ORDINANCE NO. 28363

AN ORDINANCE relating to the City's Building Code; amending Title 2 of the Tacoma Municipal Code by amending, repealing, reenacting, or adding various sections to implement the 2015 International Building Code, 2015 International Residential Code, 2015 International Existing Building Code, 2015 Uniform Plumbing Code, 2015 International Mechanical Code, and the 2015 International Fuel Gas Code, to establish the minimum requirements for building construction to safeguard the public health, safety, and welfare, to take effect July 1, 2016.

WHEREAS the City is responsible for establishing requirements to safeguard the public health, safety, and welfare of its citizens from hazards attributable to the built environment, which is accomplished through the adoption and enforcement of building codes, and

WHEREAS the International building codes are updated on a three-year cycle, and

WHEREAS the Washington State Building Code Council adopts and amends the 2015 editions of the international building codes, and

WHEREAS this ordinance proposes to adopt and amend the 2015 editions of the International Code Council Codes and International Association of Plumbing and Mechanical Officials Code with the Washington State amendments, and

WHEREAS local jurisdictions may amend the codes with requirements that are specific to the needs of that particular community and do not diminish the minimum requirements, and

WHEREAS, during this code cycle, Planning and Development Services staff has streamlined local code requirements, minimizing the number of

amendments where possible and eliminating those that are no longer necessary or do not align with the City's current needs, and has incorporated provisions which will reduce the need for updates to the City's amendments in the future, creating better alignment with other nearby jurisdictions in the enforcement of code regulations, and

WHEREAS staff has worked closely with the Board of Building Appeals in reviewing the proposed amendments to the building codes, and, on April 7, 2016, the Board approved the proposed amendments for consideration by the City Council, and

WHEREAS, on May 11, 2016, the Infrastructure, Planning, and Sustainability Committee reviewed and recommended the proposed amendments for consideration by the City Council, and

WHEREAS the City amendments must be in place by the effective date of July 1, 2016, to coincide with the effective date of adoption of these codes by the Washington State Building Code Council; Now, Therefore,

BE IT ORDAINED BY THE CITY OF TACOMA:

Section 1. That Title 2 of the Tacoma Municipal Code is hereby amended by amending Sections 2.02.010, 2.02.030, 2.02.090, 2.02.100, 2.02.110, 2.02.120, 2.02.130, 2.02.135, 2.02.150, 2.02.160, 2.02.170, 2.02.180, 2.02.190, 2.02.210, 2.02.540, 2.02.550, 2.02.560, 2.02.570, 2.02.580, 2.02.590, 2.02.600, 2.02.610, 2.02.620, 2.02.730, 2.02.740, 2.02.750, 2.02.760, 2.02.770, 2.02.776, 2.02.780, 2.02.790, 2.02.805, 2.02.810 and 2.02.820; repealing in its entirety Sections 2.02.040, 2.02.050, 2.02.060, 2.02.070, 2.02.500, 2.02.510, 2.02.520,

2.02.530, 2.02.700, 2.02.710, 2.02.720, 2.02.800, and 2.02.830; repealing and reenacting Sections 2.02.020 and 2.02.140; and adding thereto nine new sections, to be known and designated as Sections 2.02.185, 2.02.205, 2.02.390, 2.02.400, 2.02.410, 2.02.565, 2.02.585, 2.02.605, and 2.02.765; amending Chapter 2.06 by amending Sections 2.06.010, 2.06.020, 2.06.060, 2.06.070, 2.06.080, 2.06.100, and 2.06.120, repealing in its entirety Sections 2.06.030, 2.06.040, 2.06.050, and 2.06.110, and by adding thereto a new section, to be known and designated as Section 2.06.130; amending Chapter 2.07 by amending Sections 2.07.010, 2.07.050, and 2.07.060, and by repealing in its entirety Sections 2.07.020, 2.07.030, and 2.07.040 thereof; amending Chapter 2.10 by amending Section 2.10.010, and by repealing in its entirety Sections 2.10.030, 2.10.040, and 2.10.050 thereof; repealing Chapter 2.12 in its entirety; amending Chapter 2.13 by amending Sections 2.13.020, 2.13.030, 2.13.050, 2.13.060, 2.13.070, and 2.13.080 thereof; and amending Chapter 2.17 by amending Sections 2.17.010, 2.17.020, and 2.17.030, as set forth in the attached Exhibit "A."

Section 2. That Section 1 of this ordinance shall take effect on July 1, 2016.

Section 3. Severability. If any provision of this ordinance or its application to any person or circumstances is held invalid, the remainder of the ordinance or application of the provisions to other persons or circumstances shall be unaffected.

Passed _____

_____
Mayor

Attest:

_____
City Clerk

Approved as to form:

_____
Deputy City Attorney

EXHIBIT "A"

Chapter 2.02
BUILDING CODE

Sections:

2.02.590 Amendment to IRC Table R301.2 (1) – Climatic and geographic design criteria.
2.02.600 Amendment to IRC Section R301.2.3 – Snow loads.
2.02.605 Amendment to IRC Section 322 – Flood-Resistant Construction – by addition of a new Section R322.1.11 – Additional Criteria for Development in Flood Hazard Areas.
2.02.610 Amendment to IRC ~~Chapter 3 by addition of~~ Section ~~R324~~ R313 – Automatic Fire sprinkler systems.
2.02.620 Manufactured homes.
~~2.02.700 General amendments.~~
~~2.02.710 Washington State Building Code Council amendments deleted from the City of Tacoma Adoption of the 2012 International Existing Building Code.~~
~~2.02.720 Washington State Building Code Council amendments.~~
2.02.730 Amendment to IEBC Section 105.2 – Work exempt from permit.
2.02.740 Amendment to IEBC Section 112 – Board of Appeals.
2.02.750 Amendment to IEBC Section 113 – Violations.
2.02.760 Amendment to IEBC Section 202 – General Definitions – L, S, and W.
2.02.765 Amendment to IEBC Section 403 – Alterations – by addition of a new Section 4.3.1.1 - Substantial Alteration or Construction.
2.02.770 Amendment to IEBC Section 407.1 – ~~Change of Occupancy~~Conformance by addition of new Sections 407.1.1, Minimum Standards, and 407.1.2, Work/Live Use.
2.02.775 Amendment to IEBC Section 405.1 – Alteration – Level 2.
2.02.776 Amendment to IEBC Section 505.1 – Alteration – Level 3.
2.02.780 Amendment to IEBC Section 603 – Fire Protection – by addition of a new subsection EB 603.2.
2.02.790 Amendment to IEBC Section 703 – Fire Protection – by addition of a new subsection EB 703.2.
~~2.02.800 Amendment to IEBC Section 1007.1 – Change of occupancy – Structural.~~
2.02.805 Amendment to IEBC Section 1001.1 – Change of occupancy – Scope – by addition of an exception to EB1001.1.
2.02.810 Amendment to IEBC Section 1007.3 –Seismic Loads – by deletion and replacement of IEBC 1007.3 and addition of a new Section IEBC 1007.3.3 – Seismic Requirements for Unreinforced Masonry and Hollow Clay Tile Buildings~~Change of occupancy – Structural – by addition of a new Table 1007.1~~.
2.02.820 Amendment to IEBC Chapter 13 – Relocated or moved buildings.
~~2.02.830 Amendment to IEBC Appendix Section A113.9 – Secondary load paths – by addition of a new Section A113.9.1~~
2.02.840 *Repealed.*
2.02.850 *Repealed.*
2.02.860 *Repealed.*
2.02.1000 Earthquake Recording Instrumentation.

2.02.010 Adoption of International Building Code, International Residential Code, and International Existing Building Code~~s~~.

The International Building Code, International Residential Code, and International Existing Building Code, as adopted and amended by the Washington State Building Code Council under the State Building Code, as defined in TMC 2.02.100, are hereby adopted ~~2012 Edition of the International Building Code ("IBC"), along with A117.1 2012 and IBC Appendix E, the 2012 International Residential Code ("IRC"), along with IRC Appendices G and R (Note: Appendix R is in the State amendments and not in the 2012 IRC), and the 2012 International Existing Building Code ("IEBC"), along with Appendix A and Resources A in the 2012 IEBC, adopted and published by the International Code Conference, Inc., are hereby adopted by this reference, pursuant to the provisions of Section 35.21.180, Revised Code of Washington,~~ as the official Building Code of the City of Tacoma~~, such adoption by reference, however, to be subject to the amendments to the 2012 International Building Code, the 2012 International Existing Building Code, and the 2012 International Residential Code as adopted by the Washington State Building Code Council, as set forth in the Washington Administrative Code ("WAC") 51-50, and the City of Tacoma amendments to the adopted 2012 International Building Code, the 2012 International Existing Building Code, and the 2012 International Residential Code, as those amendments are hereinafter set forth.~~ The Tacoma Building Code as defined in TMC 2.02.100 is also amended to include the adoption of IBC Appendix Chapter G,

2.02.020 Purpose~~Title~~.

The State Legislature has established the State Building Code applicable throughout all cities and counties in the State of Washington for the purpose of promoting the health, safety, and welfare of the occupants or users of buildings and structures and the general public. Accordingly, this Chapter is designed to effectuate the following purposes, objectives, and standards of the State Building Code:

A. To require minimum performance standards and requirements for construction and construction materials, consistent with accepted standards of engineering, fire, and life safety;

B. To require standards and requirements in terms of performance and nationally accepted standards;

C. To permit the use of modern technical methods, devices, and improvements;

D. To eliminate restrictive, obsolete, conflicting, duplicating and unnecessary regulations and requirements which could unnecessarily increase construction costs or retard the use of new materials and methods of installation or provide unwarranted preferential treatment to types or classes of materials or products or methods of construction;

E. To provide for standards and specifications for making buildings and facilities accessible to and usable by physically disabled persons; and

F. To consolidate within each authorized enforcement jurisdiction, the administration and enforcement of building codes.

~~This chapter shall be known as the "Building Code," may be cited as such, and will be referred to herein as "this code." Where reference is made to International Building Code or IBC; or reference is made to the International Residential Code or IRC; or reference is made to the International Existing Building Code or IEBC; the reference shall mean the 2012 edition of each of these documents as amended and adopted by the City of Tacoma, unless specifically stated otherwise.~~

2.02.030 International Plumbing Code.

All references to the International Plumbing Code shall be interpreted as meaning the ~~2012~~ Uniform Plumbing Code as adopted and amended by the City of Tacoma, or if the subject being addressed is not regulated by the Uniform Plumbing Code, then the code adopted and amended by the City of Tacoma which regulates the subject being addressed.

~~**2.02.040 Amendment by deletion from the 2012 IBC and deletion of Washington State Building Code Council amendments from City of Tacoma Adoption of the 2012 International Building Code.**~~

~~IBC Chapter 34 is hereby deleted and omitted from the adoption of the 2012 IBC as the official Building Code of the City of Tacoma as adopted by this chapter, and replaced by the adoption of the 2012 International Existing Building Code. IBC Chapter 34 has been amended by the Washington State Building Code Council; however, the City of Tacoma deletes the Washington State Building Code Council amendments to this chapter.~~

~~**2.02.050 General amendments.**~~

~~The following numbered sections of the IBC, as adopted herein, are amended to read as set forth and shall supersede that section so numbered in the IBC and shall be a part of the official Building Code of the City of Tacoma. The sections so amended are as follows:~~

~~IBC Section 105.1~~
~~IBC Section 105.2~~
~~IBC Section 111~~
~~IBC Section 113~~
~~IBC Section 114~~
~~IBC Section 202~~
~~IBC Section 510.2~~
~~IBC Section 1503.4~~
~~IBC Section 1510.7~~
~~IBC Section 1608~~
~~IBC Section 1613.8~~
~~IBC Section 2405.6~~
~~IBC Section 3202.3~~

~~**2.02.060 Washington State Building Code Council amendments.**~~

~~The following sections have been amended by the Washington State Building Code Council in WAC 51-50, and are herein adopted by the City of Tacoma. The amendments to these sections are not included in this ordinance, but are adopted by reference:~~

~~IBC Section 202~~
~~IBC Section 305.2.4~~
~~IBC Section 308.2~~
~~IBC Section 308.3.2~~
~~IBC Section 308.3.3~~
~~IBC Section 308.4~~
~~IBC Section 308.4.2~~
~~IBC Section 308.6.5~~
~~IBC Section 310.2~~
~~IBC Section 310.4~~
~~IBC Section 310.5.2~~
~~IBC Section 310.5.3~~
~~IBC Section 403.5.4~~
~~IBC Section 407.4.3.2~~
~~IBC Section 420.6~~
~~IBC Section 420.7~~
~~IBC Table 509~~
~~IBC Section 903.2.1.6~~
~~IBC Section 903.2.3~~
~~IBC Section 903.2.7~~
~~IBC Section 907.2.8~~
~~IBC Section 908.7~~
~~IBC Section 908.7.1~~
~~IBC Section 909.21.12~~
~~IBC Section 909.21.13~~
~~IBC Section 1008.1.9.3~~
~~IBC Section 1008.1.9.6~~
~~IBC Section 1009.3~~
~~IBC Section 1009.18~~
~~IBC Section 1010.1~~
~~IBC Section 1018.5~~
~~IBC Section 1018.6~~
~~IBC Section 1101.2.7~~
~~IBC Section 1101.2.8~~
~~IBC Section 1101.2.9~~
~~IBC Section 1106.6~~
~~IBC Section 1107.6~~
~~IBC Section 1203.1~~
~~IBC Section 1203.2~~
~~IBC Section 1203.4~~
~~IBC Section 1203.6~~
~~IBC Section 1204~~
~~IBC Section 1208.2~~
~~IBC Section 1208.3~~
~~IBC Section 1210.4~~
~~IBC Section 1403.2~~
~~IBC Section 1405~~
~~IBC Section 1702.1~~
~~IBC Section 1904.1~~
~~IBC Section 1904.2~~
~~IBC Section 1905.1~~
~~IBC Section 1905.1.3~~
~~IBC Section 1905.1.4~~
~~IBC Section 1905.1.9~~
~~IBC Section 1905.1.10~~
~~IBC Section 2107.1~~
~~IBC Section 2107.2~~
~~IBC Section 2107.2.1~~
~~IBC Section 2107.5~~
~~IBC Section 2111.7~~
~~IBC Section 2111.7.1~~
~~IBC Section 2114~~
~~Chapter 29~~
~~IBC Section 3002.4~~

~~IBC Section 504.3~~ ~~IBC Section 1101.2~~ ~~IBC Table 1705.3~~ ~~Chapter 35~~
~~IBC Section 504.4~~ ~~IBC Section 1101.2.2~~ ~~IBC Section 1710.5~~
~~IBC Section 506.4~~ ~~IBC Section 1101.2.3~~ ~~IBC Section 1901.2.1~~
~~IBC Section 506.5~~ ~~IBC Section 1101.2.4~~ ~~IBC Section 1903.1~~

~~**2.02.070 Amendment to IBC Section 102.4 Referenced codes and standards.**~~

~~102.4 Referenced codes and standards. The codes and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between the provisions of this code and the referenced standards, the provisions of this code shall control. The edition of each referenced code and standard shall either be the edition listed in IBC Chapter 35 or the most current published edition if approved by the Building Official.~~

2.02.080 Amendment to IBC Section 105.1 – Permits – by addition of a new section 105.1.3 – Business Licensing.

105.1.3 Business Licensing. Where licensing is required for a permit applicant by the City or State, such licensing shall be required at the time of building permit issuance.

2.02.090 Amendment to IBC Section 105.2 – Work exempt from permit.

105.2 Work exempt from permit. Exemptions from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. Permits shall not be required for the following:

Building:

1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 120 square feet (11 m2).

2. Fences not over 7 feet (1829 mm) high.

3. Oil derricks.

4. Retaining walls which are not over four feet (1219 mm) in height, measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or impounding Class I, II or III-A liquids. A Fence supported by a retaining wall shall be considered a surcharge.

5. Water tanks supported directly on grade if the capacity ~~does not exceed~~is not greater than 5,000 gallons (18,925 L) and the ratio of height to diameter or width ~~does not exceed~~is not greater than 2:1.

6. Sidewalks and driveways not more than 30 inches (762 mm) above adjacent grade and on grade concrete patios with an aggregate area not exceeding 2,000 Sq. Ft. (185.81 sq-M), provided they are not over any basement or story below and are not part of an accessible route.

7. Painting, papering, tiling, carpeting, cabinets, counter tops, and similar finish work.

8. Temporary motion picture, television, and theater stage sets and scenery.

9. Prefabricated swimming pools accessory to a Group R-3 occupancy, as applicable in Section 101.2, which are less than 24 inches (610 mm) deep, ~~do not exceed~~are not greater than 5,000 gallons (18,925 L), and are installed entirely above ground.

10. Shade cloth structures constructed for nursery or agricultural purposes, ~~and~~ not including service systems.

11. Swings and other playground equipment accessory to detached one- and two-family dwellings.

12. Window awnings in Group R-3 and U occupancies supported by an exterior wall which do not project more than 54 inches (1372mm) from the exterior wall and do not require additional support.

13. Non-fixed and movable fixtures, cases, racks, counters and partitions not over 5 feet 9 inches (1753 mm) in height.

Electrical: See TMC Chapter 2.04.

