

Seattle Permits

— part of a multi-departmental City of Seattle series on getting a permit

Grading Regulations and Submittal Requirements in Seattle

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This Tip is designed to help applicants understand the requirements for sites regulated by Seattle's Grading Code, Seattle Municipal Code (SMC) Chapter 22.170. This code applies to both permanent and temporary grading (excavation, backfilling, or stockpiling of earthen material or backfill materials). It applies to other land disturbing activities such as the replacement of hard surfaces like driveways, plazas, and parking lots, and removal of roots, stumps, or other vegetation that includes ground disturbance, maintenance and protection of grades, slopes, soil stability. It also applies to the correction of hazards related to any of items the above. The purpose of the Grading Code is to protect the graded site and adjoining public and private properties, preserve natural drainage patterns and watercourses, and control pollution.

All grading activity, whether or not it requires a permit or approval from the City, must comply with the provisions of the Seattle Grading Code.

You may need a separate grading permit if your grading activity isn't associated with an active construction or building permit. When your grading is associated with a building permit (for example: new buildings or structures, building additions or alterations, shoring and excavation, etc.), grading review and approval are a component of the building permit and you won't need a separate grading permit. We only require a grading permit, or grading review for a building permit, when your project exceeds the thresholds in section 22.170.060 of the Seattle Grading Code.

GENERAL STANDARDS

The Seattle Grading Code includes specific rules regarding the protection of adjoining property, erosion control, fencing, boundary designation, and temporary stockpiling during grading activity. Volume 2: "Construction Stormwater Control" of the City of Seattle Stormwater Manual (Directors' Rule SDCI 10-2021/SPU DWW-200) specifies the best management practices (BMPs) for meeting erosion control requirements.

When you alter the existing grade of a site by filling, excavating, or moving earth materials, you must protect all adjoining property during grading and construction from encroachment or collapse by sloping the sides of the temporary grading at a slope that is safe and not steeper than 1 horizontal to 1 vertical. In addition, you need to protect the adjoining property from encroachment or collapse by sloping the sides of the permanent grading at a slope not steeper than 2 horizontal to 1 vertical. The SDCI Director may approve permanent slopes of greater steepness based on a design by the geotechnical engineer of record. If a slope stability analysis is deemed necessary by the geotechnical engineer or the Director, the analysis must show a factor of safety of at least 1.5 for static conditions and 1.1 for pseudostatic conditions. In areas of known unsuitable soils, the Director may require slopes of lesser steepness.

GRADING PERMIT THRESHOLDS

Thresholds for when the City requires a permit or approval relate to the site characteristics and the quantity of proposed earth movement. "Site" as defined by the Grading Code for grading review purposes may include two or more contiguous project sites and the work proposed within the City right-of-way. We may group two or more project sites together if they are under the control of the same person or persons and construction will occur at approximately the same time.

Note: If your project will include rockeries or retaining walls that are 4 feet tall or higher or if you will be using structural shoring, you need a construction permit (new construction, addition/alteration, shoring and excavation). In that case, the grading permit will be an element of the construction permit.

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If you plan to conduct any grading in a floodplain, you need a floodplain development permit. For more information on floodplain development regulation, please see SMC 25.06 and Tip 111, Construction and Development in Floodplains.

The Seattle Grading Code specifies when you can conduct grading without a permit or approval. The Seattle Department of Transportation (SDOT) administers the Grading Code in the street right-of-way through street use permits. You do not need a permit from SDCI if your project is located in the street right-of-way or if it is considered exempt. This includes some projects on publicly-owned property or interstate railroad right-of-way, some pavement maintenance practices, and some utility projects. However you must comply with the standards set forth in the Grading Code. Contact the SDOT for permit requirements when grading in the right-of-way. You can find exempt activities and addresses of City projects in the Seattle Grading Code section 22.170.060B.

General Sites: You need an SDCI grading permit or approval if you meet any one of the following conditions:

1. Grade changes of more than four feet and
 - a. the cumulative volume of excavation, fill, dredging or other earth movement is more than 50 cubic yards (over the lifetime of the site) or
 - b. the grading will result in a permanent slope steeper than three horizontal to one vertical, or
 - c. the grading will result in a temporary slope steeper than one horizontal to one vertical
2. Any grading if the combined volume of excavation, filling, and other movement of earth material exceeds 500 cubic yards
3. 5,000 square feet or more of land disturbing activity on a site
4. 750 square feet or more of new plus replaced hard surface

Environmentally Critical Areas (ECA) SMC 25.09: Grading is prohibited in certain ECAs. If grading in an ECA is allowed per the ECA code, you will need a grading permit or approval if you meet any one of the following conditions:

