, infiltration facilities, retention facilities, detention facilities, stormwater treatment facilities, erosion and sedimentation control facilities, and other drainage structures and appurtenances, both natural and artificial.
Drainage Manual	The drainage manual adopted by the director of public works.
Drive Aisle	An internal vehicle circulation system of private access ways for the passage of vehicles which may include fire lanes, auto courts and roads that are owned in common by the property owners of a development that are not located in an access easement, tract or right-of-way.

Driveway	The area for the passage of vehicles to a parking area or structure on a lot. A driveway begins at the property line or edge of an access easement or drive aisle and extends into the site. A residential driveway shall not serve more than one detached single-family or one duplex structure.
Driveway, Common	A driveway that provides a single, common vehicle access for up to four dwellings.
Driveway, Shared	A driveway that provides a single, common vehicle access for two lots.
Easement	A right granted by a property owner to specifically named parties or to the public for the use of certain land for specified purposes. Where appropriate to the context, "easement" may also refer to the land covered by the grant. This may include access, pedestrian paths, bicycle paths, utility easements, drainage, native growth protection areas, resource protection areas or open space.
EDDS	The Engineering Design and Development Standards of Snohomish County, adopted by the Snohomish County Department of Public Works pursuant to Title 13 SCC.
Edge of Traveled Way	The face of curb for roads that are, or will be, constructed to urban standards or the outside edge of pavement (not including paved shoulders) for roads that are, or will be, constructed to rural standards.
Encroachment	Occupancy of county right-of-way by non-roadway structures or other objects.
Emergency Vehicle Signal	A special adaptation of a conventional traffic signal specifically installed to allow for the safe movement of authorized emergency vehicles. When not providing for the movement of emergency vehicles the signal shall either flash continuously consistent with the requirements for a conventional traffic signal or display continuous green (allowed at non-intersection locations only). At no time shall the system simply be de-energized. LED displays are required.
Engineer	See County Engineer.
Fire Lane	Also "Fire apparatus access road." Any road or driving surface, whether public or private, that is designed and constructed to meet the access requirements of the county fire code, Chapter 30.53A SCC.
Franchise	A document granted by the County authorizing the use of road rights-of-way by public or private entities, subject to specified conditions, in accordance with RCW 36.55, RCW 80.32 and Chapter 13.80 SCC.
Geometrics	The physical arrangement of the visible elements of a road such as alignment, grade, curvature, width, and side slopes.
Grade	Rate or percent of change in slope either ascending or descending from or along the roadway. Measured along the centerline of the roadway or access point.

Hazard	A side slope, an object, water, or a drainage device, which, if impacted, would apply unacceptable impact forces on the vehicle occupants, or place the occupants in a hazardous position. May be either natural or man-made.
HMA	Hot mix asphalt.
HOV Lane	A road or highway lane designated for the exclusive use of high occupancy vehicles and marked or signed accordingly.
Hyporheic Zone	The saturated zone under and adjacent to a river or stream, comprising substrate with the interstices filled with water.
Infill Development	The development of a parcel of land in a highly developed urban area.
Infiltration	Hydrologic process of stormwater runoff soaking into the subsoil, commonly referred to as percolation.
Intersection Sight Distance	Distance required for a driver of a vehicle traveling at or near the posted speed on the major road to reduce speed to avoid overtaking a vehicle which has entered the intersection from the minor road whether by right- or left-turning movements or crossings.
Island	A defined area between traffic lanes for control of vehicle movements and/or for pedestrian refuge.
Landing	Road or driveway approach area to any public or private road. Also, the level area at the back of the sidewalk ramp, typically 4 feet wide.
LID	Low impact development is a stormwater management and land development strategy applied at the parcel and subdivision scale that emphasizes conservation and use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely mimic pre-development hydrologic functions.
Maintenance	Activities conducted on currently serviceable structures, facilities, and equipment that involves no expansion or use beyond that previously existing and results in no significant adverse hydrologic impact. It includes those usual activities taken to prevent a decline, lapse or cessation in the use of structures and systems. Those usual activities may include replacement of dysfunctional facilities, including cases where environmental permits require replacing an existing structure with a different type structure, as long as the functioning characteristics of the original structure are not changed. This does not include expansion in physical dimension, capacity or use.
Manhole	Opening in an underground utility system into which workers or others may enter for the purpose of making installations, inspections, repairs, connections, cleaning, and testing.
Median	That portion of a divided roadway separating the traveled ways for traffic in opposite directions.
MPH	Miles per hour.

