

Structural Plans
Type: All Construction
Subtype: RESIDENTIAL/ NON-RESIDENTIAL

City of Tukwila - Permit Center
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Tukwila, WA 98188
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When Required

Structural plans are detailed drawings that show how a building or structure will be constructed to ensure it is stable and able to withstand the loads it is designed for. These plans include information about the materials to be used, the dimensions and layout of structural elements (like beams, columns, and foundations), and any special details needed for the project.

Structural plans typically at a minimum include:

1. **Foundation Plan:** Details about the type of foundation (e.g., slab, pier, or footings), dimensions, reinforcement, and any load-bearing capacities.
2. **Framing Plan:** Shows how floors, roofs, and walls will be supported. This includes information on joists, trusses, rafters, and girders.
3. **Elevation and Section Views:** These give a vertical view of the structure, showing how different floors and elements are connected, as well as the height of different parts of the building.
4. **Details and Notes:** Specific instructions about connections, reinforcements, materials, and construction techniques.
5. **Schedules:** Lists that provide information on different elements like beams, columns, and reinforcement bars (rebar), specifying their sizes and types.
6. **Load Calculations:** Documentation that supports the plan's ability to handle loads, including live loads (like people and furniture) and dead loads (like the building's own weight).

Applicable Regulations:

- [TMC Title 16 Buildings and Construction](#)
 - [RCW 18.08.410](#)
 - [2021 Exempt from permit](#)
- Resources:**
- [Document Standards 2024](#)
 - [2021 IRC Section R301 Design Criteria](#)
 - [2021 IBC Section 107 Construction Documents](#)
 - [Construction Portal & Fees](#)

RCW 18.08.410

Authority; Washington State. Revised Code of Washington

The State in RCW 18.08.410 requires any and all plans to be drawn by a licensed professional (architect). The two notable exceptions are, "... residential building of up to and including four dwelling units ..." and, "... a building where the project size is not more than four thousand square feet ..." conditionally.

Residential

Authority; Building Official. International Residential Code Section: R301 Engineered design.

Where a building of otherwise conventional construction contains structural elements exceeding the limits of Section R301 or otherwise not conforming to this code, these elements shall be designed in accordance with accepted engineering practice.

Commercial

Authority; Building Official. International Building Code Section 107 Construction Documents

107.1 General. Submittal documents consisting of *construction documents*, statement of *special inspections*, geotechnical report and other data shall be submitted in a digital format, with each *permit* application. The *construction documents* shall be prepared by a *registered design professional* where required by the statutes of the *jurisdiction* in which the project is to be constructed. Where special conditions exist, the building official is authorized to require additional construction documents to be prepared by a registered design professional.

REGISTERED DESIGN PROFESSIONAL. An individual who is registered or licensed to practice their respective design profession as defined by the statutory requirements of the professional registration laws of the state or jurisdiction in which the project is to be constructed.