1. Any land disturbing activity in riparian corridors, wetlands, wetland buffers, and shoreline buffers
2. Land disturbing activity in liquefaction-prone areas, abandoned landfills, seismic hazards areas, peat settlement-prone areas, and volcanic hazard areas, if

any one of the general site thresholds (above) is met

3. Land disturbing activity in any environmentally critical area not listed above, if the combined volume of excavation, filling, and other movement of earth material is more than 25 cubic yards, or if any one of the general site thresholds (above) is met

Shoreline Districts: Within Shoreline Districts as defined in SMC 23.60.010, a SDCI grading permit or approval is required for any grading of lands covered by water; or if there will be any land disturbing activity within 100 feet of the ordinary high water mark; or if the combined volume of excavation, filling, and other movement of earth material is more than 25 cubic yards in the area between 100 and 200 feet of the ordinary high water mark.

Riparian and Wetland Environmental Critical Areas: A SDCI grading permit or approval is required if there will be any land disturbing activity in an ECA Riparian Management Area or wetland or wetland buffer as defined in SMC 25.09.020.

Landslide-Prone and Steep Slope Areas: A grading permit or approval is required if more than 25 cubic yards of earth will be moved. Grading in landslide-prone and steep slope areas is prohibited or restricted as described in Regulations for Environmentally Critical Areas (ECA) SMC 25.09.

"Potentially Hazardous Locations": You'll need a permit to move any earth on any of the following types of sites:

- Sites that are listed for investigation, cleanup, or other actions regarding contamination
- Existing and abandoned solid waste disposal sites
- Hazardous waste treatment, storage or disposal facilities

Note: If your project includes work on potentially hazardous sites, you must provide a copy of all applicable permit or approval applications from the appropriate regulatory agencies. Also, the plans must note the presence of any past or existing contamination with a prominent boxed note.

Temporary Stockpiles: You'll need a grading permit for temporary stockpiling if grading exceeds any of the grading permit thresholds.

"In-Place Ground Modification": A permit is always required, unless the department finds the work to be insignificant.

Extraction of Groundwater From Well Dewatering

Systems: You'll need a grading permit if you plan to install any well dewatering system that will extract groundwater including, but not limited to, well point dewatering for construction and wells for treatment of contaminated groundwater.

Grading near Public or Private Properties: You'll need a permit when there's excavation or fill in excess of three feet vertically near the public place (within a 1:1 sloped line up or down from the property line).

for various sites. You can find the required application materials to be submitted to SDCI for grading permits or approvals in SGC 22.170.070. If you are only proposing grading that is incidental to your construction and within four feet or less of the building footing, the only information we require is the location of temporary stockpiles, which may be shown on the plot plan. Please note that we do not require a grading permit for the exempted activities listed in subsection 22.170.060B of the Seattle Grading Code.

Table 1 summarizes when grading approval is required

Table 1

Cumulative Threshold, in cubic yards	TYPE OF SITE					All Other Sites and ECAs
	ECA a Riparian Management Areas, Wetlands, Wetland Buffers*	ECA Steep Slope Areas and Buffers, ECA Potential Slide Areas, and ECA Known Landslides*	Shoreline Habitat**		Potentially Hazardous Locations	
			Lands covered by water and from a ordinary high water to 100 feet	Between 100 feet and 200 feet from ordinary high water		
0	G1	G1	G1	G1	G1	G1
>0	G	G1 G2 G4 G5	G		G	G1 G2 G4 G5
>25		G		G		
>50						G3
>500						G

G Grading permit is required

G1 Grading permit is required for in-place ground modification, except when waived by the director, or for extraction of groundwater from a well dewatering system

G2 Grading permit is required if grade change is greater than 4 feet, and:

- permanent slope is greater than 3:1, horizontal to vertical, OR
- temporary slope is greater than 1:1, horizontal to vertical

G3 Grading permit is required if:

- grade change is greater than 4 feet

G4 Grading permit is required if:

- 5,000 square feet or more of land disturbing activity on a site, or
- 750 square feet or more of new or replaced hard surface

G5 Grading permit is required near a public place (streets, alleys, or other rights of way) if:

Excavation or fill in greater than 3 feet, measured vertically, on private property within any area between the vertical prolongation of the margin of a public place, and a 100 percent slope line (45 degrees from a horizontal line) from the existing elevation of the margin of a public place to the proposed elevation of the private property.

Table 1 continued:

Note: Grading in excess of 500 cubic yards or grading on sites containing certain ECAs may need to be assessed by the City of Seattle per the State Environmental Policy Act (SEPA) and the Seattle SEPA Ordinance (Chapter 25.05, SMC).

Please see this ordinance and Tip for more information on SEPA requirements:

- State Environmental Policy Act (SEPA) - SMC 25.05
- Tip 208, *State Environmental Policy Act (SEPA) Environmental Review in Seattle*

Floodplain Development: any grading in a floodplain requires a Floodplain Development Permit.