MUTCD	The Manual on Uniform Traffic Control Devices, published by the U.S. Department of Transportation.
New Development	Land disturbing activities, including Class IV general forest practices that are conversions from timber land to other uses; structural development, including construction or installation of a building or other structure; creation of impervious surfaces; and subdivisions, short subdivisions, residential condominiums, single-family detached units (SFDU), planned residential developments (PRD) and binding site plans. Projects meeting the definition of redevelopment shall not be considered new development.
Non-Motorized Transportation	Any mode of transportation that utilizes a power source other than a motor.
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 the most frequently used measure of the operating speed associated with a particular location or geometric feature. Used to determine stopping sight distance and intersection sight distance for existing roadways.
P85 Speed or 85th Percentile Speed	The speed determined by a speed study, at or below which 85% of the drivers of a particular section of road will choose to drive and feel comfortable, based on the prevailing weather and traffic conditions.
Passing Sight Distance	The minimum sight distance required for the driver of one vehicle to pass another vehicle safely and comfortably.
Pavement	The combination of subbase, base course, and surfacing materials placed on a subgrade to support the traffic load and distribute it to the subgrade.
PC	Point of curvature. The point of change from a back tangent to a circular curve.
PCC	Portland cement concrete or point of compound curvature.
PDS	Snohomish County Department of Planning and Development Services.
Pedestrian	Person traveling on foot, in a wheelchair or similar device.
Pedestrian Facilities	Infrastructure and equipment to accommodate or encourage walking, including sidewalks, curb ramps, traffic control devices, trails, walkways, crosswalks, paved shoulders, and other design features intended to provide for pedestrian travel.
Permanent Road End	The physical termination of a roadway without potential for extension, based on the best available evidence at the time of evaluation. Typically a cul-de-sac.
Permit	A document or franchise authorized by the county.
PI	Point of intersection. The point of intersection of a back tangent and a forward tangent.
Pipe	Structural tubular product designed, tested, and produced for the conveyance of specific liquids or gases under specific conditions.

Planter strip or planting strip	A planter strip is that portion of right-of-way between the curb line and the sidewalk, or between the sidewalk and the right-of-way line, used for the planting of trees, shrubs, groundcover or grass.
Plowing	Direct burial of utility lines by means of a 'plow' type mechanism that breaks the ground, places the utility line at a predetermined depth, and closes the break.
Posted Speed	Maximum vehicle speed signed along a roadway.
Primitive Road	An unmaintained or privately maintained county right of way that meets the requirements of RCW 36.75.300. Typically, a primitive road has a gravel or earth driving surface, and an average annual daily traffic of one hundred or fewer vehicles. A primitive road must be established by County Council ordinance.
Private Road	Privately owned and maintained access provided for by a tract, easement or other legal means, typically serving three or more dwelling units.
PT	Point of tangency. The point of change from a circular curve to a forward tangent.
Radius Return Access Point	Intersection of an access point with a county road delineated by either pavement edges or curbs laid out at each edge in a curvilinear fashion between tangents formed by the edge of roadway (or curb face) and the edge of access point (driveway pavement or curb face).
Record Drawings	An approved final revision of a design drawing or plan updated to include information from field inspectors showing the true condition or configuration of what has been built. The drawing or plan is designated "Record Drawing" by stamp or lettering on the drawing and the primary function is to document what was designed and what was actually built, including dimensions, elevations, location and calculations. Formerly known as "as-built" or "as-constructed" drawings.
Redevelopment	The following activities that take place on a site that already has 35 percent or more existing impervious surface coverage: the creation of new impervious surface(s); structural development including construction, installation, expansion or replacement of a building footprint or other structure; replacement of existing impervious surface that is not maintenance; and land disturbing activity.
Relocation	Planned change of location of an existing facility to a more advantageous place. Character or general physical nature of the facility will not change.
Replacement	Installation of a like element of a utility system or subsystem in the same, or nearly the same, physical location normally due to damage, wear or obsolescence of the element.
Residential Property Use	Residential developments with two or less dwelling units (duplex or single family residence) per parcel. Consistent with building permit administration in Snohomish County which treats duplex or single family developments as residential building permit applications.

