



Significant Changes to the 2021 Seattle Construction Codes

A [W] indicates the change is a significant Washington State code change. A [S] indicates a significant Seattle amendment:

2021 Seattle Building Code

Mass Timber [W]

Permits the wood of mass timber ceilings in a Type IV-B structures to be 100% exposed.

ICC A117.1-2017 Accessible and Usable Buildings and Facilities [W]

This code adopts the newest version of the accessibility standard – ICC A117.1. This standard has larger clearances for new construction primarily to accommodate dimensional requirements of powered wheelchairs and similar devices. Alterations in existing buildings are permitted to design to the prior standard, ICC A117.1-2009.

Tsunami Loads [W]

Structural design for tsunami loads was added in the 2018 Code for Risk Category III and IV buildings (hospitals, public safety buildings, and similar structures) located in the Tsunami Design Zones. The 2021 code adopts the latest Washington Tsunami Design Zone (WA-TDZ) maps. In addition, the state pre-adopted the latest tsunami design zone requirements from ASCE7-22.

Elevator Code (Seattle Building Code Ch.30) [S]

Seattle is adding specific elevator out of service and decommissioning requirements. Additional reporting requirements on elevator operation incidents and failures.

Loft [W]

Though previously allowed in Seattle by policy, the State has added provisions for lofts in residential occupancies. The idea is that this isn't considered habitable space and doesn't require compliance with the livability provisions, while providing area limitations, allows ceiling heights less than 80 inches, and reduces access and egress requirements to the loft to provide flexibility while maintaining a safe environment.

Energy Storage Systems (ESS) [W]

The 2021 state fire code has adopted updated requirements for ESS that include operational permit, system monitoring, area separation, and adds ongoing inspection and testing.

2021 Seattle Residential Code

Loft [W]

The State has modified existing requirements of sleeping lofts to provide flexibility while maintaining a safe environment.

Electric Vehicle Charging Infrastructure [W]

The State has approved EV infrastructure requirements for one and two-family dwellings.

2021 Seattle Existing Building Code

Unreinforced Masonry (URM) buildings (S)

URM buildings pose a significant collapse hazard in an earthquake. Seattle is providing several amendments to incentivize voluntary public safety improvements to unreinforced masonry (URM) buildings.

- Chapter 2 Section 202 defines URM, URM building, and Retrofitted URM building.
- Chapter 3 Section 304.5 establishes seismic regulations for URM buildings.
- New Appendix A6 codifies the URM Retrofit Technical Standard, a new minimum standard designed to reduce costs and address priority structural deficiencies.

Seismic Design Forces [S]

Removed existing Seattle amendment for structural design of existing buildings to align with national code ASCE 41-23.

2021 Seattle Mechanical Code

Smoke filtration

Ducted air handlers and ventilation systems for specific occupancies shall provide a MERV 13 filter or a MERV 4 filter for un-ducted air handlers. This will assist with maintaining the air quality in a building during a forest fire or other adverse event.

Minimum kitchen exhaust system

Intermittent kitchen exhaust system requirements set a minimum airflow rate or capture efficiencies for kitchen range hoods based on the type of kitchen appliance. The intent is to reduce the exposure to detrimental health impacts from the pollutants produced by cooking.

2021 Seattle Plumbing Code

Definitions

Modification of some definitions to provide clarity or align with adopted reference standards.

Dead Leg

Addresses dead ends in a water supply system with no circulation, also called plumbing dead legs, to assist with preventing growth of bacteria in the water supply systems.

2024 Boiler Seattle Boiler Code

Minor modifications to address errors and omissions.

2023 Seattle Electrical Code

Calculated Electric Load

Modify Article 220.84 to prevent calculated excess service capacity when using advanced heat pump systems.

Electric Vehicle Charging Infrastructure

Modifies Article 220.57 and 625. 27 to align EV charging infrastructure requirements with the Washington State Code.

