New Westminster

511 Royal Avenue
New Westminster BC
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Geotechnical & Soil Report Requirements

The Queensborough area has very unusual soil conditions which make it difficult to build on. The soil conditions and high water table dictate special permit requirements, including drainage plans, site drainage plans, fill requirements, pile foundations, geotechnical reports, and details dealing with soil gases (methane gas) etc. Each application for new construction is required to include a site specific report prepared by a qualified professional Engineer registered in the Province of British Columbia. This report shall be prepared by a Geotechnical Engineer with design and on-site experience with flood plain related soils and must address both the placement of fill on the property and the technical building issues related to pile foundations, retaining walls, drainage and bearing capacity of soil. A proposed outline for the geotechnical report, including the items to be addressed is shown below; failure to address all the items may result in the report not being accepted.

Background Information

- legal description of the lot
- purpose of the report
- site description and proposed development
- location of services to dwelling
- proposed main floor elevation
- identification of the flood construction level
- field investigation
- soil and groundwater conditions

Conclusion & Recommendations

- confirmation that the proposed development is feasible
- fill placement recommendations and anticipated short and long term settlement
- when the primary consolidation is complete and the foundation can be constructed
- settlement gauges installation, if required and recommendations as to their installation
- recommendations as to how to deal with the driveway and sidewalk settlement
- confirmation that the fill placement will not cause settlement or subsidence of adjoining land/buildings or structures
- adjoining property will not be subject to flooding as a result of fill placement

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Piled Foundation and Seismic Considerations

- seismic design
- piling design and details
- potential damage to adjacent structures from pile driving

Lot Grading & Drainage Plans

- lot grading details
- site drainage details

Methane Gas

- geotechnical engineer to specify if methane gas is present
- propose methane gas barrier or ventilation system

Review and Inspection

- a outline of the review and inspection services provided by the geotechnical engineer during construction

Borehole log

- If the geotechnical engineer requires new boreholes; a detailed borehole log and site plan locating the borehole (s) needs to be provided.

Schedule A

Provide a one-page summary of the geotechnical report called "Schedule A" which will be included in the subsidence covenant to be registered on title. This summary needs to include the wording; "the subject parcel of the land may be used safely for the intended purpose of the single family residential dwelling from a subsidence point of view". In addition it shall make mention of the lot grading plan.