New Westminster

511 Royal Avenue
New Westminster BC
V3L 1H9

604 521 3711
info@newwestcity.ca
newwestcity.ca

Suspended Garage Floors in Single Family Dwellings

General

- Plans shall be affixed with the seal of a Registered Professional Engineer.
- The Professional Engineer's main area of practice must be structural engineering.
- Submitted plans must indicate that the design is in compliance with all applicable requirements of the BCBC , CSA S413, and items listed in this bulletin.
- Engineer's Letters of Assurance, Schedule B, must be submitted indicating responsibility for the disciplines of structural, insulation, condensation, and cavity ventilation. Geotechnical discipline may also be required.
- Provide sections and details showing assembly of the structural floor slab, supporting wall, footing, insulation, and ceiling support and finish.

Structure

- Foundation walls, footings, and suspended slabs must be engineered to support the design loads through the foundation to the subgrade.
- Minimum design live load shall be 6.0KPa.
- Deflection limit shall be L/360 for combined dead and live load.
- Suspended slab shall be constructed of reinforced concrete material.
- Structural floor slab shall be sloped to provide positive drainage to the outside rather than sloping of the concrete topping.
- Concrete curbs are required around the perimeter of the garage.
- All rebar shall be clearly detailed including dowels, lengths, specific locations and concrete coverage, etc.
- Provide header detail at openings. Specify maximum span.
- Structural concept reviews in the form of the APEGBC checklist may be required.

Environmental

- The garage must be designed ensuring proper garage ventilation, and an effective barrier to gas and exhaust fumes.
- The interior space below the underside of the structural garage floor shall be designed to prevent the diffusion of water vapours into the ceiling cavity, and shall also be insulated tightly with RSI 4.9 (R28) insulation. All joints must be sealed. Indicate the size and spacing of galvanized metal joists to be attached to the underside of slab to support ceiling finishes. Ceiling height to meet code.

Waterproofing

- The garage floor slab and curb must be waterproofed to prevent the infiltration of moisture.
- The waterproofing membrane must be specified on the plan, and should be a heavy-duty maintenance free approved material having a capacity for crack bridging. The waterproofing membrane shall be protected from wear and tear with a durable protective topping such as concrete.
- Liquids entering onto the waterproof membrane must have a means of egress.
- Cracks, control joints, floor penetrations must be sealed with flexible joint sealant to prevent the ingress of water.