Gas:

1. Portable heating appliance.

2. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.

Mechanical:

1. Portable heating appliance.

2. Portable ventilation equipment.

3. Portable cooling unit.

4. Steam, hot, or chilled water piping within any heating or cooling equipment regulated by this code.

5. Replacement of any part which does not alter its approval or make it unsafe.

6. Portable evaporative cooler.

7. Self-contained refrigeration system containing 10 pounds (4.54 kg) or less of refrigerant and actuated by motors of 1 horsepower (746 W) or less.

Plumbing:

1. The stopping of leaks in drains, water, soil, waste, or vent pipe, provided, however, that if any concealed trap, drain pipe, water, soil, waste, or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in this code.

2. The clearing of stoppages or the repairing of leaks in pipes, valves or fixtures, and the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes, or fixtures.

105.2.1 Emergency repairs. Where equipment replacements and repairs must be performed in an emergency situation, the permit application shall be submitted within the next working business day to the Building Official.

105.2.2 Repairs. Application or notice to the Building Official is not required for ordinary repairs to structures, replacement of lamps, or the connection of approved portable electrical equipment to approved permanently installed receptacles. Such repairs shall not include the cutting away of any wall, partition, or portion thereof, the removal or cutting of any structural beam or load-bearing support, or the removal or change of any required means of egress, or rearrangement of parts of a structure affecting the egress requirements; nor shall ordinary repairs include addition to, alteration of, replacement or relocation of any standpipe, water supply, sewer, drainage, drain leader, gas, soil, waste, vent or similar piping, electric wiring, or mechanical or other work affecting public health or general safety.

105.2.3 Public service agencies. A permit shall not be required for the installation, alteration, or repair of generation, transmission, distribution, or metering, or other related equipment that is under the ownership and control of public service agencies by established right.

105.2.4 City of Tacoma Projects and Department of Transportation Projects. A permit shall not be required for the construction of roads, highways, freeways, and other structures related to such construction, including, but not limited to, grading, excavation, filling, paving, construction of bridges and pedestrian overpasses, drainage, power, water, and channelization, constructed by or under contract to the City of Tacoma, or the Washington State Department of Transportation.

Exceptions:

1. Buildings and other structures not normally included in road or highway construction shall require building and other construction permits.

2. Road or in right-of-way construction caused by development on private property shall require permits as required for the type of work.

3. Work in the right-of-way undertaken as the responsibility of the owner of abutting property, including, but not limited to, off-site improvements as required within Section 2.19.

2.02.100 Amendment to IBC Section 202 – Definitions – D, L, S, T, and W.

Design Professional. A Washington State Licensed Architect governed by the Washington State Board of Registration for Architects, or a Washington State Licensed Engineer governed by the Washington State Board of Registration for Professional Engineers and Land Surveyors.

Live/Work Unit. A dwelling or sleeping unit in which up to 50 percent of the unit's space includes a commercial business use. The business owner lives in the residential space.

State Building Code. For purposes of this Title, the State Building Code shall consist of the following national model codes and the following standards, as such model codes and standards are adopted and amended from time to time by the Washington State Building Code Council pursuant to Chapters 19.27 and 70.92 of the Revised Code of Washington and Title 51 of the Washington Administrative Code (Note: All amendments to the State Building Code adopted by the Washington State Building Council from time to time are hereby, upon the effective date of such amendments, incorporated in this Chapter as though fully set forth herein. In the event that any provisions of the State Building Code are renumbered, any reference in this chapter to such provision shall refer to such provision as renumbered):

1. The International Building Code ("IBC"), including Appendix E, published by the International Code Council, and including accessibility provisions in 2012 ANSI 117.1; and

2. The International Residential Code ("IRC"), including IRC Appendices F and Q, published by the International Code Council, and provided that IRC Chapters 11 and 25 through 43 are not adopted; and

3. The International Existing Building Code ("IEBC") including Appendix A, published by the International Code Council; and

4. Except as provided in RCW 19.27.170, the Uniform Plumbing Code ("UPC") including Appendices A, B, and I, published by the International Association of Plumbing and Mechanical Officials: PROVIDED that, UPC Chapters 12 and 14 are not

adopted, and provided further that any provisions of the UPC affecting related to venting and combustion air of the fuel fired appliances as found in chapter 5 and those portion of the code addressing building sewers are not adopted; and

5. The International Mechanical Code ("IMC") , published by the International Code Council, including the International Fuel Gas Code ("IFGC") and the National Fuel Gas Code, published by the International Code Council, Inc., except that the standards for liquefied petroleum gas installations shall be NFPA 58 (Liquefied Petroleum Gas Code) and ANSI Z223.1/NFPA 54 (National Fuel Gas Code); and

6. The Washington State Energy Code ("WSEC") Commercial Provisions and the Washington State Energy Code, Residential Provisions, under the authority of RCW 19.27A.020, and as set forth in WAC 51-11C and 51-11R, pursuant to the provisions of RCW 35.21.180, as published by the Washington State Building Code Council; and

7. The International Fire Code, published by the International Code Council, Inc. This code is adopted and amended in TMC Title 3.

Tacoma Building Code, Plumbing Code, Mechanical Code, and Energy Code. The Tacoma Building Code , Plumbing Code, Mechanical Code, and Energy Code shall consist of the State Building Code as amended from time to time by the provisions of TMC Chapters 2.02, 2.06, 2.07, and 2.10. Note that the Tacoma Mechanical Code also includes the International Fuel Gas Code, adopted by the State Building Code as part of the International Mechanical Code.

Work/Live Unit. A commercial business use which includes a dwelling unit in up to 50 percent of the unit's space. The business owner lives in the residential space.

2.02.110 Amendment to IBC Section 111.2 – Certificate ~~of occupancy or certificate of completion~~issued.

~~111.1 Use and occupancy. No building or structure shall be used or occupied, and no change in the existing occupancy classification of a building or structure or portion thereof shall be made, until the Building Official has issued a certificate of occupancy or a certificate of completion, as appropriate for the building or structure.~~

~~Exception:~~

~~Certificates of occupancy are not required for work exempt from permits under Section 105.2.~~

111.2 Certificate issued. After the Building Official completes all inspections of the building or structure, the Building Official shall issue a certificate of occupancy or completion that contains the following as applicable to the project:

1. The building permit number.

2. The address of the structure.

3. The name and address of the owner.

4. A description of that portion of the structure for which the certificate is issued.

5. A statement that the described portion of the structure has been inspected for compliance with the requirements of this code for the occupancy and division of occupancy and the use for which the proposed occupancy is classified.

6. The name of the Building Official.

7. The edition of the code under which the permit was issued.

8. The use and occupancy, in accordance with the provisions of Chapter 3.

9. The type of construction as defined in Chapter 6.

10. The design occupant load, for buildings with assembly or meeting rooms with an occupant load in excess of fifty.

11. If an automatic sprinkler system is provided, whether the sprinkler system is required, and what type of system is being provided.

12. Any special stipulations and conditions of the building permit.

~~Issuance of the certificate of occupancy shall not be construed as an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction.~~

~~111.3 Temporary occupancy. The Building Official is authorized to issue a temporary certificate of occupancy or certificate of completion before the completion of the entire work covered by the permit, provided that such portion or portions shall be occupied or used safely. The Building Official shall set a time period during which the temporary certificate of occupancy is valid.~~

~~111.4 Revocation. The Building Official is authorized to, in writing, suspend or revoke a certificate of occupancy or completion issued under the provisions of this code wherever the certificate is issued in error, or on the basis of incorrect information supplied, or where it is determined that the building or structure or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code.~~

2.02.120 Amendment to IBC Section 113 – Board of Appeals.

Section 113 in the IBC ~~2012 International Building Code~~ shall be replaced in its entirety with the following:

113.1. The Board of Building Appeals. The Board of Building Appeals, as created by TMC 2.17, is the properly designated board of appeals for the IBC, as adopted by the City of Tacoma and the State of Washington. The Board of Building Appeals, within the authority granted it by TMC 2.17, shall:

Hear and decide appeals of orders, decisions or determinations made by the Building Official relative to the application and interpretation of this code.

113.2. Limitations of Authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed. The Board of Building Appeals shall have no authority relative to interpretation of the administrative provisions to the codes assigned to the Board's authority, nor shall the Board be empowered to waive requirements of these codes or to grant variances, unless specifically granted in TMC 2.17.

2.02.130 Amendment to IBC Section 114 – Violations.

Section 114 of the IBC shall be replaced in its entirety with the following:

114.1 Unlawful acts. It shall be unlawful for any person, firm, corporation, or other legal entity to erect, construct, alter, extend, repair, move, remove, demolish, or occupy any building, structure, or equipment regulated by this chapter or by the codes adopted and amended by TMC Title 2, or cause the same to be done, in conflict with or in violation of any of the provisions of these codes.

114.2 Notice of violation. The Building Official is authorized to serve a notice of violation or order on the person responsible for the erection, construction, alteration, extension, repair, moving, removal, demolition, or occupancy of a building or structure in violation of the provisions of this code or any other code which references section 2.01.150, or in violation of a *permit* or certificate issued under the provisions of this code. Such order shall direct the discontinuance of the illegal action or condition and the abatement of the violation. The Notice of Violation shall contain the following:

114.2.1 The address of the site and the specific details of the condition(s) which is (are) to be corrected;

114.2.2 A specified timeframe for correcting the violation or submitting an acceptable work schedule.

114.2.3 The citation penalties that may be imposed in the event that the condition is not corrected within the timeframe indicated on the Notice of Violation;

114.2.4 The procedure that may be implemented if civil penalties in excess of $1,000.00 are assessed in trying to correct the violation(s); and

114.2.5 The name, address and telephone number of the regulatory agency and the inspector issuing the Notice of Violation.

114.3. Penalties and Certificate of Complaint. If the notice of violation is not complied with within the specified period of time, the Building Official is authorized to issue a second Notice of Violation and issue a civil penalty of $250.00. The monetary penalties for violations shall be as follows:

114.3.1 First and subsequent civil penalties $250.00;

114.3.2 Civil penalties will continue to accumulate until the violation is corrected, or, if the total assessed penalty exceeds $1,000.00, a Certificate of Complaint may be filed with the Pierce County Auditor to be attached to the title of the property. A copy of the Certificate of Complaint shall be sent to the Property Owner and parties of interest, if different from the owner.

Each day that a property or person is not in compliance with the provisions of this code may constitute a separate violation.

Penalties shall be billed to the property owner or, if appropriate, the permit holder. Penalties unpaid after 60 calendar days may be collected in any lawful means, including but not limited to, referral to a collection agency.

114.4 Administrative Reviews by the Building Official

114.4.1 General. A person, firm, corporation or other legal entity to whom a Notice of Violation or a civil penalty has been issued relative to the violation of this chapter and the codes adopted and amended by this chapter, may request an administrative review of the violation(s) cited in the Notice of Violation or for the civil penalties assessed pursuant to enforcement.

114.4.2. How to request administrative review. A person, firm, or corporation may request an administrative review of the violation(s) being cited in the Notice of Violation or of a civil penalty assessed by filing a written request with the Building Official, sent to the attention of the contact listed within the Notice of Violation within seven (7) calendar days of the notification date of violation(s) or the date a civil penalty is assessed. The request shall state, in writing, the reasons the Building Official should consider the violation(s) cited in the Notice of Violation as not being violations of TMC Title 2 or the codes and amendments adopted by TMC Title 2 by reference, or why the Building Official should negate or reduce the civil penalty. Upon receipt of the request for administrative review, the Building Official shall review the information provided.

114.4.3 Decision of Building Official. After considering all of the information provided, the Building Official shall determine whether a violation has occurred, and shall affirm, vacate, suspend, or modify the Notice of Violation or the amount of any monetary penalty assessed. The Building Official's decision shall be delivered in writing to the appellant by first class mail. If the administrative review is for the violation, the Building Official's decision shall include an official interpretation of the code sections for which the Notice of Violation was issued.

114.5 Appeals of the Administrative Review by the Building Official. The official interpretation of the code provisions, cited as being the basis for the Notice of Violation being issued, made in the administrative review decision by the Building Official may be appealed directly to the Board of Building Appeals, in accordance with the provisions of TMC Chapter 2.17. Said appeal shall be filed within seven (7) calendar days of receipt of the Building Official's decision with the City Clerk. If such an appeal is successful, any civil penalties that may have been assessed will be withdrawn.

114.6 Alternate Criminal Penalty. Any person who violates or fails to comply with any of the provisions referenced in TMC Title 2 and the codes adopted by reference and amended within TMC Title 2 or any other code which references TMC Section 2.02.150 may be guilty of a misdemeanor and, upon conviction thereof, may be subject to a fine in an amount not exceeding $1,000, or subject to imprisonment in jail of not more than 180 days, or both a fine and imprisonment. Each day a person or entity violates or fails to comply with a provision referenced in TMC Title 2 and the codes adopted and amended within Title 2.02 may be considered a separate violation.

2.02.135 Amendment to IBC Section 419 – Live/Work Units.

Section 419 in IBC shall be replaced in its entirety with the following:

Section 419 – Live/Work and Work/Live Units.

419.1 Live/Work Units.

419.1.1 General. A live/work unit shall comply with Sections 419.1.1 through 419.1.9.

Exception: Dwelling or sleeping units that include an office that is less than 10 percent of the area of the dwelling unit are permitted to be classified as dwelling units with accessory occupancies in accordance with Section 508.2.

419.1.1.1 Limitations. The following shall apply to all live/work areas:

1. The live/work unit is permitted to be not greater than 3,000 square feet (279 m^2) in area; and

2. The nonresidential area of a live/work unit is permitted to be not more than 50 percent of the area of each live/work unit; and

3. The nonresidential area function shall be limited to the first or main floor only of the live/work.

419.1.2 Occupancies. Live/work units shall be classified as a Group R-2 occupancy. Separation requirements found in Sections 420 and 508 shall not apply within the live/work unit where the live/work unit is in compliance with Section 419.1. Nonresidential uses which would otherwise be classified as either a Group H or S occupancy, or occupancies related to marijuana growing, processing or retail sales shall not be permitted in a live/work unit.

Exception: Storage shall be permitted in the live/work unit provided the aggregate area of storage in the nonresidential portion of the live/work unit shall be limited to 10 percent of the space dedicated to nonresidential activities.

419.1.3 Means of egress. Except as modified by this section, the means of egress components for a live/work unit shall be designed in accordance with Chapter 10 for the function served.

419.1.3.1 Egress capacity. The egress capacity for each element of the live/work unit shall be based on the occupant load for the function served in accordance with Table 1004.1.1.

419.1.3.2 Spiral stairways. Spiral stairways that conform to the requirements of Section 1009.12 shall be permitted.

419.1.4 Vertical openings. Floor openings between floor levels of a live/work unit are permitted without enclosure.

[F] 419.1.5 Fire protection. The live/work unit shall be provided with a monitored fire alarm system where required by Section 907.2.9 and an automatic sprinkler system in accordance with Section 903.2.8.

419.1.6 Structural. Floor loading for the areas within a live/work unit shall be designed to conform to Table 1607.1 based on the function within the space.

419.1.7 Accessibility. Live/work units shall be accessible in accordance with Chapter 11 for the function served. For the residential portion of the live/work unit, accessibility requirements for R-2 occupancies in Chapter 1107.6 shall apply.

419.1.8 Ventilation. The applicable ventilation requirements of the International Mechanical Code shall apply to each area within the live/work unit for the function within that space.

419.1.9 Plumbing facilities. The nonresidential area of the live/work unit shall be provided with minimum plumbing facilities as specified by Chapter 29, based on the function of the nonresidential area. Where the nonresidential area of the live/work unit is required to be accessible by Section 1103.2.13, the plumbing fixtures specified by Chapter 29 shall be accessible.

419.2 Work/Live Units

General. A work/live unit shall comply with Sections 419.2.1 through 419.2.14.

419.2.1 Limitations. The following shall apply to all work/live areas:

1. A work/live unit shall be located within a building that complies with the provisions of Chapters 5, 9, and 10.

2. A work/live unit is permitted to be not greater than 3,000 square feet (279 m^2) in area;

Exception: Work/live units shall not be limited in size for the following:

a. Buildings classified as A, B, F-2, or M occupancy, and

b. Buildings compliant with height and area requirements in Table 503, and

c. Buildings with an approved automatic sprinkler system installed in accordance with 903.3.1.1 throughout, and

d. Where the nonresidential uses are separated from the residential uses in accordance with Section 508.4.4.

3. The residential area of the work/live unit is permitted to be not greater than 50 percent of the total area of the work/live unit and shall not exceed 1,500 square feet (139 m^2);

4. A work/live unit shall not be located on a floor that is greater than 75 feet above the lowest level of fire department vehicle access.

Exception: Work/live units located in high-rise buildings complying with Section 403.

5. The nonresidential area function shall be limited to the first or main floor only of the work/live unit.

6. For the purposes of this section, the residential area is considered a Group R occupancy.

419.2.2 Occupancies. Work/live units shall be classified in accordance with Chapter 3 for the type of nonresidential occupancy. Permitted occupancies for work/live units are A, B, F, and M. Nonresidential uses which would otherwise be classified as either a Group H or S occupancy, or occupancies related to marijuana growing, processing or retail sales shall not be permitted in a work/live unit. For the purposes of this section, requirements in the International Building, Mechanical Code, Fuel Gas, Uniform Plumbing Code, or Washington State Energy Code related to residential occupancies shall be applied to the residential portion of the unit where applicable.