2021 Seattle Energy Code

- The 2021 SEC will largely match the 2021 WA State Energy Code, including adoption of the new “fossil fuel compliance path.” Several significant 2018 SEC provisions have been adopted into the 2021 state code.
- Stringency levels of existing 2018 SEC provisions are maintained, and a few 2021 amendments provide greater efficiency than both the 2018 SEC and the 2021 state code.
- Several 2021 SEC amendments provide greater flexibility than was provided in the 2018 SEC for existing buildings, while other amendments are clarifications or corrections to the state code.

Key changes to the 2021 Seattle Energy code Commercial provisions are listed below.

[W] indicates a significant WA state code change.

[S] indicates a significant Seattle code change.

- **C202 Definition of Residential Building.** Residential buildings have been redefined to exclude most low-rise multifamily, so that all multifamily buildings must use commercial energy code (except low-rise buildings with units accessed from exterior walkways). [W]
- **C401.3 Fossil Fuel Compliance Path added,** permitting use of fossil fuel space heating and water heating equipment with additional efficiency credits. [W]
- **C403.3.5.5. Modifications to the DOAS Requirements.** Permits supplemental DOAS heating using electric heat pumps for DOAS serving spaces with only zonal heating systems. [S]
- **C404.3.3. Plumbing code Appendix M for multifamily.** Requires use of Seattle Plumbing Code Appendix M for sizing hot water distribution systems piping. [S]
- **Tables C405.4.2(1) and C405.4.2(2) Lighting Power Allowances.** Lighting power allowance (LPA) table based on 2022 ASHRAE table, with 5% reduction. This approximates the 2018 Seattle code level of stringency. The ASHRAE LPA values remain unchanged for healthcare, pharmacy, and correctional facilities. [S]
- **C405.14.1 Electric-ready commercial kitchen.** Commercial kitchens in new buildings must have electrical capacity for future electrification of any gas cooking appliances. [S]
- **C406 Efficiency credits table.** Reorganized and expanded, added “load management” credit requirement. [W]
- **C406 Submetering for multifamily:** 2021 SEC has an alternative option for multifamily buildings large enough to be subject to the state code submetering requirements. Such buildings can now provide additional solar or achieve other credits from the C406 efficiency credits table in lieu of submetering. This option maintains the stringency of the state code, while still providing alternate compliance options. [S]
- **C407 Building Performance Pathways.** The Building Performance Targets in the 2021 WA code have been adjusted for R-1 hotel and R-2 Multifamily. These changes maintain 2018 SEC efficiency

for R-1 Hotel and R-2 Multifamily occupancies. For all other occupancies, this amendment will match WA State Code. The state adjusted targets for most occupancies and added a “site energy use” target. [S]/[W]

- **C407.3.1 Limits on substandard building envelopes.** The total UxA for the building envelope is not permitted to be more than 10% higher than allowed by prescriptive compliance [S]
- **C408 Commissioning.** New post-occupancy commissioning compliance rules added to ensure completion of commissioning work. [S]
- **C411.1 On-site renewable energy.** Threshold for compliance is 5,000 sf [S]. The solar requirement is 0.5 W/sf [W], with additional C406 credit systems allowed as an alternative [S]. Affordable housing is exempt, and other projects are permitted to gift their required solar to affordable housing [S]. Error in 2021 WSEC Section C411.1.1 corrected [S].
- **C503.4.3.1 Addition of new or replacement of existing air-cooled chiller systems.** Requires that air-cooled chiller replacements be made with heat pumps, controlled to serve as the first stage of heating [S].
- **C503.4.6** Provides several new compliance options for replacement of central HVAC gas and electric resistance heating equipment with heat pumps [S]:
 - Exempts affordable housing, hospitals, nonprofits, and buildings that would require certain costly utility service upgrades.
 - Allows buildings to retain 50% of their existing gas heating capacity.
 - Allows emergency replacements of gas equipment, using either a TCO (temporary certificate of occupancy) or a performance bond that requires the heat pump installation within 4 years.
 - Each of the above requires a “future decarbonization plan” that includes an engineered schematic design and cost estimate for future conversion to heat pumps.
- **C503.5.1.** New compliance options for replacement of gas and electric resistance heating equipment for central service water heating systems (similar to C503.4.6) [S].