Please see this code and this Tip for more information on Floodplain Development regulations:

- SMC 25.06
- Tip 111, *Construction and Development in Floodplains*

* Please see this ordinance and these Tips for more information on ECAs:

- Environmental Critical Areas Ordinance - SMC 25.09
- Tip 328, *Environmentally Critical Areas Exceptions*
- Tip 331, *Environmentally Critical Areas — Tree and Vegetation Overview*
- Tip 331A, *Environmentally Critical Areas: Vegetation Restoration*

** Please see Please see this ordinance and these Tips for more information on shoreline permitting:

- SMC 23.60
- Tip 209, *Application Requirements for Shoreline Permits*
- Tip 209A, *Shoreline Substantial Development Exemptions Application Instructions*

GRADING PERMIT SUBMITTAL REQUIREMENTS

Our submittal requirements include the following for most projects:

1. Vicinity map and legal description of the site
2. Site Plan (See SDCI Tips 103, *Site Plan Requirements*; 103A, *Site Plan Guidelines*; and 103B, *Environmentally Critical Area Site Plan Requirements* for Site Plan requirements and guidelines)
3. Grading Plan¹ (See the Grading Plan Requirements in the following section. Note: if we don't require your Grading Plan to be prepared by a licensed civil engineer or geotechnical engineer, you may omit a separate grading plan if all of the information is shown on the site plan or the drainage plans)
4. Construction Stormwater Control (CSC) and Soil Amendment (CSC/SOIL) Plan². See Volume 1, Chapter 8 of the Seattle Stormwater Manual for plan requirements
5. Drainage and Wastewater Control (DWC) Plan². See Volume 1, Chapter 8 of the Seattle Stormwater Manual for plan requirements
6. Drainage Report (if required)². (See Volume 1, Chapter 8 and Appendix B of the Seattle Stormwater Manual for Drainage Report requirements)
7. Geotechnical Report (if required)

ADDITIONAL REQUIREMENTS

The Department of Ecology (Ecology) requires a completed Notice of Intent application and coverage under Ecology's Construction Stormwater General Permit for any land disturbing activities such as clearing, grading, excavating, and/or demolition if the project:

Disturbs one or more acres of land area, or is "part of a larger common plan of development or sale" that will ultimately disturb one or more acres of land, and discharges stormwater from the site into state surface water(s) or into storm drainage systems, which discharge to state surface waters, or is a significant contributor of pollutants to waters of the state, as determined by Ecology for any size construction site.

You can find all required forms and additional information about the Construction stormwater General Permit on [Ecology's construction website](#).

SDCI requires proof of coverage under the Construction Stormwater General Permit before we issue your grading permit if there is any known soil or groundwater contamination on the site. You may need additional permits from Ecology for long term treatment of contaminated groundwater and discharge (e.g. Individual Permit).

If your projects will treat contaminated groundwater and discharge it to a Combined Sewer, you need a King County construction dewatering authorization before we issue your grading permit. You can find all required forms and additional information for this authorization on the [King County Industrial Waste – Construction dewatering website](#).

In addition, you need a side sewer permit for temporary dewatering from SDCI for any temporary groundwater discharge to a combined sewer.

GRADING PLAN REQUIREMENTS

Submittal requirements will include the following for most projects:

1. A bar scale and north arrow
2. An estimate of the total combined volume of excavation, filling, and other movement of earth material
3. Notes to describe the following:
 - a. Immediate and long-term use of the property
 - b. Identify past industrial or manufacturing uses or hazardous materials, treatment, disposal or storage that has occurred on the site
 - c. For structural fill, specify the compaction criteria
 - d. If excavated soil is transported to another site in the City of Seattle limits, provide Grading Permit or application number.
4. A topographic plan showing the existing and proposed contours of the land at not more than 2-foot

¹ Projects with 2,500 cubic yards of total graded materials require a grading plan prepared by a licensed civil engineer.

² Projects with 5,000 square feet or more of new plus replaced hard surface or 1 acre or more of land disturbance area will require drainage plans (CSC/SOIL Plan and DWC Plan) and a drainage report prepared by a licensed civil engineer.

contour intervals, and the location and amount of all temporary stockpiles and excavations. (On steeper sites, the Director may authorize plans to show a contour interval greater than 2 feet but in no case more than a 5-foot interval. The information relating to adjacent properties may be approximated.