Exception: Storage shall be permitted in the work/live unit provided the aggregate area of storage in the nonresidential portion of the work/live unit shall be limited to 10 percent of the space dedicated to nonresidential activities.

419.2.3 Fire and smoke protection features

419.2.3.1 Separations within work/live units. Separations between and within work/live units shall be accordance with Sections 419.2.3.1.1 or 419.2.3.1.2.

419.2.3.1.1 The residential use area within the work/live unit shall be separated from the nonresidential use by 1-hour fire barriers walls and/or horizontal assemblies.

Exception: For work/live units of A, B, F-2, and M occupancies, separation between the residential use and the nonresidential use is not required where the building is fully equipped with an automatic sprinkler system installed in accordance with 903.3.1.1; however, the residential use must be clearly delineated from the nonresidential use.

419.2.3.2 Separations between work/live units and between work/live units and other occupancies. Work/live units shall be separated from other work/live units and other occupancies in accordance with Section 508 or with 1-hour fire partition walls and/or horizontal assemblies, whichever is more restrictive.

419.2.4 Hazardous Materials. The maximum allowable quantities per control area for the storage and use of hazardous materials shall be reduced to 25 percent of those values in IFC Tables 5003.1.1(1) and 5003.1.1(2). Additional requirements may be imposed by the Building or Fire Code Official depending on the specific hazardous materials associated with the nonresidential use.

419.2.5 Fire Protection Systems

419.2.5.1 Automatic Sprinkler Systems. Buildings containing work/live units shall be equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.

Exception: Buildings lawfully in existence prior to December 5, 1989 may alternatively comply with Sections 419.2.5.1.1 through 419.2.5.1.3.

419.2.5.1.1 Buildings may be partially equipped with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 and the following:

1. All stories containing work/live units and all stories below work/live units, including basements, shall be equipped with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

2. The means of egress shall be equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.

419.2.5.1.2 Buildings may be partially equipped with an approved automatic sprinkler system installed in accordance with Section 903.3.1.2 and the following:

1. The residential use within the work/live unit shall be separated from the nonresidential use in accordance with Section 419.2.3.1.1.

2. The residential space within the work/live unit shall not be required to exit through the nonresidential space.

3. Work/live units shall be located on a level of exit discharge.

4. The means of egress for the residential use area shall be provided with an automatic sprinkler system installed in accordance with Section 903.3.1.2.

5. A building shall contain no more than four work/live units.

Exception: Work/live units of F-1 occupancy shall be equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.

419.2.5.1.3 Buildings may be partially equipped with an approved automatic sprinkler system installed in accordance with Section 903.3.1.3 and the following:

1. The residential use within the work/live unit shall be separated from the nonresidential use in accordance with Section 419.2.3.1.1.

2. The residential space within the work/live unit shall not be required to exit through the nonresidential space.

3. Buildings containing work/live units shall be single-story without basements.

4. The residential use area shall be provided with direct access to an exit and shall not be required to exit through the nonresidential area of the work/live unit.

5. A building shall contain no more than one work/live unit.

Exception: Work/live units of F-1 occupancy shall be equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.

419.2.5.1.4 Water Supply. Automatic sprinkler systems installed in accordance with Sections 419.2.5.1.2 or 419.2.5.1.3 are permitted to be connected to the domestic service. Such combination services shall comply with the following requirements:

1. Valves shall not be installed between the domestic water riser control valve and the sprinkler system.

Exception: An approved indicating control valve supervised in the open position in accordance with Section 903.4.

2. The domestic service shall be capable of supplying the simultaneous domestic demand and the sprinkler demand required to be hydraulically calculated by NFPA 13D or NFPA 13R.

419.2.5.2 Alarm and Detection Systems.

419.2.5.2.1 Manual fire alarm system. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed throughout work/live occupancies.

Exception: Manual fire alarm boxes shall not be required where the building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 and the occupant notification system or emergency voice/alarm communication system will activate throughout the notification zones upon sprinkler water flow.

419.2.5.2.2 Automatic smoke detection system. In addition to those required by Chapter 9, area smoke detectors shall be provided throughout buildings with a work/live use. The activation of any detector required by this section shall activate the occupant notification system in accordance with Section 907.5.

Exception: Area smoke detection shall not be required in rooms/areas where an approved automatic sprinkler system has been provided and the occupant notification system or emergency voice/alarm communication system will activate throughout the notification zones upon sprinkler water flow.

419.2.5.2.3 Single- and multiple-station smoke alarms. Listed single- and multiple-station smoke alarms complying with UL 217 shall be installed in accordance with Sections 419.2.5.2.3.1 through 419.2.5.2.3.3 and NFPA 72.

419.2.5.2.3.1 Location. Single- or multiple-station smoke alarms shall be installed in the following locations:

1. In each room used for sleeping purposes.

2. On the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms.

3. In each story within a dwelling unit, including basements but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper Level.

419.2.5.2.3.2 Interconnection. Where more than one smoke alarm is required to be installed within an individual dwelling unit, the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon the activation of one alarm. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

419.2.5.2.3.3 Power Source. Smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms with integral strobes that are not equipped with battery back-up shall be connected to an emergency electrical system. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent without a disconnecting switch other than as required for overcurrent protection.

Exception: Smoke alarms are not required to be equipped with battery backup where they are connected to an emergency electrical system.

419.2.5.2.4 Carbon monoxide alarms. Work/live occupancies shall be provided with single station carbon monoxide alarms installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units and on each level of the dwelling. The carbon monoxide alarms shall be listed as complying with UL 2034 and installed and maintained in accordance with NFPA 720-2012 and the manufacturer's instructions.

419.2.5.2.4.1 Carbon monoxide detection systems. Carbon monoxide detection systems, that include carbon monoxide detectors and audible notification appliances, installed and maintained in accordance with this section for carbon monoxide alarms and NFPA 720-2012 shall be permitted. The carbon monoxide detectors shall be listed as complying with UL 2075.

419.2.6 Means of egress. Except as modified by this section, the means of egress components for a work/live unit shall be designed in accordance with Chapter 10 for the function served.

419.2.6.1 Egress capacity. The egress capacity for each element of the work/live unit shall be based on the occupant load for the function served in accordance with Table 1004.1.1.

419.2.6.2 Spiral stairways. Spiral stairways that conform to the requirements of Section 1009.12 shall be permitted only for the residential portion of the work/live unit.

419.2.7 Vertical openings. Floor openings between floor levels of a work/live unit are permitted without enclosure where the residential and nonresidential uses are permitted to be nonseparated.

419.2.8 Structural. Floor loading for the areas within a work live unit shall be designed to conform to Table 1607.1 based on the function within the space.

419.2.9 Accessibility. Work/live unit shall be accessible in accordance with Chapter 11 for the function served. For the residential portion of the work/live unit, accessibility requirements for R occupancies in Chapter 1107.6 shall apply. Where there are other R occupancy units within the building, work/live units shall be considered R-2 occupancy and shall be combined with other R-2 occupancy units in determining accessibility requirements for the residential units within the building.

419.2.10 Ventilation. The applicable ventilation requirements of the International Mechanical Code and Section 1203 shall apply to each area within the work/live unit for the function within that space. Mechanical ventilation systems shall be separate for the residential and commercial portions where separated by a fire barrier wall.

419.2.11 Plumbing facilities. The nonresidential area of the work/live unit shall be provided with minimum plumbing facilities as specified by Chapter 29, based on the function of the nonresidential area. Where the nonresidential or residential area of the work/live unit is required to be accessible by Section 1103.2.13, the plumbing fixtures specified by Chapter 29 shall be accessible. Toilets and bathrooms shall also meet requirements in Section 1210.

419.2.12 Sound insulation. Common interior walls and floor/ceiling assemblies between adjacent work/live units or between work/live units and other occupancies shall have sound transmission in accordance with Chapter 1207.

419.2.13 Interior Space Dimensions. Habitable and occupiable spaces within work/live units shall meet the minimum requirements for interior space dimensions in Section 1208.

419.2.14 Certificate of Occupancy. A new certificate of occupancy shall be issued for any work/live use.

2.02.140 ~~**Amendment to IBC Section 504.2 – Automatic sprinkler system increase**~~ **Amendment to IBC Section 504.4 by addition of a new Section 504.4.1.1 – Type B occupancies within R-1 and R-2 occupancies.**

The following section amends Section 504.4.1 of the State Building Code amendments to IBC Section 504.4 – Number of Stories.

5.4.4.1.1 Type B Occupancies within R-1 and R-2 occupancies. Provided the building meets the additional requirements in Section 504.4.1 as amended by the State Building Code, Type B occupancies that are considered accessory to and for the exclusive use of the R-1 and R-2 uses, including such uses as assembly areas, exercise rooms, or other amenity spaces with less than 50 occupants, may be permitted on all stories that the R-1 and R-2 uses are permitted. These spaces must also meet all the additional provisions as specified in the State Building Code amendment (WAC 51-50-0504) to IBC 504 – Building Height and Number of Stories. ~~504.2 Automatic sprinkler system increase. Where a building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, the value specified in Table 503 for maximum height is increased by 20 feet (6096 mm) and the maximum number of stories is increased by one story. These increases are permitted in addition to the area increase in accordance with Sections 506.2 and 506.3. For Group R buildings protected throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.2, the value~~

~~specified in Table 503 for maximum height is increased by 20 feet (6096 mm) and the maximum number of stories is increased by one story, but shall not exceed four stories or 60 feet (18 288 mm), respectively.~~

~~Exceptions:~~

~~1. Buildings or portions of buildings, classified as a Group I-2 of Type IIB, III, IV, or V construction.~~

~~2. Buildings or portions of buildings, classified as a Group H-1, H-2, H-3, or H-5.~~

~~3. Fire-resistance rating substitution in accordance with Table 601, Note d.~~

~~4. For Group R, Group B, and/or Group M Occupancies in buildings constructed of Type VA construction, the number of stories may be increased by a maximum of two stories provided:~~

~~4.1. The building is sprinklered in accordance with Section 903.3.1.1 of this code, with quick response sprinkler heads installed.~~

~~4.2 The height in feet for the type VA construction may be increased to 65 feet, which if constructed over type IA construction in accordance with the provisions of Section 509.2, may be measured from the three-hour fire resistive horizontal assembly, separating the type IA construction from the type VA construction, provided the elevation of the finished floor of the highest occupied floor (or occupied roof) does not exceed 75 feet above the elevation of the lowest Fire Department Access to the building.~~

~~4.3 Vertical Exit enclosures shall be constructed as smokeproof enclosures or pressurized stair enclosures in accordance with Section 909.20.~~

~~4.4 For the purposes of this exception, standby power shall be provided for all exit enclosure pressurization systems used to meet Subsection 4.3 above and shall be installed in accordance with Sections 403.4.7 and 909.20.6.2, and the National Electric Code as adopted and amended by the City of Tacoma. Connection ahead of the main service disconnect switch shall be permitted for the standby power when standby power is not otherwise required to be provided by a generator.~~

~~4.5 Emergency power systems shall be provided in accordance with Section 403.4.8~~

~~4.6 Walls separating dwelling units or sleeping units, and corridor walls in Group B and Group R, Divisions 1 and 2 Occupancies shall be constructed as one-hour fire-resistance rated construction as provided in IBC Section 708. Reduction of the fire resistance rating is not permitted.~~

~~4.7 All Exterior walls, including those with a fire separation distance of more than five feet, shall be of not less than one-hour fire-resistive rated construction for fire exposure from both the interior and exterior sides of the walls.~~

~~4.8 Structural observation is provided during construction in accordance with Sections 1702 and 1709.1 with special attention to wood shrinkage.~~

2.02.150 Amendment to IBC Section 510.2 – Horizontal building separation allowance by addition of a new Section 510.2(7).

~~509~~510.2(7) For the condition in Section 504.4.1 as amended by the State Building Code , the maximum building height in feet (mm) for the Type VA construction as set forth in Section 504.3 for the Type VA construction may be measured from the horizontal building separation, provided the finished floor level of the highest occupied floor does not exceed 75 feet above the lowest level of fire department access to the building, whichever provides the lowest height. ~~Horizontal building separation allowance. A building shall be considered as separate and distinct buildings for the purpose of determining area limitations, continuity of firewalls, limitation of number of stories and type of construction, when all of the following conditions are met:~~

~~1. The buildings are separated with a horizontal assembly having a minimum three-hour fire-resistance rating.~~

~~2. The building below the horizontal assembly is of Type IA construction.~~

~~3. The number of basements and stories below the three-hour fire resistive horizontal assembly shall not be limited, provided the overall height restrictions for the entire building structure above and below the three-hour fire resistive horizontal assembly comply with item 8 below, and entire building above and below the three-hour fire resistive horizontal exit are provided with an automatic fire sprinkler system complying with IBC Section 903.3.1.1 with quick response or other sprinkler heads, approved by the Building Official.~~

~~4. Shaft, stairway, ramp or escalator enclosures through the horizontal assembly shall have not less than a two-hour fire-resistance rating with opening protectives in accordance with Section 716.5.~~

~~5. Vertical Exit enclosures shall be smokeproof enclosures if the stair enclosures above the three hour occupancy separation are in type VA construction exceed four stories above the three hour occupancy separation or by the high-rise provisions in IBC section 403.~~

~~Exception:~~

~~Where the enclosure walls below the three-hour fire-resistive horizontal assembly have not less than a three-hour fire-resistance rating with opening protectives in accordance with Table 716.5, the enclosure walls extending above the three-hour fire-resistive horizontal assembly shall be permitted to have a one-hour fire-resistance rating provided:~~

~~a. The building above is not required to be of Type I construction; and~~

~~b. The enclosure connects less than four stories; and~~

~~c. The enclosure opening protectives above the three-hour fire-resistive horizontal assembly have a fire-protection rating of not less than one-hour.~~

~~6. The building or buildings above the three-hour fire-resistive rated horizontal assembly shall be permitted to have multiple Groups A occupancy uses, each with an occupant load of less than 300, and/or Group B, M, R, and/or Group S occupancies.~~

~~7. The building below the three-hour fire-resistive horizontal assembly shall be protected throughout by an approved automatic sprinkler system in accordance with Section 903.3.1.1 and shall be permitted any of the following occupancies:~~

~~7.1 Group S-2 parking garage used for the parking and storage of private motor vehicles;~~

~~7.2 Multiple Group A, each with an occupant load of less than 300;~~

~~7.3 Group B;~~

~~7.4 Group M;~~

~~7.5 Group R; and~~

~~7.6 Uses incidental to the operation of the building (including entry lobbies, mechanical rooms, storage areas, and similar uses).~~

~~8. The maximum building height in feet shall not exceed 65 feet in height measured from the top of the three-hour fire-resistive separation, and the finish floor level of the highest occupied floor shall not exceed 75 feet above the lowest fire department access to the building, whichever provides the lesser height.~~

2.02.160 Amendment to IBC Section 1503.4~~0~~ – Roof Drainage.

Section 1503.4 in the currently adopted edition of the IBC shall be replaced in its entirety with the following:

1503.4~~.1 General.~~ Design and installation of roof drainage systems shall comply with Section 1503 of this code and the UPC as applicable.

1503.4.1 Roofs shall be sloped a minimum of 1 unit vertical in 48 units horizontal (2% slope) for drainage unless designed for water accumulation in accordance with Chapter 16, and approved by the Building Official. Vegetated roofs may be approved as an alternate design.

1503.4.2 Roof Drains. Unless roofs are sloped to drain over roof edges, roof drains shall be installed at each low point of the roof. Vegetated roofs may be designed with alternate drainage systems as approved by the Building Official.

Roof drains shall be sized and discharged in accordance with the Uniform Plumbing Code. Roof drainage shall be directed away from the building and discharged to the storm sewer or to other approved disposal systems. Roof drainage shall not be connected to, or allowed to infiltrate into, the footing drain system.

1503.4.3 Overflow Drains and Scuppers. Where roof drains are required, overflow drains having the same size as the roof drains shall be installed with the inlet flow line located two inches above the low point of the roof, or overflow scuppers having three times the size of the roof drains and having a minimum opening height of four inches may be installed in adjacent parapet walls with the inlet flow line located not more than two inches above the low point of the adjacent roof.

Overflow drains shall discharge to an approved location and shall discharge at a point above the ground, which can be readily observed. Overflow drains shall not be connected to roof drain lines.

1503.4.4 Concealed Piping. Roof drains and overflow drains, where concealed within the construction of the building, shall be installed in accordance with the Uniform Plumbing Code.

1503.4.5 Over Public Property. Roof drainage water from a building shall not be permitted to flow over public property unless part of a City approved dispersion system and where an easement has been obtained.

1503.4.6 Gutters. Gutters and leaders placed on the outside of buildings other than Group R-3, private garages, and buildings of type V construction shall be of noncombustible material or a minimum of Schedule 40 plastic pipe.

