

Soils Report Requirements

Applicability

A Soils Report is required for all structures requiring a [Building Permit \(BLD\)](#) and/or associated with a [Site Work \(SW\) Permit](#). Please submit your project's Soils Report via MyBuildingPermit.com as part of the overall permit submittal.

Exceptions:

- a) Single-story residential room additions (when approved by the Building Official in advance)
- b) Carports
- c) Utility sheds
- d) Decks
- e) Detached garages accessory to single family dwellings. The detached garage must be located more than 10 feet from the top or bottom of a slope and not located in an area of the City where soil or geological problems are known to exist (i.e. steep slopes, areas of historic slope failure, or coal mine hazards).

Note: all structures constructed under an exception must be designed using an assumed maximum soil bearing value of 1,500 pounds per square foot or less. No other exceptions will be granted without the approval of the Building Official.

Required Issaquah Municipal Code (IMC) Compliance

All Soils Reports must conform to [IMC 18.802 – Critical Areas Regulations](#), depending on the critical areas present on your project site:

- [IMC Title 18, Article II – Geologically Hazardous Areas](#)
 - [IMC 18.802.130 – Geological Hazard Areas](#)
 - [IMC 18.802.140 – Coal Mine Hazard Areas](#)
 - [IMC 18.802.150 – Erosion Hazard Areas](#)
 - [IMC 18.802.160 – Landslide Hazard Areas](#)
 - [IMC 18.802.170 – Seismic Hazard Areas](#)
 - [IMC 18.802.180 – Steep Slope Hazard Areas](#)
 - [IMC 18.802.185 – Peat Settlement Prone Areas](#)
 - [IMC 18.802.190 – Mitigation of Geologic Hazards](#)
- [IMC Title 18, Article III – Wetlands](#)
- [IMC Title 18, Article IV – Fish and Wildlife Habitat Conservation Areas \(FWHCAs\)](#)
- [IMC Title 18, Article V – Streams](#)
- [IMC Title 18, Article VI – Critical Aquifer Recharge Areas \(CARA\)](#)
- [IMC 18.802.400 – Critical Areas Studies](#)
- [IMC 18.802.410 – Geologic Hazard Critical Area Study Requirements](#)

Soils Reports for Stormwater Site Plans

For Soils Reports prepared as a component of a Stormwater Site Plan, please see the Soils Report Requirements in Step 1 of the [Guidelines for Preparing a Stormwater Site Plan](#).

If stormwater infiltration or dispersion is proposed on-site, the Soils Report must assess compliance with the following requirements from the [Washington State Department of Ecology 2019 Stormwater Management Manual for Western Washington \(SWMMWW\)](#):

- [Volume V, Section 3: Dispersion BMPs \(Best Management Practices\)](#)
- [Volume V, Section 5: Infiltration BMPs](#)

Additional Soils Report Requirements

1. Per [IMC 18.810.090 - Grading](#), the Soils Report must show how grading design maintains as much of the natural vegetation and contouring as possible. Exposed cuts and fills must be minimized, and final grading recontoured and landscaped to blend into the site and appear natural.
2. The Soils Report shall be prepared by a qualified professional with expertise in geotechnical engineering and licensed in the State of Washington. The qualified professional is required to review all construction drawings, structural calculations, site stormwater management, and provide a letter verifying that all design requirements are met.
3. The Soils Report shall include, but is not limited to, test records, results, evaluations, and recommendations consisting of the following items, as applicable:
 - a) Boring and test pits are required to be of a sufficient depth. The minimum depth of borings shall be deep enough to penetrate surface fill over native in-situ materials. Field report boring log should be included as an appendix to the Soils Report. Hand auger boring will not be accepted.
 - b) The Soils Report must identify the plans that are being reviewed in coordination with the Soils Report. The report must describe the buildings, expected cuts and fills, and associated retaining walls, as needed, and their locations on-site.
 - c) For the purpose of issuance of a Building Permit, the City of Issaquah will not accept a previous report addressing a different project although this information may be accepted as part of a new Soils Report. All Soils Reports must be project-specific unless otherwise accepted by the Building Official.
 - d) Plot plan showing the location of all test borings or excavations.
 - e) Sub-surface field investigation and the associated results.
 - f) Elevation of the water table and groundwater seepage, if encountered.
 - g) Results of slope stability analysis (required on all sloped lots).
 - h) Expected total differential settlement.
 - i) Engineering recommendations for foundation, retaining wall, and/or basement wall design and drainage.
 - j) Piling requirements.
 - k) Recommendations for slabs.
 - l) Soil bearing value.
 - m) Active fluid pressure.
 - n) Specification of the friction coefficient.
 - o) Fill material – specify compaction requirements, keying or benching, maximum fill lifts, and field testing.
 - p) Potential for liquefaction and seismic design.
 - q) Special inspection requirements for earthwork, including foundations, prior to foundation inspection.
 - r) Construction sequencing plan to minimize risk of destabilizing the cut slopes or hillside (required on sloped lots). Deepened footing locations must be clearly addressed on sloped lots, per the requirements of Section 1808.7 and Figure 1808.7.1 in the 2018 International Building Code (IBC).
 - s) Oversized particles.
4. Inspection and certification of foundation footings by the qualified professional. The qualified professional may recommend in the report that they be called to inspect the footings prior to pouring concrete, including observations for pile installations. In most cases, the city will follow this recommendation and stamp the plans with this requirement as a "Special Inspection".
5. Consultant Peer Review: in areas with slope stability issues, buildings supported on fill material, and/or seismic concerns, the City of Issaquah may use the services of an outside geotechnical engineering firm. The fees to review this portion of work will be charged to the applicant and added to the sum of permit fees. Changes or revisions to approved plans that affect soils or foundation designs may also be subject to an outside review.

6. Plat Developments: single-family homes developed in newly platted areas where a preliminary plat soils report was approved by the City of Issaquah may use the original plat soils report for Building Permits for individual lots subject to the following:
 - a) The soils report for the plat must identify general soil conditions, recommendations, and design requirements as noted above for individual lots. Any sensitive areas as noted above must also be addressed in that report. Submit one copy of plat soils record to the Issaquah Building Department for plat record.
 - b) The plat soils report must reflect current plat layout, conditions, and location of lots and provide all the information requested in Item 3 above for each lot.
 - c) Soil borings or test pits must be adequately spaced so that they reflect soil conditions consistent with building development and not necessarily just utility or roadway development.
 - d) Each individual lot must be identified in the report (i.e. specific lot called out or lots XX through YY in which the specific lot is included within that range of lots)
 - e) There must be field reports prepared by the geotechnical engineering firm of record noting on-site grading operations (including structural fill placement observation and testing) in accordance with Soils Report recommendations. Submit all field reports as an appendix to the Soils Report. The field reports are not required to be submitted with the individual building permits, but must be the basis of the final acceptance letter.
 - f) A final acceptance letter or Soils Report addendum must be provided with each building permit application from the soils engineer of record accepting the work as installed and in conformance with the Soils Report recommendations. The final acceptance letter requires the individual lot to be identified in the letter as noted above.