

Vehicle Loading Requirements

Overview:

This document describes the City of Issaquah's requirements for the structural design of a condition that may occur with underground parking facilities or flood-control structures. It is intended to provide guidance in applying certain regulations and is for informational use only. It cannot be used as a substitute for construction codes or other municipal requirements.

Concrete slabs or utility vault lids that are subject to fire truck or semi-trailer loading must be designed for additional loading as prescribed below. This may also include the condition of a fire truck setting down stabilizer outriggers to extend a ladder. To determine whether the required fire truck access area may be restricted and whether the outrigger load is applicable, the project design team should contact:

Mark Lawrence, Assistant Fire Marshal
Eastside Fire & Rescue
mlawrence@esf-r.org
425-313-3322

Design Loading:

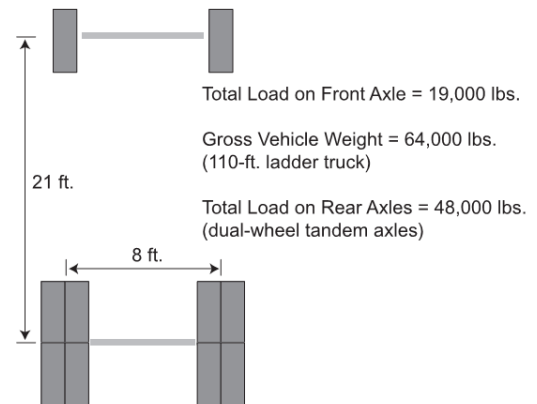
The concrete slab must be designed for the following live loads:

- HS20 loading required under the latest edition of the American Association of State Highway and Transportation Officials (AASHTO) publication entitled "Standard Specifications for Highway Bridges"

- Fire truck wheel and axle loads as indicated:

- HS20 loading required under the latest edition of the American Association of State Highway and Transportation Officials (AASHTO) publication entitled "Standard Specifications for Highway Bridges"

- Fire truck wheel and axle loads as indicated:



- Point load of 45,000 lbs. due to the maximum reaction which may occur at a stabilizer outrigger. This load must be applied on an 18"x18" area (2.25 s.f.) and also applied as an un-factored load on a 10"x14" area (1.0 s.f.). The live load conditions given previously are to be applied independently of each other, but in combination with other loads as required by AASHTO and the IBC. Each load must be increased by any factors required by AASHTO or the IBC, unless specifically exempted.