2.02.170 Amendment to IBC Section 1511~~10.7 – Energy code requirements for r~~Re-roofing – by addition of a new Section 1511.7 – Energy Code Requirements for Re-Roofing.

~~1510~~1511.7 Energy Code Requirements for Re-Roofing. Replacement of roof coverings shall conform to the provisions of Section C101.4.3 of the Energy Code. Replacement of low-slope roof coverings shall conform to the provisions of Section C402.2.1.1 of the Energy Code.

2.02.180 Amendment to IBC Section 1608 – Snow loads.

Section 1608 in the IBC shall be replaced in its entirety with the following:

1608 Snow loads. Roofs shall be designed for a snow load of 25 pounds per square-foot applied at roof level, except that if the live load determined by Section 1607 is greater than the snow load, then the live load shall be the roof design load.

Potential unbalanced accumulation of snow at valleys, parapets, roof structures, and offsets in roofs of uneven configuration shall be considered with a ground snow load of 21 psf.

The extra load caused by snow sliding off a sloped roof onto a lower roof shall be determined in accordance with Section 7.9 of ASCE 7-~~05~~10.

The 25-pound-per-square-foot snow load may be reduced by 0.125 pounds-per-square-foot for each degree of roof pitch over 20 degrees.

2.02.185 Amendment to IBC Section 1612.3 – Establishment of Flood Hazard Areas.

1612.3 Establishment of Flood Hazard Areas. The City of Tacoma hereby adopts the flood hazard maps and supporting data from the 1983 and 2007 FEMA Region X Flood Insurance Studies for Pierce County, Washington and Incorporated Areas, as amended or revised with accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto. The adopted flood hazard map and supporting data area hereby adopted by reference and declared to be part of this section.

2.02.190 Amendment to IBC Section 1613 by addition of a new subsection 1613.~~8~~7 – Tension-only bracing.

1613.~~8~~7 Tension-Only Bracing. The body of the tension element, in a tension-only bracing assembly, shall be designed for the seismic load effect, including the Overstrength Factor, in accordance with ASCE 7-10, Section 12.4.3.

2.02.200 Amendment to IBC Section 2405 by addition of a new subsection 2405.6 – Location of sloped glazing and skylights.

2405.6 Sloped glazing and skylights shall not be located closer to property lines or the centerline of adjoining public ways where, due to proximity to the property line or the centerline of an adjoining public way, openings in walls are prohibited, or are required to be protected by the provisions of Section 705.

2.02.205 Amendment to IBC Section 3108 – Telecommunication and Broadcast Towers by addition of a new Section 3108.1.1 – Amplification Factor for Structures Bracketed to Supporting Structure.

3108.1.1 Amplification Factor for Structures Bracketed to Supporting Structure. The following amendments shall be made to Section 2.7.2.1.1 of TIA-222:

1. For structures bracketed to the supporting structure at the mid-height of the structure or below, the amplification factor shall be equal to 1.0.

2. For structures bracketed to the supporting structure above the mid-height of the structure, the amplification factor shall be equal to 3.0 or may be linearly interpolated between 3.0 and 1.0 based on the elevation of the bracket with respect to the mid-height of the structure.

2.02.210 Amendment to IBC Section 3202.3 – Encroachments eight feet or more above grade.

Section 3203.3 in the IBC shall be replaced in its entirety with the following:

3202.3 Encroachments eight feet or more above grade. Encroachments eight feet (2438 mm) or more above grade shall comply with Sections 3202.3.1 through 3202.3.4.

3202.3.1 Awnings, canopies, marquees, and signs. Awnings, canopies, marquees, and signs shall be constructed so as to support applicable loads as specified in Chapter 16. Awnings, canopies, marquees, and signs with less than 16.5 feet (5029 mm) clearance above the sidewalk shall not extend into or occupy more than two-thirds the distance from the property line to the face of the curb, but in no case shall extend closer than two feet to the curb. All portions of awnings, canopies, marquees, and signs shall be not less than eight feet above any public walkway. Stanchions or columns that support awnings, canopies, marquees and signs shall be located not less than 2 feet (610 mm) in from the curb line.

3202.3.2 Windows, balconies, architectural features, and mechanical equipment. Where the vertical clearance above grade to projecting windows, balconies, architectural features, or mechanical equipment is more than eight feet (2438 mm), one inch (25mm) of encroachment is permitted for each additional one inch (25 mm) of clearance above eight feet (2438 mm), but the maximum encroachment shall be four feet (1219 mm). No usable floor space shall be added to the building by such projections unless the air rights for the street where the projection occurs are vacated by City of Tacoma ordinance.

3202.3.3 Encroachments 16.5 feet or more above grade. Upon issuance of a Street Occupancy Permit or upon vacation of the air rights over the street by ordinance and subject to the conditions of the street occupancy permit or vacation, encroachments 16.5 feet (5029 mm) or more above grade shall not be limited. No usable floor space shall be added to the building by such projections unless the air rights for the street where the projection occurs are vacated by City of Tacoma ordinance.

Exception:

Encroachments into street right-of-ways which are also the right-of-way for railroads or light-rail shall be a minimum of 24 feet clear above the elevation of the top of railroad or light-rail rails.

3202.3.4 Pedestrian walkways. The installation of a pedestrian walkway over a public right-of-way shall require that the air rights above the right-of-way be vacated by City of Tacoma ordinance. The vertical clearance from the public right-of-way to the lowest part of the pedestrian walkway shall be subject to the approval of the City of Tacoma, but in no case shall be less than 16.5 feet (5029 mm) minimum.

Exception:

Pedestrian walkways over street right-of-ways which are also the right-of-way for railroads or light-rail shall be a minimum of 24 feet clear above the elevation of the top of railroad or light-rail rails.

* * *

2.02.390 Amendment to IBC Appendix Section G102.2 – Establishment of Flood Hazard Areas.

Section G102.2 of Appendix G in the IBC shall be replaced in its entirety with the following:

G102.2 Establishment of flood hazard areas. Flood hazard areas are established in Section 1612.3 of this code. The City of Tacoma has regulated flood hazard areas under ordinance since March 25, 1986.

2.02.400 Amendment to IBC Appendix Section G103 – Powers and Duties by the addition of a new Section G103.10 – Additional Conditions for Consideration.

G103.10 – Additional Conditions for Consideration. The Building Official shall also review the project for compliance with the Endangered Species Act.

2.02.410 Amendment to IBC Appendix Section G105 – Variances by Addition of a new Section G105.7.1 – Additional Criteria for Issuance.

G105.7.1Additional Conditions for Issuance. In addition to the conditions for issuance listed in IBC G105.7, the Board of Building Appeals shall also require the applicant to demonstrate the following:

1. The proposed development will not destroy or adversely affect a fish and wildlife habitat conservation area or create an adverse effect to federal, state or locally protected species or habitat.

2. The proposed development project will not affect, or be affected by, channel migration.

3. There is good and sufficient cause for providing relief.

4. The variance pertains to a physical piece of property, and is not personal in nature and not based on the inhabitants or their health, economic, or financial circumstances.

5. The project is compliant with the Endangered Species Act.

6. The project will not adversely affect features or quality of habitat supporting local, state or federally protected fish or wildlife.

7. The applicant’s circumstances are unique and do not represent a problem faced by other area properties.

8. All requirements of other permitting agencies will still be met.

9. For new construction, substantial improvements as defined in Subsection 2.02.585, and other development necessary for the conduct of functionally dependent uses, the project will not adversely affect federal, state or locally protected fish, wildlife and their habitat.

~~**2.02.500 Amendment by deletion from the 2012 International Residential Code.**~~

~~The following sections are hereby deleted and omitted from the adoption of the 2012 IRC as adopted by this chapter:~~

~~R110 Certificate of Occupancy~~

~~R322 Flood Resistant Construction~~

~~**2.02.510 General amendments.**~~

~~The following numbered sections and tables of the IRC, as adopted herein, are amended to read as set forth, and shall supersede that section or table so numbered in the IRC and shall be a part of the official Building Code of the City of Tacoma. The sections and tables so amended are as follows:~~

~~IRC Section R105.2~~
~~IRC Section R105.3.1.1~~
~~IRC Section R105.3.1.2~~
~~IRC Section R112~~
~~IRC Section R113~~
~~IRC Table R301.2 (1)~~
~~IRC Section R301.2.3~~
~~IRC Section R324~~

~~**2.02.520 Chapters and sections of the Code deleted by the Washington State Building Code Council.**~~

~~Chapter 11~~
~~Chapters 25 through 43~~

~~**2.02.530 Washington State Building Code Council amendments.**~~

~~The following sections of the IRC have been amended by the Washington State Building Code Council in WAC 51-51, and are herein adopted by the City of Tacoma. The amendments to these sections are not included in this ordinance, but are adopted by reference:~~

~~IRC Section R102~~	~~IRC Section R408~~	~~IRC Section R1006~~
~~IRC Section R202~~	~~IRC Section R501 (New Sect.)~~	~~IRC Section M1201~~
~~IRC Section R301~~	~~IRC Section R502~~	~~IRC Section M1301 (New Sect.)~~
~~IRC Section R302~~	~~IRC Section R507 (New Sect.)~~	~~IRC Section M1302~~
~~IRC Section R303~~	~~IRC Section R602~~	~~IRC Section M1415~~
~~IRC Section R314~~	~~IRC Section R612~~	~~IRC Section M1507~~
~~IRC Section R315~~	~~IRC Section R703~~	~~IRC Section M1508~~
~~IRC Section R325~~	~~IRC Section R806~~	~~IRC Chapter M16~~
~~IRC Section R326~~	~~IRC Section R903~~	~~IRC Chapter M17~~
~~IRC Section R328 (New Sect.)~~	~~IRC Section R1001~~	~~IRC Chapter M20~~
~~IRC Section R403~~	~~IRC Section R1002 (New Sect.)~~	~~IRC Chapter 44~~
~~IRC Section R404~~	~~IRC Section R1004~~	~~IRC Appendix R~~

2.02.540 Amendment to IRC Section R105.2 – Work Exempt From Permit, Building and Electrical Sections.

The following additional exception shall be added to R105.2 – Building: ~~R105.2 Work exempt from permit. Permits shall not be required for the following. Exemption from the permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction.~~

Building:

~~1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 200 square feet (18.58 m2).~~

~~2~~11. Reroofing of single family or duplex residential buildings, provided the existing roof coverings are removed prior to reroofing and the following conditions are met:

a. The new roofing material does not exceed five (5) pounds per square foot, or

b. For a vegetated roof, where it is the same weight as the previous roof and a vegetated roof was previously approved through a building permit.

~~3. Fences not over seven feet (1829 mm) high.~~

~~4. Retaining walls that are not over four feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge.~~

~~5. Water tanks supported directly upon grade if the capacity does not exceed 5,000 gallons (18927 L) and the ratio of height to diameter or width does not exceed 2 to 1.~~

~~6. Sidewalks, driveways, and on grade concrete patios with an aggregate area not exceeding 2,000 Sq. Ft. (185.81 sq M).~~

~~7. Painting, papering, tiling, carpeting, cabinets, countertops, and similar finish work.~~

~~8. Prefabricated swimming pools that are less than 24 inches (610 mm) deep.~~

~~9. Swings and other playground equipment.~~

~~10. Window awnings supported by an exterior wall which do not project more than 54 inches (1372 mm) from the exterior wall and do not require additional support.~~

~~11. Decks not exceeding 200 square feet (18.58 m2) in area that are not more than 30 inches (762 mm) above grade at any point, are not attached to a dwelling, and do not serve the exit door required by Section R311.4.~~

The following amendment shall be made to R105.2 – Electrical:

Electrical: See TMC Chapter 2.04.

~~Gas:~~

~~1. Portable heating, cooking, or clothes drying appliances.~~

~~2. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.~~

~~3. Portable fuel cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.~~

~~Mechanical:~~

~~1. Portable heating appliance.~~

~~2. Portable ventilation appliances.~~

3. Portable cooling unit.

4. Steam, hot, or chilled water piping within any heating or cooling equipment regulated by this code.

5. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.

6. Portable evaporative cooler.

7. Self-contained refrigeration systems containing 10 pounds (4.54 kg) or less of refrigerant or that are actuated by motors of 1 horsepower (746 W) or less.

8. Portable fuel cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

9. The stopping of leaks in drains, water, soil, waste or vent pipe; provided, however, that if any concealed trap, drainpipe, water, soil, waste, or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in this code.

10. The clearing of stoppages or the repairing of leaks in pipes, valves or fixtures, and the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.

R105.2.1 Emergency repairs. Where equipment replacements and repairs must be performed in an emergency situation, the permit application shall be submitted within the next working business day to the Building Official.

R105.2.2 Repairs. Application or notice to the Building Official is not required for ordinary repairs to structures. Such repairs shall not include the cutting away of any wall, partition or portion thereof, the removal or cutting of any structural beam or load bearing support, or the removal or change of any required means of egress, or rearrangement of parts of a structure affecting the egress requirements; nor shall ordinary repairs include addition to, alteration of, replacement or relocation of any, water supply, sewer, drainage, drain leader, gas, soil, waste, vent or similar piping or mechanical or other work affecting public health or general safety.

R105.2.3 Public service agencies. A permit shall not be required for the installation, alteration, or repair of generation, transmission, distribution, metering, or other related equipment that is under the ownership and control of public service agencies by established right.

2.02.550 Amendment to IRC Section R105.3.1.1 – Determination of substantially improved or substantially damaged existing buildings in flood hazard areas.

Section R105.3.1.1 in the IRC 2012 International Residential Code shall be replaced in its entirety with the following is amended to consider substantial improvement or repair pursuant to the definition in TMC 2.02.585.:

R105.3.1.1. Determination of Substantially Improved or Substantially Damaged Existing Buildings in Flood Hazard Areas. For applications for reconstruction, rehabilitation, addition or other improvement of existing buildings or structures located in a flood hazard area as established by Table R301.2(1), the Building Official shall examine or cause to be examined the construction documents and shall prepare a finding with regard to the value of the proposed work. For buildings that have sustained damage of any origin, the value of the proposed work shall be that work that is performed within a two-year period, as measured from the issuance date of the initial building permit for the project. The value of work shall include the cost to repair the building or structure to its predamaged condition. If the Building Official finds that the value of the proposed work (within a two-year period) equals or exceeds 50 percent of the building or structure value (calculated using the latest Building Valuation Data published by the International Code Council) before damage has occurred or the improvement is started, all existing portions of the entire building or structure shall meet the requirements of Section R322. If the building or structure has sustained substantial damage, all repairs are considered substantial improvement regardless of the actual repair work performed. The term does not include:

1. Improvements of a building or structure required to correct existing health, sanitary, or safety code violations identified by the Building Official and which are the minimum necessary to assure safe living conditions; or

2. Any alteration of a historic building or structure, provided that the alteration will not preclude the continued designation as a historic building or structure. For the purpose of this exclusion, a historic building is:

2.1. Listed or preliminarily determined to be eligible for listing in the National Register of Historic Places; or

2.2. Determined by the Secretary of the U.S. Department of Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined to qualify as a historic district; or

2.3 Designated as historic under a state or local historic preservation program that is approved by the Department of Interior.

2.02.560 Amendment to IRC Section 105.3.1 by addition of a new Section R105.3.1.2 - Criteria for issuance of a variance for flood hazard areas.

R105.3.1.2 Criteria for Issuance of a Variance for Flood Hazard Areas. A variance shall be issued by the Building Official only upon the following criteria:in accordance with TMC 2.02.410.

1. A showing of good and sufficient cause that the unique characteristics of the size, configuration, or topography of the site render the elevation standards in Section 322 inappropriate.

~~2. A determination that failure to grant the variance would result in exceptional hardship by rendering the lot undevelopable.~~

~~3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, cause fraud on or victimization of the public, or conflict with the existing local laws or ordinances.~~

~~4. A determination that the variance is the minimum necessary to afford relief, considering the flood hazard.~~

~~5. Submission to the applicant of written notice specifying the difference between the design flood elevation and the elevation to which the building is to be built, stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced floor elevation, and stating that the construction below the design flood elevation increases risk to life and property.~~

2.02.565 Amendment to IRC Section 110.1 – Use and Occupancy – by addition of exemptions.

Exemptions:

3. Certificates of occupancy are not required for remodels to One- and Two-family dwellings.

4. Certificates of occupancy are not required for additions less than 50 percent of the original building area for One- and Two-family dwellings.

2.02.570 Amendment to IRC Section R112 – Board of Appeals.

Section R112 in the IRC ~~2012 International Residential Code~~ is hereby deleted and replaced by reference to TMC 2.02.120. ~~shall be replaced in its entirety with the following:~~

~~R112.1. The Board of Building Appeals. The Board of Building Appeals, as created by TMC 2.17, is the properly designated board of appeals for the IRC, as adopted by the City of Tacoma and the State of Washington. The Board of Building Appeals, within the authority granted it by TMC 2.17, shall:~~

~~Hear and decide appeals of orders, decisions, or determinations made by the Building Official relative to the application and interpretation of this code.~~

~~R112.2. Limitations of Authority. An application for an appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed. The Board of Building Appeals shall have no authority relative to interpretation of the administrative provisions of this code, nor shall the Board be empowered to waive requirements of this code or grant variances, unless specifically granted in TMC Chapter 2.17.~~

2.02.580 Amendment to IRC Section R113 – Violations.

Section R113 – Violations in the IRC~~2012 International Residential Code~~ is hereby deleted, and replaced by reference by TMC 2.02.130.