Restoration	All work necessary to replace, repair or otherwise restore the right-of-way and all features contained within the right-of-way to the same or equivalent condition as before.
Retention	The detainment of stormwater runoff in a basin without release except by means of evaporation or infiltration.
Retention Facility	An open or closed drainage facility, such as a pond or tank, that stores stormwater runoff without release except by means of evaporation, plant transpiration or infiltration into the ground. The facility includes the flow control structure, the infiltration system, the inlet and outlet pipes, and all maintenance access points.
Right-of-Way (R/W)	All property in which the County has any form of ownership or title and which is held for public road purposes, regardless of whether or not any road exists thereon or whether or not it is used, improved, or maintained for public travel.
Road	An open, public way for the passage of vehicles that, where appropriate, may include pedestrian, equestrian and bicycle facilities. Limits include the outside edge of sidewalks, or curbs and gutters, planter strips, paths, walkways, or side ditches, including the appertaining shoulder and all slopes, ditches, channels, waterways, and other features necessary for proper drainage and structural stability within the right of way. The term "road" is used interchangeably with "street".
Road End	The physical termination of the traveled way.
Roadway	Portion of a road, street or highway improved, designed, or ordinarily used for vehicular travel, exclusive of the sidewalk or shoulder even though such sidewalk or shoulder is used by persons riding bicycles.
Rural Area	Those areas of the county outside an urban growth area as depicted in the Snohomish County comprehensive plan.
SCC	Snohomish County Code.
Separate Turn Lane	An auxiliary lane for traffic in one direction, which has been physically, separated from the through traffic lane(s) by a traffic island or stripe. Frequently provided in one or more approaches to an intersection.
Shared Roadway	A roadway, without a painted bicycle lane, that does not prohibit bicycles.
Shared Use Path	A multi-use facility physically separated from the roadway, for bicyclists, pedestrians or other non-motorized users.
Shoulder	That portion of the roadway contiguous with the traveled way on the same level for accommodating bicycle and pedestrian travel, stopped vehicles, emergency use, and for lateral support of base and surface courses.
Sidewalk	A facility constructed between the curb line, in the lateral line of a roadway, and adjacent property set aside and intended for pedestrian use, or such portion of private property that parallels, and is in proximity to, a public roadway and dedicated for use by pedestrians. Sidewalks are typically constructed of concrete but may be asphalt.

Signed Shared Roadway	A roadway, designated by signing as a preferred route for bicycle use, with appropriate improvements such as widened shoulders.
Site	The area defined by the legal boundaries of a parcel or parcels of land that is (are) subject to new development or redevelopment including contiguous improvements in the right-of-way. For road projects, the lengths of the project site and right-of-way boundaries define the site.
Snohomish County Drainage Manual	See Drainage Manual.
Speed Change Lane	Separate lane to allow a vehicle entering or leaving a roadway to increase speed (acceleration lane), or decrease speed (deceleration lane) to a rate at which it can safely merge with, or diverge from, through traffic.
Stopping Sight Distance	Distance needed for a vehicle traveling at or near design speed to stop, prior to reaching a stationary object in its path.
Stormwater Facility	See Drainage Facility.
Stream	Those areas where naturally occurring surface waters flow sufficiently to produce a defined channel or bed which demonstrates clear evidence of the passage of water including, but not limited to bedrock channels, gravel beds, sand and silt beds and defined channel swales. A defined channel or bed means a water course that is scoured by water or contains deposits of mineral alluvium. The channel or bed need not contain water during the entire year. Streams do not include water courses which were created entirely by artificial means, such as irrigation ditches, canals, roadside ditches, or storm or surface water runoff features, unless the artificially created water course contains salmonids or conveys a stream that was naturally occurring prior to the construction of the artificially created water course.
Street	Used interchangeably with "road," especially in urban areas. See "Road" definition.
Swale	A shallow drainage conveyance with relatively gentle side slopes, generally with flow depths less than one foot.
Temporary Road End	The physical termination of a roadway with potential for further extension typically ending in a temporary cul-de-sac or hammerhead turnaround.
Traffic	Movement of motorized and non-motorized vehicles, persons, cargo, and equestrians through the transportation network comprised of streets, roads, sidewalks, walkways and shared use paths.
Traffic Control	Those activities necessary to safeguard the general public, as well as all workers, during the construction and maintenance of roadway and other facilities within the right-of-way.
Traffic Engineer	Snohomish County Traffic Engineer.