5. Cross-sections of the site and adjacent property show existing and proposed grades.
6. Show temporary cuts if recommended by a geotechnical engineer.
7. The limits of proposed land disturbance.
8. Existing and proposed retaining walls, rockeries, and all other features that create sudden grade changes. Proposed retaining walls and rockeries shall include top and bottom elevations at the ends, high points, and at least every 25 feet along the feature.
9. Location of existing and proposed buildings, structures, hard surface, and other improvements on the site.
10. The approximate location of all buildings, structures, hard surface, and other improvements on adjacent land.
11. The location of existing and proposed drainage control facilities, drainage discharge points, watercourses, drainage patterns, and areas of standing water.
12. Environmentally critical areas and associated setbacks and buffers.
13. Non-disturbance areas.
14. The approximate location, type, and size of trees and other vegetation on the site. All Significant trees or trees to be protected within or adjacent to the site must be surveyed and the dimensions of the drip lines must be shown on the plans.
15. Designation of trees and vegetation to be removed, and the minimum distance between tree trunks and the nearest excavation and/or fill.
16. Areas where equipment traffic will be permitted and excluded.
17. Locations and extents of any past or existing soil and/or groundwater contamination. Also, add a prominent boxed note to the plan describing any past or existing contamination.

GRADING PERMIT APPROVALS

Grading approvals or permits issued by SDCI will often include conditions such as:

- Limiting the work to specific seasons or weather conditions
- Sequencing of work
- Special inspections
- Conforming to geotechnical engineer's recommendations
- Best management practices
- Revegetation
- Long-term maintenance of the site

Grading permits are valid for 18 months and may be renewed for up to an additional 18 months unless we specify a shorter or non-renewable time frame when we issue your permit.

GRADING PERMIT INSPECTIONS

At a minimum, the following inspections are required by SDCI:

- First Ground Disturbance Inspection is required after your permit is issued and before any ground disturbance. The site inspector will meet with you to discuss your proposed erosion control measures and the CSCP/ PCSP plan.
- Site Final Inspection is required before we can finalize your grading permit. A site inspector will ensure that you have removed the temporary erosion control measures, installed the final erosion control, and implemented the soil management plan.

Other inspections may be required by a private geotechnical engineer or biologist if your project is subject to special inspections.

To schedule an inspection, call 684-8900 or go online to the [Seattle Services Portal](#).

HELPFUL RESOURCES

Seattle Municipal Codes (SMC):

- Grading Code – SMC 22.170
- Stormwater Code – SMC 22.800
- State Environmental Policy Act - SMC 25.05
- Environmental Critical Areas Ordinance - SMC 25.09

Tips:

- Tip 103, *Site Plan Requirements*
- Tip 103A, *Site Plan Guidelines*
- Tip 103B, *Environmentally Critical Area Site Plan Requirements*
- Tip 106, *General Standards for Plans and Drawings*
- Tip 111, *Construction and Development in Floodplains*
- Tip 208, *State Environmental Policy Act (SEPA) Environmental Review in Seattle*
- Tip 209, *Application Requirements for Shoreline Permits*
- Tip 209A, *Shoreline Substantial Development Exemptions Application Instructions*
- Tip 242, *Tree Protection Regulations in Seattle*
- Tip 325 – *Environmentally Critical Areas: Peat Deposits*
- Tip 327a, *Environmentally Critical Areas Exemptions, Relief from Prohibition on Steep Slope Development, and Modifications to Submittal Requirements — Application Instructions and Submittal Requirements*
- Tip 327b, *Environmentally Critical Areas Small Project Waivers Application Instructions and Submittal Requirements*
- Tip 328, *Environmentally Critical Areas Exceptions*
- Tip 331, *Environmentally Critical Areas — Tree and Vegetation Overview*
- Tip 331A, *Environmentally Critical Areas: Vegetation Restoration*
- Tip 503, *Side Sewer Permits in Seattle*

- Tip 508, *Grading and Retaining Wall Construction Near or Adjacent to Property Lines*

Director's Rules:

- DR 8-89, *Development Activity Requiring a Permit or License Under the Floodplain Development Ordinance: Exemptions*
- DR 20-90, *Regulation and Enforcement of Investigative Field Work Performed in Environmentally Sensitive Areas and Shorelines*
- DR 8-93, *Acknowledgement of Risk of Development on Sites with Potentially Hazardous Conditions*
- DR 3-2007, *Application Submittal Requirements in Environmentally Critical Areas*
- DR 26-2015, *Requirements for allowing grading in ECA between Oct. 31st and April 1st (grading season extension application)*
- DR 30-2015, *Clarifying Landscape Standards, including Seattle Green Factor*
- DR 5-2016, *General Duties and Responsibilities of Geotechnical Engineers*

QUESTIONS?

For more information about grading approvals, permits, standards or submittal requirements for a specific project, contact:

- Site Development staff: (206) 684-8860
- Drainage & Sewer Review staff: (206) 684-5362 or sidesewerinfo@seattle.gov
- Customer Service: (206) 684-8600

Access to Information

Links to electronic versions of SDCI Tips, Codes, and Forms are available on [SDCI's website](http://www.sdciconsultants.com).