2.02.585 Amendment to IRC Chapter 2 – Definitions with the addition of a definition for Substantial Improvement or Repair.

Substantial Improvement or Repair or Substantial Alteration or Construction. Reconstruction, rehabilitation, addition, alteration, repair, or other improvement to an existing building or structure, the cost of which exceeds 50 percent of the value of the building or structure before the repair or improvement is started as calculated using the latest Building Valuation Data published by the International Code Council. If ICC Building Valuation Data is not applicable to this building or structure, the value may be established using an approved market valuation. For the purposes of determining Substantial Improvement or Repair for flood hazard areas, this shall be cumulative as measured from the issuance date of the initial building permit or the last substantial improvement. For all other purposes, this shall be cumulative over a two-year period, as measured from the issuance date of the initial building permit for the project.

2.02.590 Amendment to IRC Table R301.2 (1) – Climatic and geographic design criteria.

TABLE R301.2 (1)

CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

ROOF SNOW LOAD	WIND DESIGN				SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP[e]	ICE BARRIER UNDER-LAYMENT REQUIRED[h]	FLOOD HAZARDS[g]	AIR FREEZ-ING INDEX[i]	MEAN ANNUAL TEMP[j]
	Speed[d] (mph)	Topo-graphic effects[k]	Special wind region[l]	Wind-borne debris zone[m]		Weathering[a]	Frost line depth[b]	Termite[c]					
25	110	K_{zt}=2	No	No	D_1	Moderate	12 in	Moderate to Heavy	20° F	No	Adoption: 3/25/1986; Flood Insurance Studies: 1983 & 2007	350	50° F

~~ROOF SNOW LOAD~~	~~WIND DESIGN~~		~~SEISMIC DESIGN CATEGORY[f]~~	~~SUBJECT TO DAMAGE FROM~~			~~WINTER DESIGN TEMP[e]~~	~~ICE BARRIER UNDER LAYMENT REQUIRED[h]~~	~~FLOOD HAZARDS[g]~~	~~AIR FREEZING INDEX[i]~~	~~MEAN ANNUAL TEMP[j]~~
	~~SPEED[d] (mph)~~	~~Topographic effects[k]~~		~~Weathering[a]~~	~~Frost line depth[b]~~	~~Termite[c]~~					
~~25 PSF~~	~~85~~	~~K_{zt} = 2~~	~~D_1~~	~~Moderate~~	~~12 Inch.~~	~~Moderate to Heavy~~	~~20° F~~	~~No~~	~~3/25/1986 See TMC Chapter 2.12~~	~~350~~	~~50° F~~

For SI: 1 pound per square foot = 0.0479 ~~ken/m2~~kPa, 1 mile per hour = ~~1.609 km/h~~0.447 m/s.

a. Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weathering column shall be filled in with the weathering index "negligible," "moderate" or "severe" ~~(i.e., negligible, moderate, or severe.)~~ for concrete as determined from ~~the Weathering Probability Map [~~Figure R301.2 (3)~~]~~. The grade of masonry units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216 or C 652.

b. The frost line depth may require deeper footings than indicated in Figure R403.1 (1). The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.

c. The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.

d. The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2 (4)A]. Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.

e. The outdoor design dry-bulb temperature shall be in accordance with the Washington State Energy Code, as adopted and amended by the City of Tacoma in TMC Chapter 2.10.

f. The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.

g. The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction's entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the date(s) of the Flood Insurance Study, and (c) the panel numbers and date(s) of all currently effective FIRMs and FBFMs, or other flood hazard map adopted by the community, as amended.

h. In accordance with Sections R905.~~2.7.1~~1.2, R905.~~4~~5.3.1, R905.~~5~~7.3.1, R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall fill in this part of the table with "NO."

i. The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99%) value on the National Climatic Data Center data table "Air Freezing Index- USA Method (Base 32°Fahrenheit)" ~~at www.ncdc.noaa.gov/fpsf.html~~.

j. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32°Fahrenheit)" ~~at www.ncdc.noaa.gov/fpsf.html~~.

k. Topographical effects shall be considered by performing a topographical analysis or using the topographical effects as published on the City of Tacoma Web Site. The appropriate KZT factor shall be applied and the analysis shall be in accordance with the provisions of the International Building Code and/or ASCE 7-05.

2.02.600 Amendment to IRC Section R301.2.3 – Snow loads.

Section R301.2.3 in the IRC~~2012 International Residential Code~~ is hereby deleted, and replaced by reference to TMC 2.02.180.

2.02.605 Amendment to IRC Section 322 – Flood-Resistant Construction – by addition of a new Section R322.1.11 – Additional Criteria for Development in Flood Hazard Areas.

R322.1.11 Additional Criteria for Development in Flood Hazard Areas. In addition to the requirements established in R322, the Building Official shall review projects in flood hazard areas for compliance with the Endangered Species Act.

2.02.610 Amendment to IRC ~~Chapter 3 by addition of~~ Section ~~R324~~R313 – Automatic Fire sprinkler systems.

IRC Section R313 shall be deleted and replaced by the following:

R313 – Automatic Fire Sprinkler Systems. An automatic sprinkler system shall be installed throughout every building which is a group of townhouses, as defined in the IRC~~2012 International Residential Code, which contains five or more townhouse units~~. Such fire sprinkler system shall be designed and installed in accordance with IBC Section 903.3.1.1, IBC Section 903.3.1.2, or IBC Section 903.3.1.3.

For the purposes of this IRC section, fire walls shall not be considered as dividing townhouses into separate buildings.

2.02.620 Manufactured Homes.

Manufactured homes, as defined by Title 46 of the Revised Code of Washington ("RCW") ("Motor Vehicles"), shall be permitted to be installed in the City, subject to the following conditions:

A. Manufactured homes to be installed in the City shall be new, which means any manufactured home required to be titled under Title 46 RCW which has not been previously titled to a retail purchaser and which is not a "used mobile home" as defined in RCW 82.45.032(2), which states:

(2) "Used mobile home" means a mobile home which has been previously sold at retail and has been subjected to tax under Washington State RCW chapter 82.08, or which has been previously used and has been subjected to tax under Washington State RCW chapter 82.12, and which has substantially lost its identity as a mobile unit at the time of sale by virtue of its being fixed in location upon land owned or leased by the owner of the mobile home and placed on a foundation (posts or blocks) with fixed pipe connections with sewer, water, and other utilities.

B. The Building Official shall be responsible for issuing all permits for alterations, remodeling, or expansion of manufactured housing which has been converted to real property and is located within City limits.

C. All manufactured homes shall be comprised of at least two fully-enclosed parallel sections, each of not less than 12 feet wide by 36 feet long.

D. Manufactured homes shall be set upon a permanent foundation, as defined by the Housing and Urban Development ("HUD") handbook "Permanent Foundation Guide for Manufactured Housing," which is sufficient to resist wind and seismic lateral forces, as well as the gravity loads as specified in the IRC, as adopted and amended in TMC 2.02. The Building Official shall be responsible for issuing all permits for foundations for manufactured homes.

"Permanent Foundation" for manufactured homes is defined in the HUD handbook, "Permanent Foundation Guide for Manufactured Housing," as:

Definition of Permanent Foundation. Permanent foundations must be constructed of durable materials; i.e., concrete, mortared masonry, or treated wood – and be site-built. It shall have attachment points to anchor and stabilize the manufactured home to

transfer all loads, herein defined, to the underlying soil or rock. The permanent foundations shall be structurally designed for the following:

1. Vertical stability.

a. Rated anchorage capacity to prevent uplift and overturning due to wind or seismic forces, whichever controls. Screw-in anchors are not considered a permanent anchorage.

b. Footing size to prevent overloading the soil-bearing capacity and avoid soil settlement. Footing shall be reinforced concrete to be considered permanent.

c. Base of footing below maximum frost-penetration depth.

d. Encloses a basement or crawl space with a continuous wall (whether bearing or non-bearing) that separates the basement or crawl space from the backfill, and keeps out vermin and water.

2. Lateral Stability. An anchorage system with a tested and rated or engineered load capacity to prevent sliding due to wind or seismic forces, whichever controls, in the transverse and longitudinal directions.

E. The space from the bottom of the manufactured home to the ground shall be enclosed by concrete or an approved concrete product. Such concrete product may be designed to support the manufactured home for gravity and lateral loads, or may be decorative.

F. All manufactured homes shall be originally constructed with a composition or wood shake or shingle, coated metal, excluding zinc galvanized metal, or similar roof of not less than 3:12 pitch.

G. All manufactured homes shall have exterior siding similar in appearance to siding materials commonly used on conventional site-built, IRC-compliant, single-family residences.

H. The roof shall be designed to support 25 pounds per-square-foot snow load, in conformance with TMC 2.02.~~180~~600.

I. Manufactured homes installed within the City shall meet the Washington State Energy Code, as adopted and amended by TMC 2.10.

J. Light and ventilation in manufactured homes shall meet the requirements of Section R303 of the IRC.

~~2.02.700 General amendments.~~

~~The following numbered sections and tables of the International Existing Building Code ("IEBC"), as adopted herein, are amended to read as set forth, and, shall supersede that section or table so numbered in the IEBC and shall be a part of the official Building Code of the City of Tacoma. The sections and tables so amended are as follows:~~

~~IEBC Section 105.2~~	~~IEBC Section 407.1~~	~~IEBC Table 1007.1~~
~~IEBC Section 112~~	~~IEBC Section 603~~	~~IEBC Section 1301~~
~~IEBC Section 113~~	~~IEBC Section 703~~	~~IEBC Section A113.9~~
~~IEBC Section 202~~	~~IEBC Section 1007.1~~	

~~2.02.710 Washington State Building Code Council amendments deleted from the City of Tacoma Adoption of the 2012 International Existing Building Code.~~

~~The following IEBC sections have been amended by the Washington State Building Code Council; however, the City of Tacoma deletes the Washington State Building Code Council Amendment, and adopts the IEBC section as stated in the 2012 International Existing Building Code or as the section is amended by the City of Tacoma by this chapter.~~

~~IEBC Section 407.1~~	~~IEBC Section 1301.1~~

~~2.02.720 Washington State Building Code Council amendments.~~

~~The following sections have been amended by the Washington State Building Code Council in WAC 51-50, Appendix M and are herein adopted by the City of Tacoma. The amendments to these sections are not included in this ordinance, but are adopted by reference:~~

~~IEBC Section 101.4~~	~~IEBC Section 804.1~~	~~IEBC Section 1201.1~~
~~IEBC Section 101.6~~	~~IEBC Section 811.1~~	~~IEBC Section 1203.9~~
~~IEBC Section 102.4.1.1~~	~~IEBC Section 907.4.1~~	~~IEBC Section 1204.1~~
~~IEBC Section 505.1~~	~~IEBC Section 908.1~~	~~IEBC Section 1205.10~~
~~IEBC Section 707.1~~	~~IEBC Section 1012.1.1~~	~~IEBC Section 1205.14~~

2.02.730 Amendment to IEBC Section 105.2 – Work exempt from permit.

Section 105.2 in the IBC~~2012 International Existing Building Code~~ is hereby deleted, and replaced by reference by TMC ~~Section~~ 2.02.090.

2.02.740 Amendment to IEBC Section 112 – Board of Appeals.

IEBC Section 112 in the IBC~~2012 International Existing Building Code~~ is hereby deleted and replaced by reference to TMC 2.02.120.~~shall be replaced in its entirety with the following:~~

~~EB112.1. The Board of Building Appeals. The Board of Building Appeals, as created by TMC 2.17, is the properly designated board of appeals for the International Existing Building Code, as adopted by the City of Tacoma. The Board of Building Appeals, within the authority granted it by TMC 2.17, shall:~~

~~Hear and decide appeals of orders, decisions or determinations made by the Building Official relative to the application and interpretation of this code.~~

~~EB112.2. Limitations of Authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply or an equally good or better form of construction is proposed. The Board of Building Appeals shall have no authority relative to interpretation of the administrative provisions of this code, nor shall the Board be empowered to waive requirements of this code or grant variances, unless specifically granted in TMC Chapter 2.17.~~

2.02.750 Amendment to IEBC Section 113 – Violations.

Section 113 in the IBC~~2012 International Existing Building Code~~ is hereby deleted, and replaced by reference by TMC ~~Section~~ 2.02.130.

2.02.760 Amendment to IEBC Section 202 – General Definitions – L, S, and W.

Live/Work Unit. A dwelling or sleeping unit in which up to 50 percent of the unit's space includes a commercial business use. The business owner lives in the residential space.

Substantial Improvement or Repair or Substantial Alteration or Construction. Reconstruction, rehabilitation, addition, alteration, repair, or other improvement to an existing building or structure, the cost of which exceeds 50 percent of the value of the building or structure before the repair or improvement is started as calculated using the latest Building Valuation Data published by the International Code Council. If ICC Building Valuation Data is not applicable to this building or structure, the value may be established using an approved market valuation. For purposes of determining Substantial Improvement or Repair for flood hazard areas, this shall be cumulative as measured from the issuance date of the initial building permit or the last substantial improvement. For all other purposes, this shall be cumulative over a two-year period, as measured from the issuance date of the initial building permit for the project.

~~Substantial Renovation or Construction. Remodeling, alteration, or reconstruction of, and/or addition to, an existing building within a two-year period, the cost of which exceeds 50 percent of the value of the building as calculated using the latest Building Valuation Data published by the International Code Council. The two-year period shall be measured from the issuance date of the initial building permit for the project.~~

Work/Live Unit. A commercial business use which includes a dwelling unit in up to 50 percent of the unit's space. The business owner lives in the residential space.

2.02.765 Amendment to IEBC Section 403 – Alterations – by addition of a new Section 4.3.1.1 - Substantial Alteration or Construction.

403.1.1 Substantial Alteration or Construction. Where alteration to any building or structure are defined as Substantial Alteration or Construction as defined in IEBC Section 202, such alterations shall comply with the requirements of IEBC Section 907.

2.02.770 Amendment to IEBC Section 407.1 – ~~Change of Occupancy.~~Conformance by addition of new Sections 407.1.1, Minimum Standards, and 407.1.2, Work/Live Use.

407.1.1 Minimum Standards. ~~EB407.1 Conformance. No change shall be made in the use or occupancy of any building that would place the building in a different division of the same group of occupancy or in a different group of occupancies, unless such building is made to comply with the requirements of the International Building Code for such division or group of occupancy. Subject to the approval of the Building Official, the use or occupancy of existing buildings shall be permitted to be changed and the building is allowed to be occupied for purposes in other groups without conforming to all the requirements of the International Building Code for those groups, provided the new or proposed use is less hazardous, based on life, fire risk, and seismic risk, than the existing use.~~ Minimum standards for fire, life, and seismic under TMC 2.01, Minimum Building and Structures Code, shall be provided regardless of whether the new occupancy or new use is considered less hazardous than the old occupancy. The relative hazard of occupancies shall be determined using IEBC Chapter 10~~, as amended in this chapter~~.

407.1.~~1~~2 Work/Live Use. A change to a work/live use is not a change of occupancy for the building or space provided the following conditions are met:

1. The buildings containing work/live units shall comply with IBC Section 419.2; and

2. The occupancy classification of the work/live unit conforms to the existing permitted use; and

3. All buildings with work/live uses shall comply with the standards for fire, life, and seismic safety in TMC 2.01, Minimum Building and Structures Code; and

4. A certificate of occupancy is issued for any new or altered work/live use.

Additional conditions may be imposed by the Building Official or Fire Code Official where deemed necessary for the general safety and welfare of the occupants and the public depending on the specific hazards and hazardous materials associated with the work/live use.

2.02.775 Amendment to IEBC Section 504.1 – Alteration – Level 2.

EB504.1. Scope. Level 2 alterations include the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment below the threshold of a Level 3 alteration.

2.02.776 Amendment to IEBC Section 505.1 – Alteration – Level 3.

EB505.1. Scope. Level 3 alterations apply where the work is Substantial ~~Renovation or Construction~~Improvement or Repair as defined in 2.02.760.

2.02.780 Amendment to IEBC Section 603 – Fire Protection – by addition of a new subsection EB603.2.

EB603.2 Group R-1 and R-2 occupancies. Where Repairs, as defined by the IEBC~~International Existing Buildings Code~~, are undertaken to buildings of Group R-1 or Group R-2 occupancies, automatic fire sprinkler systems shall be provided when required by the International Fire Code ("IFC") as adopted and amended in TMC Chapter 3.02.

2.02.790 Amendment to IEBC Section 703 – Fire Protection – by addition of a new subsection EB703.2.

EB703.2 Group R-1 and R-2 occupancies. Where Repairs, as defined by the IEBC~~International Existing Buildings Code~~, are undertaken to buildings of Group R-1 or Group R-2 occupancies, automatic fire sprinkler systems shall be provided when required by the International Fire Code ("IFC") as adopted and amended in TMC Chapter 3.02.