Trail	Public way constructed primarily for, and open to, pedestrians, bicyclists and equestrians.
Trail Access Permit	A permit issued pursuant to Chapter 13.60 SCC to allow access to a legal lot via county right-of-way where no county-maintained road exists.
Traveled Way	That portion of the roadway intended for the movement of vehicles, including bicycles in bicycle lanes, but exclusive of shoulders.
Trip	A one-direction movement, which begins at an origin and ends at a destination.
Trip Distribution	The calculation and assignment of trips from a land development proposal to the surrounding road network.
Trip End	Each trip has two ends, the origin and the destination. Trip ends for a location are the summation of origins and destinations.
Trip Generation	The number of trips created by a particular land use or activity.
Ultimate Buildout	The development potential based on established GMA land use designations, taking into account existing developments and assumptions about environmental constraints and other limiting features.
Unmaintained Road	A road within county right-of-way that is accessible to public travel but is not maintained by the County.
Unopened Right-of-Way	A county right-of-way that exists by dedication or deed, but for which no vehicular roadway meeting these Standards has been constructed by the County or other parties.
Urban Area	Those areas designated by the County's comprehensive plans allowing densities of three dwelling units per acre (3 DU/acre) or greater, together with any adjacent areas designated as commercial or industrial. May also be defined as all land, regardless of current comprehensive plan designation, located within an urban growth area (UGA) officially adopted by the County Council pursuant to the State Growth Management Act, RCW 36.70A.
Urban Growth Areas (UGAs)	Those areas designated by the County after consultation with cities, where urban growth will be encouraged and supported by public facilities and services. The urban growth areas include areas and densities sufficient to permit the urban growth that is projected to occur in the county for a 20 year period. Urban growth refers to growth that makes intensive use of land for the location of buildings, structures, and impermeable surfaces to such a degree as to be incompatible with the primary use of such land for the production of food, other agricultural products or fiber or the extraction of mineral resources.
Utility	Any public or private entity whose principal purpose is to provide electricity, water, sewer, storm drainage, gas, radio, television, telephone and/or other forms of communication utilizing the electromagnetic spectrum to the public, except personal wireless telecommunications services.

Walkway	A facility designated for pedestrian and non-vehicular traffic. Walkways are typically constructed of asphalt and built over existing ground without being raised. Separation from vehicle traffic may be provided by pavement striping, extruded curb, ditch or open space.
Wetlands	Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include, but are not limited to swamps, marshes, bogs and similar areas, as well as artificial wetlands intentionally created from non-wetland areas to mitigate for conversion of wetlands, as permitted by the County. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to irrigation and drainage ditches, grass-lined biofiltration swales, canals, detention facilities, wastewater treatment facilities, farm ponds and landscaping amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street or highway.
Window Cut	A rectangular cut in asphalt or concrete pavement (typically ranging in size from 4 square feet to 25 square feet) undertaken by a utility for repair of underground facilities or to install an underground service connection.
Woonerf	Dutch for “street for living.” A joint-use access way, widely used in Europe, that is designed for priority access by non-motorized users (pedestrians and bicyclists) and secondarily by motor vehicles.
WSDOT	Washington State Department of Transportation.