~~**2.02.800 Amendment to IEBC Section 1007.1 – Change of occupancy – Structural.**~~

~~EB1007.3.1 Compliance with the International Building Code. Where a building or portion thereof is subject to a change of occupancy that results in the building being assigned to a higher risk category based on Table 1604.5 of the International Building Code; or where such change of occupancy results in a reclassification of a building to a higher hazard category as shown in Table 1007.1; or where a change of a Group M occupancy to a Group A, E, I-1, R-1, R-2, or R-4 occupancy with two-thirds or more of the floors involved in Level 3 alteration work, the building shall comply with the requirements for International Building Code level seismic forces as specified in Section 301.1.4.1 for the new risk category.~~

~~Exceptions:~~

~~1. Group M occupancies being changed to Group A, E, I-1, R-1, R-2, or R-4 occupancies for buildings less than six stories in height and in Seismic Design Category A, B, or C.~~

~~2. Where approved by the Building Official, specific detailing provisions required for a new structure are not required to be met where it can be shown that an equivalent level of performance and seismic safety is obtained for the applicable risk category based on the provision for reduced International Building Code level seismic forces as specified in Section 301.1.4.2. The rehabilitation procedures shall consider the regularity, overstrength, redundancy, and ductility of the lateral-load-resisting system within the context of the existing detailing of the system.~~

~~3. Where the area of the new occupancy with a higher hazard category is less than or equal to 10 percent of the total building floor area and the new occupancy is not classified as Risk Category IV. For the purposes of this exception, buildings occupied by two or more occupancies not included in the same Risk Category shall be assigned the classification of the highest seismic use group corresponding to the various occupancies. Where structures have two or more portions that are structurally separated, each portion shall be subject to the provisions of Section 1604.5.1 of the International Building Code. Where a structurally separated portion of a structure provides required access to, required egress from, or shares life safety components with another portion having a higher seismic use group, both portions shall be assigned the higher Risk Category. The cumulative effect of the area of occupancy changes shall be considered for the purposes of this exception.~~

~~4. Unreinforced masonry being wall buildings in Risk Category III when assigned to Seismic Design Category A or B shall be allow to be strengthened to meet the requirements of Appendix Chapter A1 of this code (Guidelines for the Seismic Retrofit of Existing Buildings ("GSREC")).~~

2.02.805 Amendment to IEBC Section 1001.1 – Change of Occupancy – Scope – by addition of an exception to EB1001.1.

EB1001.1 ~~Scope. The provisions of this chapter shall apply where a change of occupancy occurs, as defined in Section 202, including:~~Exception:

1. ~~Where the occupancy classification is not changed; or~~

~~2. Where there is a change in occupancy classification or the occupancy group designation changes.~~

~~Exception:~~ The addition of work/live units complying with IBC Section 419.2 where the occupancy classification of the work/live unit conforms to the existing permitted use and the building complies with TMC 2.01, Minimum Building and Structures Code.

2.02.810 Amendment to IEBC Section 1007.3 – Seismic Loads – by deletion and replacement of IEBC Section 1007.3 and addition of a new Section IEBC 1007.3.3 – Seismic Requirements for Unreinforced Masonry and Hollow Clay Tile Buildings~~Change of occupancy - Structural by addition of a new Table 1007.1~~.

IEBC Section 1007.3 shall be deleted and replaced as follows:

IEBC 1007.3 – Seismic Loads. Existing buildings with a change of occupancy shall comply with the seismic provisions of Sections 1007.3.1 and 1007.3.2. Unreinforced masonry and hollow clay tile buildings shall also comply with Section 1007.3.3.

The following section shall be added to IEBC Section 1007.3:

IEBC 1007.3.3 – Seismic Requirements Due to Change of Occupancy for Unreinforced Masonry and Hollow Clay Tile Buildings. Existing buildings constructed with unreinforced masonry or hollow clay tile categorized in IBC Table 1604.5 as Risk Category II, shall be required to comply with the requirements for International Building Code level seismic forces as specified in Section 301.1.4.2 when the occupancy is increased to a higher relative hazard level in accordance with IEBC Table 1007.1.

IEBC TABLE 1007.1 – HAZARD CATEGORIES TRIGGERING SEISMIC REQUIREMENTS DUE TO CHANGE OF OCCUPANCY FOR URM AND HOLLOW CLAY TILE CLASSIFIED BUILDINGS

Relative Hazard	Occupancy Classification
High	• Buildings and other structures whose primary occupancy is assembly with an occupant load greater than 99. • Buildings and other structures containing Group E occupancies with an occupant load greater than 50. • Group I occupancies not categorized under Risk Categories III and IV. • Group H occupancies. • Any other occupancy with an occupant load greater than 500.
Medium	• Buildings and other structures whose primary occupancy is assembly with an occupant load of 99 or less. • Buildings and other structures containing Group E occupancies with an occupant load of 49 or less. • Group R-1, R-2. • Group F-1 and S-1 with an occupant load of 500 or less. • Group B or M with an occupant load of 100 to 500.
Low	• Group B or M with an occupant load less than 100. • Group F-2, S-2, R-3, and U with an occupant load of 500 or less

~~EB TABLE 1007.1 HAZARD CATEGORIES AND CLASSIFICATIONS EARTHQUAKE SAFETY~~

~~RELATIVE HAZARD~~	~~OCCUPANCY CLASSIFICATION~~
~~1~~	~~H-1, H-4 with highly toxic materials~~ ~~I-2 (Hospitals)~~ ~~B (Fire, Rescue, and Police Stations)~~ ~~B (Emergency Preparedness Centers)~~ ~~B (Primary Communication Centers)~~ ~~S (Post-Earthquake Recovery Vehicle Garages)~~ ~~F (Power Generating Stations and Other Utility Facilities required for emergency backups)~~
~~2~~	~~A, E, I-1, I-2 (All Others), I-3, H-2, H-3~~ ~~F (Power Generating Stations and Other Public Utilities not Listed in Relative Hazard 1)~~ ~~B (Used for Adult Education and with an Occupant Load > 500)~~ ~~Any Building with an Occupant Load > 500~~
~~3~~	~~R-1, R-2~~
~~4~~	~~F-1, S-1, H-4 (All Others)~~
~~5~~	~~B (All Others), F-2, M, S-2~~
~~6~~	~~R-3, U~~

2.02.820 Amendment to IEBC Chapter 13 – Relocated or moved buildings.

Chapter 13 in the IEBC~~2012 International Existing Building Code~~, as amended by the State Building Code, is hereby deleted and replaced with the following:

1301.1. Buildings or structures moved into or within the City of Tacoma shall comply with the provisions of this code and the Tacoma Building and Fire Codes for new buildings or structures. ~~Buildings or structures moved into or within the City of Tacoma shall comply with the provisions of the construction codes, including, but not limited to, the building code, mechanical code, fire code, plumbing code, electrical code, energy code, and barrier-free code for new buildings or structures.~~

Exception:

Group R, Division 3, buildings or structures are not required to comply if:

1. The original occupancy classification is not changed, ~~and~~

2. The building complies with TMC 2.01, Minimum Building and Structures Code, and

~~2~~3. The original building is not substantially remodeled or rehabilitated. For the purposes of this section only, a Group R, Division 3 building shall be considered to be substantially remodeled when the costs of remodeling within a two year period beginning on the date the alteration permit is issued, exceed 60 percent of the value of the building as calculated using the Building Valuation Table published by the International Code Council, exclusive of the costs relating to preparation, construction, demolition, or renovation of foundations.

Off-site improvements shall be provided in accordance with Section 2.19, as if the building is a new building, when the building is moved onto the site from some other location, and shall be provided as if the building was added to or remodeled when the building is moved within the site.

Both a building permit and a moving permit shall be required to move a building onto a site within the City of Tacoma. No moving permit shall be issued until a building permit is issued for the building.

Prior to issuing a building permit for a building to be moved onto a site within the City of Tacoma, the permittee shall post a performance bond, or other financial security acceptable to the Building Official, to be used to demolish the building if ~~the conditions set forth in Sections 1301.1 and 1301.2,~~conditions of the building permit and all other applicable codes and regulations of the City of Tacoma, have not been complied with within the times specified in said sections. The amount of the bond shall be established by the Building Official and shall be sufficient to cover costs of demolishing the building, disposing of all demolition debris, cleaning the property of any and all litter and debris, and grading the property so that no unsafe conditions remain.

~~The following shall be conditions of any permits issued to move a building onto a site within the City of Tacoma:~~

~~Sec. 1301.1.1. The foundation required for the building shall be completed and the building placed on the foundation, in accordance with the provisions of this code, within 30 days of the date the building permit is issued.~~

~~Sec. 1301.1.2. All construction required to bring the building into conformance with the provisions of the construction codes for new buildings, and all other applicable codes and regulations of the City of Tacoma shall be completed, and a final inspection of the work passed, within 180 days of the date the building permit is issued.~~

~~Any permittee may apply for an extension of the time to meet one or both of the requirements specified in 1301.1.1 and 1301.1.2, above, for a good and satisfactory reason. The maximum extensions of time which may be granted by the Building Official to complete said work shall be: 30 additional days to complete the work specified in 1301.1.1; and 180 additional days to complete the work specified in 1301.1.2, above.~~

~~If the permittee fails to comply with all of the conditions of the permit within the time limits described above, the Building Official shall demolish the moved building, dispose of all demolition debris, clean the property of any and all litter and debris, and grade the property so that no unsafe conditions remain. All of the City's costs therefore shall be charged against the permittee's bond or other financial security.~~

~~1301.2 Conformance. Buildings or structures moved into or within the jurisdiction shall comply with the provisions of this code, the International Residential Code (WAC 51-51), the International Mechanical Code (WAC 51-52), the International Fire Code (WAC 51-54), the Uniform Plumbing Code and Standards (WAC 51-56 and 51-57), and the Washington State Energy Code (WAC 51-11) for new buildings or structures.~~

~~Exception:~~

~~Group R-3 buildings or structures are not required to comply if:~~

~~1. The original occupancy classification is not changed, and~~

~~2. The original building is not substantially remodeled or rehabilitated. For the purposes of this section only, a Group R, Division 3 building shall be considered to be substantially remodeled when the costs of remodeling within a two-year period beginning on the date the alteration permit is issued, exceed 60 percent of the value of the building as calculated using the Building Valuation Table published by the International Code Council, exclusive of the costs relating to preparation, construction, demolition, or renovation of foundations.~~

~~2.02.830 Amendment to IEBC Appendix Section A113.9 Secondary load paths by addition of a new Section A113.9.1~~

~~113.9.1 Hollow Clay Tile. Primary or secondary framing supported by hollow clay tile shall be provided with an independent secondary vertical load path constructed to support all dead and live loads. A full snow load on the roof need not be included, but a minimum ten pounds per square foot live load shall be assumed for the roof.~~

~~Hollow clay tile walls used as shear walls shall be provided with an independent secondary lateral load path capable of carrying the design lateral loads for the shear walls.~~

~~A 50 percent increase in the allowable stresses will be allowed in the materials used to construct the secondary load paths.~~

* * *

Chapter 2.06
PLUMBING CODE

Sections:

2.06.010 Adoption of the Uniform Plumbing Code.

The Uniform Plumbing Code as adopted by the State Building Code as defined in TMC 2.02.100 is hereby included in the City of Tacoma Plumbing Code as adopted by this chapter. Section 104.5, Table No. 104.5, and Section 1101.12.2.2.2 are hereby deleted from the UPC as amended in this chapter.~~The 2012 Edition of the Uniform Plumbing Code and the International Association of Plumbing and Mechanical Officials ("IAPMO") Installation Standards, together with appendices A, B, and I (hereinafter referred to as the Uniform Plumbing Code), adopted and published by the International Association of Plumbing and Mechanical Officials is hereby adopted by this reference, pursuant to the provisions of Section 35.21.180, Revised Code of Washington, as the official Plumbing Code of the City of Tacoma, provided that Chapters 12 and 15, requirements relating to venting and combustion air of fuel fired appliances as found in chapter 5, and portions of the code addressing building sewers are not adopted. Such adoption by reference shall be subject to the amendments to the Uniform Plumbing Code hereinafter set forth~~.

~~(Note: Where reference is made to International Building Code or IBC; or reference is made to the International Residential Code or IRC; or reference is made to the International Existing Building Code or IEBC; the reference shall mean the 2012 edition of each of these documents as amended and adopted by the City of Tacoma, unless specifically stated otherwise.)~~

2.06.020 Conflicts with the City of Tacoma Stormwater Management Manual or Side Sewer and Sanitary Sewer Availability Manual.

If there is a conflict between the UPC~~2012 Uniform Plumbing Code~~ as adopted and amended in this chapter and the City of Tacoma Stormwater Management Manual, the City of Tacoma Stormwater Management Manual, as authorized by TMC 12.08.090, shall govern.

City sewer availability, building sewers (from a point two feet after passing through or under a building foundation), and private sewage disposal systems shall be in accordance with the City of Tacoma Side Sewer and Sanitary Sewer Availability Manual, as authorized by TMC 12.08.740. If there is a conflict between the UPC~~2012 Uniform Plumbing Code~~ as adopted and amended in this chapter and the City of Tacoma Side Sewer and Sanitary Sewer Availability Manual, the City of Tacoma Side Sewer and Sanitary Sewer Availability Manual~~, as authorized by TMC 12.08.740,~~ shall govern.

~~**2.06.030 Adoption of Washington State Building Code Council amendments to the 2012 Uniform Plumbing Code.**~~

~~The amendments to the 2012 Edition of the Uniform Plumbing Code, as developed by the Washington State Building Code Council under the authority of RCW 19.27 and as set forth in WAC Sections 51-56, is hereby adopted by this reference.~~

~~Chapters 12 and 15, requirements relating to venting and combustion air of fuel fired appliances as found in Chapter 5, portions of the Code addressing building sewers, and Part II of UPC Chapter 7 have been deleted by the Washington State Building Code Council Amendments, including UPC Sections 713 through 723, and Tables 717.1 and 721.1.~~

~~City sewer availability, building sewers (from a point two feet after passing through or under the building foundation), and private sewage disposal systems shall be in accordance with the City of Tacoma Side Sewer and Sanitary Sewer Availability Manual as authorized by TMC 12.08.740.~~

2.06.040 Amendments by deletion.

Section 103.4, Table No. 103.4, and Section 1101.11.2.2.2 are hereby deleted from the City of Tacoma adoption of the 2012 Uniform Plumbing Code.

2.06.050 General amendments.

The following numbered sections of the Uniform Plumbing Code ("UPC"), as adopted herein, are amended to read as set forth, and, shall supersede that section so numbered in the UPC and shall be a part of the official Plumbing Code of the City of Tacoma. The sections so amended are as follows:

The following numbered sections and numbered tables of the UPC, in this chapter by reference adopted, are amended to read as hereinafter set forth; and, as so amended, shall supersede that section or table so numbered in the UPC and shall be a part of the official Plumbing Code of the City of Tacoma. The sections and tables are as follows:

UPC Section 101.11.6102.3
UPC Section 102.4
UPC Section 102.5
UPC Section 218
UPC Section 305.2
UPC Section 403.4
UPC Section 403.7

2.06.060 Addition of a new UPC Section 101.11.6 – Substantial renovationBuilding Improvements.

101.11.6 Substantial RenovationBuilding Improvements. Buildings which are substantially renovated improved, as defined in TMC 2.02.760, shall be provided with an educational flyer regarding inflow and infiltration pursuanter to the requirements of TMC 12.08.720. Substantial renovation for the purposes of this section shall be defined as meaning remodeling, alteration of, and/or addition to, an existing building within a two-year period, the cost of which exceeds 60 percent of the value of the building as calculated using the latest Building Valuation Table ("BVT") as published by the International Code Council. The Building Official shall determine the value of work to be included in the renovation.

2.06.070 Amendment to UPC Section 102.3107.0 – Board of Appeals.

Section 102.3107.0 in the 2012 Uniform Plumbing Code ("UPC") is hereby deleted and replaced by reference by TMC 2.02.120.shall be replaced in its entirety with the following:

102.3.1 The Board of Building Appeals. The Board of Building Appeals, as created by TMC 2.17, is the properly designated board of appeals for the UPC, as adopted by the City of Tacoma and the state of Washington. The Board of Building Appeals, within the authority granted it by TMC 2.17, shall:

Hear and decide appeals of orders, decisions, or determinations made by the Building Official relative to the application and interpretation of this code.

102.3.2. Limitations of Authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply or an equally good or better form of construction is proposed. The Board of Building Appeals shall have no authority relative to interpretation of the administrative provisions to the codes assigned to the Board's authority, nor shall the Board be empowered to waive requirements of these codes or to grant variances, unless specifically granted in TMC Chapter 2.17.

2.06.080 Amendment to UPC Section 102.4106.0 – Violations and UPC Section 102.5 Penalties.

Sections 102.3 and 102.4106.0 in the 2012 UPCUniform Plumbing Code are is hereby deleted, and replaced by reference by TMC 2.02.130.

2.06.090 Amendment to UPC Section 218.0 – P – Definitions by redefining "Private sewer."

Private Sewer – A building sewer that receives the discharge from more than one (1) building drain and conveys it to a public sewer, private sewage disposal system, or other point of disposal. Private sewers shall only be permitted in accordance with the "City of Tacoma Side Sewer and Sanitary Sewer Availability Manual" as authorized by TMC 12.08.740.

2.06.100 Amendment to UPC Section 305304.0 by addition of a new sSection 305304.2 – Public sewer availability.

304.2 Public Sewer Availability. When a public sewer is not available, alternative methods of waste disposal shall be determined in accordance with the "City of Tacoma Side Sewer and Sanitary Sewer Availability Manual" as authorized by TMC 12.08.740.

2.06.110 Amendment to UPC Section 403.4 Metered Faucets .

403.4 Metering Valves. Lavatory faucets located in restrooms intended for use by the general public shall be equipped with a metering valve designed to close by spring or water pressure when left unattended (self-closing). The faucet shall remain open for a minimum of 10 seconds and shall not exceed 0.26 gallons (0.98 L) of water per use.

Exceptions:

1. Existing buildings undergoing alterations, additions or repairs.

2. Where designed and installed for use by persons with a disability.

~~3. Where installed in day care centers, for use primarily by children under six years of age.~~

2.06.120 ~~Addition~~ Amendment to UPC Chapter 4 by addition of a new UPC Section ~~403.7~~423.0 – ~~Automatic In-Ground~~Water Conservation for Irrigation Systems~~Design and Installation~~.

~~403.7~~423.0 ~~Automatic In-Ground~~Water Conservation for Irrigation Systems~~ Design and Installation~~. The purpose of this section shall be to implement water conservation performance standards for irrigations systems installed within the City of Tacoma. A new installation of an automatic in-ground irrigation system shall comply with the following:

1. An automatic clock.

2. Flow sensor and mastervalve capabilities able to detect leaks in zones.

3. Electronic valves with backflow protection devices for underground valves or with air vacuum breaker for above ground anti-siphon valves as approved by the local water utility.

4. Ability to sense rainfall. The component used to sense rainfall shall be exposed to weather and comply with either Item a or b:

a. Interrupt the circuit to the valve to stop the irrigation clock from watering after a rainfall event, or

b. Reduce irrigation timing based on the amount of rainfall or soil moisture sensors.

Exception:

The following landscaped areas are exempt:

1. Landscaped areas in locations where they do not receive natural precipitation.

2. Landscaped areas requiring irrigation for only one year of plant establishment before the irrigation system is decommissioned or removed. Areas where irrigation remains in place after 1 year shall meet the requirements of Section 403.7.

3. Plant nurseries.

4. Landscape areas less than 10,000 square feet.

5. Modification or expansions to existing irrigation systems.

2.06.130 Addition of a new UPC Section 603.1.1 – City of Tacoma Requirements for Cross-Connection Control.

603.1.1 City of Tacoma Requirements for Cross-Connection Control. Cross-connection control requirements of the City of Tacoma Department of Public Utilities, Water Division, as administered and enforced by this department shall be met.

Chapter 2.07
MECHANICAL CODE

Sections:

2.07.010 Adoption of the International Mechanical Code.

The IMC as adopted by the State Building Code as defined in TMC 2.02.100 is hereby included in the City of Tacoma Mechanical Code as adopted by this chapter. ~~The 2012 Edition of the International Mechanical Code, together with Appendix A (hereinafter referred to as the "International Mechanical Code"), and the 2012 Edition of the International Fuel Gas Code, adopted and published by the International Code Conference, and the Standards for liquefied petroleum gas installations shall be the 2011 Edition of NFPA 58 (Liquefied Petroleum Gas Code) and the 2012 Edition of ANSI Z223.1/NFPA 54 (National Fuel Gas Code), is hereby adopted by this reference, pursuant to the provisions of Section 35.21.180 RCW, as the official Mechanical Code of the City of Tacoma, and may be referred to as the Tacoma Mechanical Code.~~

~~Such adoption by reference shall be subject to the amendments to the International Mechanical Code hereinafter set forth.~~

~~**2.07.020 Adoption of Washington State Building Code Council amendments to the 2012 International Mechanical Code.**~~

~~The amendments to the 2012 Edition of the International Mechanical Code, the 2012 Edition of the International Fuel Gas Code and the Standards for liquefied petroleum gas installations, the 2011 Edition of NFPA 58 (Liquefied Petroleum Gas Code) and the 2012 Edition of ANSI Z223.1/NFPA 54 (National Fuel Gas Code) as developed by the Washington State Building Code Council and as set forth in WAC 51-52, are hereby adopted by this reference.~~

~~**2.07.030 Administration.**~~

~~The administration of the International Fuel Gas Code and the Standards for liquefied petroleum gas installations: the 2011 Edition of NFPA 58 (Liquefied Petroleum Gas Code) and the 2012 Edition of ANSI Z223.1/NFPA 54 (National Fuel Gas Code), as adopted in this chapter, shall be administered in accordance with Chapter 1 of the International Mechanical Code as adopted in this chapter and as herein amended.~~

~~**2.07.040 General amendments.**~~

~~The following numbered sections of the International Mechanical Code ("IMC"), as adopted herein, are amended to read as set forth and shall supersede that section so numbered in the IMC and shall be a part of the official Mechanical Code of the City of Tacoma. The sections so amended are as follows:~~

~~IMC Section 108~~

~~IMC Section 109~~

~~IMC Sections108 and 109 shall also apply to the 2012 International Fuel Gas Code and the 2012 Edition of ANSI Z223.1/NFPA 54 (National Fuel Gas Code).~~

2.07.050 Amendment to IMC Section 108 – Violations.

Section 108 in the IMC ~~2012 International Mechanical Code~~ is hereby deleted, and replaced by reference by TMC 2.02.130.

2.07.060 Amendment to IMC Section 109 – Board of Building Appeals.

Section 109 in the IMC~~2012 International Mechanical Code~~ is hereby deleted and replaced by reference by TMC 2.02.120.~~shall be replaced in its entirety with the following:~~

~~109.1 The Board of Building Appeals. The Board of Building Appeals, as created by TMC 2.17, is the properly designated board of appeals for the IMC, as adopted by the City of Tacoma and the state of Washington. The Board of Building Appeals, within the authority granted it by TMC 2.17, shall:~~

~~Hear and decide appeals of orders, decisions or determinations made by the Building Official relative to the application and interpretation of this code.~~

~~109.2 Limitations of Authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed. The Board of Building Appeals shall have no authority relative to interpretation of~~

~~the administrative provisions to the codes assigned to the Board's authority, nor shall the Board be empowered to waive requirements of these codes or to grant variances, unless specifically granted in TMC Chapter 2.17.~~

2.07.070 Amendment of IMC Section 109 – Board of Building Appeals. ***Repealed by Ord. 28155.***

Chapter 2.10
ENERGY CODE

Sections:

2.10.010 Adoption of the Washington State Energy Code.

The WSEC as adopted by the State Building Code as defined in TMC 2.02.100 is hereby included in the City of Tacoma Energy Code as adopted by this chapter ~~The Washington State Energy Code, Commercial Provisions and the Washington State Energy Code, Residential Provisions, as developed, adopted, and periodically updated by the Washington State Building Code Council under the authority of RCW 19.27A.020, and as set forth in WAC 51-11C and 51-11R, are hereby adopted by reference, pursuant to the provisions of RCW 35.21.180, as the Official Energy Code of the City of Tacoma.~~

2.10.020 Administration.

The Tacoma Energy Code shall be administered in accordance with the administrative provisions of the Building Code as adopted and amended by Chapter 2.02 of the Tacoma Municipal Code. Penalties for violations shall be prescribed in accordance with the provisions set forth in Chapter 2.02 of the Tacoma Municipal Code.

~~**2.10.030 General amendments.**~~

~~The following numbered sections and tables of the Washington State Energy Code, as adopted herein, are amended to read as set forth, and, shall supersede that section or table so numbered in the Washington State Energy Code and shall be a part of the official Energy Code of the City of Tacoma. The sections and tables so amended are as follows:~~

~~WSEC Section C402.2.1.1~~
~~WSEC Table C402.2.1.1~~

~~**2.10.040 Amendment to WSEC Section C402.2.1.1 Roof solar reflectance and thermal emittance.**~~

~~C402.2.1.1 Roof solar reflectance and thermal emittance. Low-sloped roofs, including roof covering replacements, with a slope less than 2 units vertical in 12 horizontal, directly above conditioned spaces in Climate Zones 1, 2, 3 and 4 shall comply with one or more of the options in Table C402.2.1.1.~~

~~Exceptions:~~

~~The following roofs and portions of roofs are exempt from the requirements in Table C402.2.1.1:~~

~~1. Portions of roofs that include or are covered by:~~

~~1.1 Photovoltaic systems or components.~~

~~1.2 Solar air or water heating systems or components.~~

~~1.3 Roof gardens or landscaped roofs.~~

~~1.4 Above-roof decks or walkways.~~

~~1.5 Skylights.~~

~~1.6 HVAC systems, components, and other opaque objects mounted above the roof.~~

~~2. Portions of roofs shaded during the peak sun angle on the summer solstice by permanent features of the building, or by permanent features of adjacent buildings.~~

~~3. Portions of roofs that are ballasted with a minimum stone ballast of 17 pounds per square foot (psf) (74 kg/m2) or 23 psf (117 kg/m2) pavers.~~

~~4. Roofs where a minimum of 75 percent of the roof area meets a minimum of one of the exceptions above.~~

~~5. Repair or patching of an existing roof covering where each contiguous area of new roofing is smaller than 400 square feet and the combined areas of new roofing comprise less than half of any bounded roof area.~~

~~6. Built-up roof membranes may be overlaid with a reflective coating or covered with a white granulated cap sheet, without having to meet the specific reflectivity criteria listed in Table C402.2.1.1.~~

~~7. Roof levels that are below the highest occupied floor level of the building, where such roofs comprise less than half of the total roof area of the building.~~

~~(Ord. 28155 Ex. A; passed Jun. 11, 2013)~~

2.10.050 Amendment to WSEC Table C402.2.1.1 Reflectance and Emittance Options.

Table C402.2.1.1 Reflectance and Emittance Options

Three-year-aged solar reflectance of 0.55 and three-year-aged thermal emittance of 0.75
Initial solar reflectance of 0.70 and initial thermal emittance of 0.75
Three-year-aged solar reflectance index of 64 initial solar reflectance index of 82

a. The use of area-weighted averages to meet these requirements shall be permitted. Materials lacking initial tested values for either solar reflectance or thermal emittance, shall be assigned both an initial solar reflectance of 0.10 and an initial thermal emittance of 0.90. Materials lacking three-year-aged tested values for either solar reflectance or thermal emittance shall be assigned both a three-year-aged solar reflectance of 0.10 and a three-year-aged thermal emittance of 0.90.

b. Solar reflectance tested in accordance with ASTM C 1549, ASTM E 903 or ASTM E 1918, or CRRC-1 Standard published by the Cool Roof Rating Council.

c. Thermal emittance tested in accordance with ASTM C 1371 or ASTM E 408, or CRRC-1 Standard published by the Cool Roof Rating Council.

d. Solar reflectance index ("SRI") shall be determined in accordance with ASTM E 1980 using a convection coefficient of 2.1 Btu/h x ft2 x F (12W/m2 x K). Calculation of aged SRI shall be based on aged tested values of solar reflectance and thermal emittance. Calculation of initial SRI shall be based on initial tested values of solar reflectance and thermal emittance.

Chapter 2.12
FLOOD HAZARD AND COASTAL HIGH HAZARD AREAS

Sections:

2.12.010 Findings of fact and purpose.

A. The Flood Hazard Areas and Coastal High Hazard Areas of the City of Tacoma are subject to periodic inundation by flood waters which endangers life and property, presents health and safety hazards, disrupts commerce and governmental services, and necessitates extraordinary public expenditures for flood protection and relief, all of which adversely affect the public health, safety, and general welfare.

B. These flood losses are caused by the natural accumulation and ponding of flood waters and the cumulative effect of obstructions in flood hazard areas which increase flood heights and velocities. Developments which are inadequately flood proofed, elevated, or otherwise protected from flood damage also contribute to the flood loss.

C. It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

1. To protect human life and health by preventing the hazardous use of flood-prone lands;

2. To minimize expenditure of public money for remedial flood control measures;

3. To minimize the need for rescue and relief efforts associated with flooding which are generally undertaken at the expense of the general public;

4. To minimize damage to public facilities and utilities such as water and gas mains; electric, telephone, and sewer lines; streets; and bridges located in flood hazard areas;

5. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions; and

6. To qualify the City for participation in the National Flood Insurance Program, thereby giving the citizens of Tacoma the opportunity to purchase flood insurance with particular emphasis on those in Flood Hazard Areas or Coastal High Hazard Areas.

D. To accomplish its purposes, this chapter includes methods and provisions for:

1. Restricting or prohibiting developments which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;

2. Requiring that developments vulnerable to floods, including facilities which serve such developments, be protected against flood damage at the time of initial construction;

3. Controlling filling, grading, dredging, and other development which may increase flood damage within the A1-30 and V1-V30 zones on the City's FIRM maps; and

4. Preventing and regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.

2.12.020 Definitions.

Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application.

"Appeal" means a request for a review of the Building Official's interpretation of any provision of this chapter or a request for a variance.

~~"Base flood" means the flood having a 1 percent chance of being equaled or exceeded in any given year, also referred to as the "100-year flood."~~

~~"Base flood elevation" (BFE) means the actual elevation (in mean sea level) of the water surface of the base flood determined by the Federal Flood Insurance Administration or any qualified person or agency described in Section 2.12.030.B hereof.~~

~~"Basement" means any area of the building having its floor sub-grade (below ground level) on all sides.~~

~~"BFE" is an abbreviation for "Base Flood Elevation".~~

~~"Breakaway walls" means any type of walls, whether solid or lattice, and whether constructed of concrete, masonry, wood, metal, plastic, or any other suitable building material, which are not part of the structural support of the building and which are so designed as to break away, under abnormally high tides or wave action, without damage to the structural integrity of the building on which they are used or any buildings to which they might be carried by flood waters.~~

~~"Building official" means the Planning Manager of the City of Tacoma Community and Economic Development Department, Building and Land Use Services, or that person designated by the Planning Manager of the City of Tacoma Community and Economic Development Department, Building and Land Use Services, to administer the requirements set forth in this chapter.~~

~~"City" means the City of Tacoma or the City Council of Tacoma.~~

~~"Coastal high hazard area" means the area subject to high velocity waters, including, but not limited to, storm surge or tsunamis, designated on the City's FIRM maps as Zone V1.~~

~~"Development" means any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation, or drilling operations or storage of equipment or materials located within the area of special flood hazard.~~

~~"Expansion to a preexisting manufactured home park or manufactured home subdivision" means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, either final site grading or pouring of concrete pads, or the construction of streets).~~

~~"FEMA" is an abbreviation for the "Federal Emergency Management Agency".~~

~~"FIRM" is an abbreviation for "Flood Insurance Rate Map".~~

~~"FIS" is an abbreviation for "Flood Insurance Study".~~

~~"Flood" or "flooding" means a general and temporary condition of partial or complete inundation of normally dry land areas from:~~

~~1. The overflow of inland or tidal waters; and/or~~

~~2. The unusual and rapid accumulation of runoff or surface waters from any source.~~

~~"Flood hazard area" means the area within the flood plain which consists of the floodway, floodway fringe, or adjacent land or any other land that has been identified within the respective boundaries (Zones A, A1-30, and V1-30) indicated on the Flood Insurance Rate Maps ("FIRM").~~

~~"Flood Insurance Rate Map" ("FIRM") means the official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the City.~~

~~"Flood insurance study" (FIS) means the official report provided by the Federal Insurance Administration which includes flood profiles, the Flood Boundary-Floodway Map, and the water surface elevation of the base flood.~~

~~"Floodway" means the channel of a river or other watercourse and the adjacent land areas which must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.~~

~~"Lowest Floor" means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or storage in an area other than a basement area, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ordinance found at Section 5.2-1(2), (i.e. provided there are adequate flood ventilation openings).~~

~~"Manufactured (mobile) home" means a structure which is transportable in one or more sections, built on a permanent chassis, and designed to be used with or without a permanent foundation when connected to the required utilities. It does not include recreational vehicles or travel trailers.~~

~~"Mean high tide" ("mean high water") means the mean height of tidal high waters at a particular point or station over a period of time. For purposes herein, the cycle of change covers a 19-year period, and mean high water is the average of the high waters over that 19-year period as defined by the United States Geodetic Survey.~~

~~"Mean sea level" means the average height of the sea for all stages of the tide, and in the City shall mean 0.58 feet National Geodetical Vertical Datum (N.G.V.D. 1929), which is also National Oceanic and Atmospheric Administration Datum (N.O.A.A.). See diagram at end of this chapter entitled "City of Tacoma Coastal Flood Elevation Data."~~

~~"New construction" means new structures, where no structure is present prior to construction, for which the "start of construction" commenced on or after the adoption date of this chapter, or September 1, 2001, whichever is later.~~

~~"New manufactured home park or manufactured home subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale, for which the construction of facilities for servicing the lot (including, at a minimum, the installation of utilities, either final site grading or the pouring of concrete pads, and the construction of streets) is completed on or after the effective date of this chapter.~~

~~"Preexisting manufactured home park or manufactured home subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale, for which the construction of facilities for servicing the lot on which the manufactured home is to be affixed (including, at a minimum, the installation of utilities, either final site grading or the pouring of concrete pads, and the construction of streets) is completed before the effective date of this chapter.~~

~~"Start of construction", includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the state of excavation, or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations, or the erection of temporary forms; nor does it include the installation of the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure.~~

~~"Structure" means a walled and roofed building or manufactured home which is principally above ground.~~

~~"Substantial Damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.~~

~~"Substantial improvement" means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:~~

~~1. Before the improvement or repair is started, or~~

~~2. If the structure has been damaged and is being restored, before the damage occurred.~~

~~For the purposes of definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.~~

~~The term does not, however, include either:~~

~~1. Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which have been previously identified by the local code enforcement official which are solely necessary to assure safe conditions; or~~

~~2. Any alteration of a structure listed on the National Register of Historic Places or a recognized state Inventory of Historic Places.~~

~~"Variance" means a grant of relief from the requirements of this chapter which permits construction in a manner which would otherwise be prohibited by this chapter.~~

~~2.12.030 General provisions.~~

~~A. Lands to which this chapter applies. This chapter shall apply to all Flood Hazard Areas and Coastal High Hazard Areas within the jurisdiction of the City (Zones A, A1-30, and V1-30 on the FIRM).~~

~~B. Basis for Establishing the Areas of Special Flood Hazard. The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for the City of Tacoma," dated December 1, 1983, and any revisions thereto, with an accompanying Flood Insurance Rate Map (FIRM), and any revisions thereto, are hereby adopted by reference and declared to be a part of this chapter. The best available information for~~

flood hazard area identification as outlined in section 2.12.030 C shall be the basis for regulation until a new FIRM is issued that incorporates data utilized under section 2.12.030 C.

C. The Flood Insurance Study and maps shall provide the base information by which the provisions of this chapter shall be administered. When base flood elevation data has not been provided (in A or V Zones) in accordance with section 2.12.030 B, Basis for Establishing the Areas of Special Flood Hazard, the Building Official shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a Federal, State or other source, in order to administer this chapter.

D. The Flood Insurance Study and maps are on file at the City of Tacoma, Community and Economic Development Department, Building and Land Use Services, Tacoma Municipal Building, 747 Market Street, Suite 345, Tacoma, WA 98402-3769.

E. Information to be obtained and maintained. Where the base flood elevation data is provided through the Flood Insurance Study, FIRM, or in accordance with Section 2.12.030 C, the City shall obtain from the building permit applicant, and shall maintain a record of the actual (as-built) elevation (in relation to mean sea level) of the lowest floor (including basements), of all new or substantially improved structures within a Flood Hazard Area or Coastal High Hazard Area, and whether the structure contains a basement. This information shall be maintained by the Building and Land Use Services Division of the Public Works Department and be available for public inspection. Section B of the Elevation Certificate shall be completed by the Building Official, or his authorized designee.

F. Compliance. No structure or land shall be hereafter constructed, located, extended, converted, or altered without full compliance with the terms of this chapter and other applicable regulations.

G. Interpretation. In the interpretation and application of this chapter, all provisions shall be:

H. Considered as minimum requirements;

I. Liberally construed in favor of the governing body; and

J. Deemed neither to limit nor repeal any other powers granted under state statutes.

K. Warning and disclaimer of liability. The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the City, any officer or employee thereof, or the Federal Insurance Administration for any flood damages which result from reliance on this chapter or any administrative decision lawfully made hereunder.

2.12.040 General standards for flood hazard protection.

In all Flood Hazard Areas and Coastal High Hazard Areas, the following general standards for flood hazard protection shall apply:

A. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure. Manufactured homes located in flood hazard protection areas shall be provided with permanent foundations, as necessary to meet this subsection and the provisions for foundations listed in the City's amendments to the International Residential Code, as adopted and amended by TMC Chapter 2.02.

B. All new construction and substantial improvements shall be:

1. Constructed with materials and utility equipment resistant to damage by flood waters;

2. Constructed using methods and practices which minimize flood damage; and

3. Electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities shall be elevated or otherwise designed or located so as to prevent water from entering and accumulating within the components during conditions of flooding.

C. Utilities shall be designed and installed under the following provisions:

1. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;

2. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters; and

3. New on-site waste disposal systems for new construction shall be prohibited.

4. Water wells shall be located on high ground that is not in a floodway, or subject to flooding and shall also meet WAC 173-160-171.

D. All subdivision proposals shall:

1. Be consistent with the need to minimize flood damage;

2. Have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;

3. Have adequate drainage provided to reduce exposure to flood damage;

4. Where base flood elevation data has not been provided or is not available from another authorized source, it shall be generated for subdivision proposals and other proposed developments which contain at least 50 lots or 5 acres (whichever is less).

E. AE and A1-30 Zones with Base Flood Elevations but No Floodways. In areas with base flood elevations (but a regulatory floodway has not been designated), no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

F. Floodways. Located within areas of special flood hazard established in Section 2.12.030 B are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters that can carry debris, and increase erosion potential, the following provisions apply:

1. Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer is provided demonstrating through hydrologic and hydraulic analysis performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels during the occurrence of the base flood discharge.

2. Construction or reconstruction of residential structures is prohibited within designated floodways, except for:

a. Repairs, reconstruction, or improvements to a structure which do not increase the ground floor area; and

b. Repairs, reconstruction or improvements to a structure , the cost of which does not exceed 50 percent of the market value of the structure either

(i) Before the repair or construction is started, or

(ii) If the structure has been damaged, and is being restored, before the damage occurred.

Any project for improvement of a structure to correct existing violations of state or local health, sanitary or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, or to structures identified as historic places, may be excluded in the 50 percent.

3. If Section 2.12.040 F is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of TMC Chapter 2.12.

G. Critical Facilities. Construction of new critical facilities shall be, to the extent possible, located outside the limits of the Special Flood Hazard Areas (SFHA) (100-year floodplain). Construction of new critical facilities shall be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated three feet above BFE or to the height of the 500-year flood whichever is higher. Access to and from the critical facilities should be protected to the height utilized above. Flood proofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the base flood elevation shall be provide to all critical facilities to the extent possible.

Exception: In areas where the flood hazard is tidal flooding, critical facilities need only be elevated to the height of the 500 year flood.

H. A registered professional engineer shall certify that the standards of this chapter are satisfied.

2.12.050 Specific standards for flood hazard protection.

A. In all Flood Hazard Areas (Zones A and A1-30), the following specific standards for flood hazard protection shall apply:

1. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to or above base flood elevation.

~~Exception: Residential structures in Coastal A zones shall have lowest floor, including a basement, elevated to or above the base flood elevation plus one foot.~~

~~(Note: It is recommended that the lowest floor, including basements, be elevated a minimum of one foot above base flood elevation to increase safety and reduce insurance premiums.) Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of flood waters. Designs for meeting this requirement must be certified by a registered professional engineer or must meet or exceed the following minimum criteria:~~

~~a. A minimum of two openings, having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding, shall be provided;~~

~~b. The bottom of all openings shall be no higher than one foot above grade; and~~

~~c. Openings may be equipped with screens, louvers, or other coverings or devices, provided that they permit the automatic entry and exit of floodwaters.~~

~~d. Below grade crawl space areas may be constructed in accordance with the Federal Emergency Management Agency (FEMA) Technical Bulletin 11-01, which states:~~

~~(i) The interior grade of a crawlspace below the BFE must not be more than 2 feet below the lowest adjacent exterior grade (LAG), shown as D in Figure 3.~~

~~(ii) The height of the below-grade crawlspace, measured from the interior grade of the crawlspace to the top of the crawlspace foundation wall must not exceed 4 feet (shown as L in Figure 3) at any point. The height limitation is the maximum allowable unsupported wall height according to the engineering analyses and building code requirements for flood hazard areas. This limitation will also prevent these crawlspaces from being converted into habitable spaces.~~

~~(iii) There must be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. The enclosed area should be drained within a reasonable time after a flood event. The type of drainage system will vary because of the site gradient and other drainage characteristics, such as soil types. Possible options include natural drainage through porous, well-drained soils and drainage systems such as perforated pipes, drainage tiles, or gravel or crushed stone drainage by gravity or mechanical means.~~

~~(iv) The velocity of floodwaters at the site should not exceed 5 feet per second for any crawlspace. For velocities in excess of 5 feet per second, other foundation types should be used. Below-grade crawlspace construction in accordance with the requirements listed above will not be considered basements.~~

~~2. New construction and substantial improvement of any commercial, industrial, or other nonresidential structure shall either have the lowest floor, including basement, elevated to the level of the base flood elevation. (It is recommended that the lowest floor, including basements, be elevated a minimum of one foot above base flood elevation to increase safety and reduce insurance premiums.) Or, together with attendant utility and sanitary facilities, shall:~~

~~a. Be flood proofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;~~

~~b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. The design of such components shall be certified by a registered professional engineer, that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications, and plans. Such certifications shall be submitted to the Building Official; and~~

~~c. Non-residential structures that are elevated and not flood proofed shall meet the same standards set for space below the lowest floor, as described in Section 2.12.050.A.1.~~

~~d. For all new or substantially improved flood proofed nonresidential structures where the flood elevation data is provided through the FIS, FIRM, or in accordance with Section 2.12.030 B 1,~~

~~(i) Obtain and record the elevation (in relation to mean sea level) to which the structure was flood proofed.~~

~~(ii) Flood proofing certifications required in section 2.12.030 C.~~

~~3. Manufactured homes.~~

~~a. All manufactured homes to be placed or substantially improved within flood hazard zones shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to or above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. (It is recommended that the lowest floor, be elevated a minimum of one foot above base flood elevation to increase safety and reduce insurance premiums.)~~

~~This applies to manufactured homes:~~

~~(i) Outside of a manufactured home park or subdivision,~~

~~(ii) In a new manufactured home park or subdivision,~~

~~(iii) In an expansion to an existing manufactured home park or subdivision, or~~

~~(iv) In an existing manufactured home par or subdivision on a site which a manufactured home has incurred "substantial damage" as the result of a flood; and~~

~~b. Manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision that are not subject to the above manufactured provisions be elevated so that either:~~

~~(i) The lowest floor of the manufactured home is elevated to or above the base flood elevation, or~~

~~(ii) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.~~

~~(4) Recreational vehicles placed on sites with special flood hazard areas (A1-A30, AH, AE, VI-V30, and VE) on the community's FIRM must either:~~

~~a. Be on site for fewer than 180 consecutive days;~~

~~b. Be fully licensed and ready for highway use, on its wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or~~

~~c. Meet the elevation and anchoring requirements for manufactured homes.~~

~~B. In all Coastal High Hazard Areas (Zones V1-30, VE, and V), the following specific standards for flood hazard protection for all structures (including residential, commercial, and manufactured homes) shall apply:~~

~~1. All new construction in Zones V, V1-V30, and VE shall be located landward of the reach of mean high tide.~~

~~2. All new construction and substantial improvement shall be elevated so that the bottom of the lowest supporting (horizontal) member is elevated to or above the base flood elevation, with all space below the lowest supporting member open so as not to impede the flow of water, except for breakaway walls, as provided for in Section 2.12.020.~~

~~3. New construction or substantial improvements shall be elevated on pilings or columns and shall be securely anchored thereto. The pile or column foundation attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have a 1 percent chance of being equaled or exceeded in any given year.~~

~~4. Pilings or columns used as structural support shall be designed and anchored so as to withstand all applied loads of the base flood flow. A registered professional engineer or architect shall develop or review the structural design, specification, and plans for the construction, and shall certify that the design methods of construction to be used are in accordance with accepted standards of practice for meeting the provision of Sections 2.12.050.B.2 and 3 above.~~

~~5. Obtain the elevation (in relation to mean sea level) of the bottom of the lowest horizontal structural member of the lowest floor of all new and substantially improved structures in Zones V1-V30 and VE. The Building Official shall maintain a record of all such information.~~

~~6. Provide that all new construction and substantial improvements within Zones V1-30, VE, and V on the community's FIRM have the space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls, open wood lattice work, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. For the purposes of this section, a breakaway wall shall have a design safe loading resistance of not less than ten pounds per square foot and no more than 20 pounds per square foot. Use of breakaway walls which exceed a design safe loading resistance of 20 pounds per square foot (either by design or when so required by local or state codes) may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet the following conditions:~~

~~a. Breakaway wall collapse shall result from water loads less than that which would occur during the base flood; and~~

~~b. The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components. Maximum wind and water loading values to be used in this determination shall each have a 1 percent chance of being equaled or exceeded in any given year (100-year mean recurrence interval).~~

7. If breakaway walls are utilized, such enclosed space shall be useable solely for parking of vehicles, building access, or storage. Such space shall not be used for human habitation.

8. The use of fill for structural support of buildings shall be prohibited.

9. Man-made alteration of sand dunes, which would increase potential flood damages, shall be prohibited.

10. Prior to construction, plans for any structure which will have breakaway walls must be submitted to the Building Official for approval.

11. Any alteration, repair, reconstruction, or improvement to a structure, started after the enactment of this chapter, shall not enclose the space below the lowest floor unless breakaway walls are used, as provided for in Section 2.12.020.

2.12.060 Permits - Approval required.

No building permit for structures or the development or use of land shall be issued by the City within a Flood Hazard Area or Coastal High Hazard Area, unless approved by the Building Official. Such approval shall be based on a review of the provisions set forth in this section and the technical findings and recommendations of City departments including, but not limited to, the Fire Department and the Public Works Department. Permits shall not be issued until the Building Official has reviewed all development permits to determine that all necessary permits have been obtained from those Federal, State, or local governmental agencies from which prior approval is required. Where elevation data is not available either through the Flood Insurance Study, FIRM, or from another authoritative source (Section 2.12..030 B 1), applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. Compliance with the provisions of this section does not obviate the need to obtain other permits which may be required pursuant to state or federal law, including approvals required from the Washington State Department of Social and Health Services and/or Department of Ecology relating to water and/or sewer systems which ensure that water and sewer systems will be designed to avoid infiltration, inflow, or impairment. Failure to elevate at least two feet above grade in these zones may result in higher flood insurance rates.

2.12.070 Procedural requirements.

A development permit shall be obtained before construction or development begins within any area of special flood hazard established in Section 2.12.030 B. The permit shall be for all structures including manufactured homes, as set forth in the "Definitions," and for all development including fill and other activities, also as set forth in the "Definitions."

City building permits which relate to the development and use of land within a Flood Hazard Area or Coastal High Hazard Area shall be applied for with Planning and Development Services. If it appears that the property may lie in a Flood Hazard Area or Coastal High Hazard Area, Planning and Development Services shall require the property owner to submit additional information as necessary to determine if, in fact, the property lies within a Flood Hazard Area or Coastal High Hazard Area, and, if the development is located in an unnumbered A-zone, base flood elevation data shall be provided by the applicant. If it is determined that the property lies within a Flood Hazard Area or Coastal High Hazard Area, the applicant shall be required by Planning and Development Services to submit such surveys, plans, and supporting documents as are necessary to determine the applicability of City regulations to the proposed structure, development, or use. Planning and Development Services shall consider not only the individual structure, development, or use, but shall also consider it in combination with existing and future similar structures, developments, and uses. Whenever technical information is furnished to the City by an applicant for a building permit, the City shall consider such report in acting upon the requested permit.

The Building Official shall, within a reasonable time, indicate in a letter to the applicant for a building permit and other known parties of interest, approval or disapproval of the requested building permit, and, if approved, the conditions of approval.

The cumulative effect of any proposed development, where combined with all other existing and anticipated development, shall not increase the water surface elevation of the base flood more than one foot at any point.

Whenever any alteration or relocation of any watercourse is proposed, the Building Official shall:

A. Notify adjacent communities and the Washington State Department of Ecology prior to any alteration or relocation of a watercourse, and submit such notifications to the Federal Insurance Administration;

B. Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.

2.12.080 Variance Procedure - Board of Building Appeals.

A. The Board of Building Appeals, as established by the City, shall hear and decide appeals and requests for variances from the requirements of this chapter. It shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the Building Official in the enforcement or administration of this chapter.

B. Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the state Inventory of Historic Places, without regard to the procedures set forth in the remainder of this chapter.

C. Variances shall be issued only upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

D. Variances shall be issued only upon:

1. A showing of good and sufficient cause;

2. A determination that failure to grant the variance would result in exceptional hardship to the applicant; and

3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, or create nuisances or conflict with existing local laws or ordinances.

E. In passing upon such applications, the Board of Building Appeals shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this chapter, and:

1. The danger that materials may be swept onto other lands to the injury of others;

2. The danger to life and property due to flooding or erosion damage;

3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

4. The importance of the services provided by the proposed facility to the community;

5. The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;

6. The compatibility of the proposed use with existing and anticipated development;

7. The relationship of the proposed use to the policies of the Generalized Land Use Plan for that area;

8. The safety of access to the property in times of flood for ordinary and emergency vehicles;

9. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and

10. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, water systems, streets, and bridges.

F. Upon consideration of the factors of Section 2.12.080.D and the purposes of this chapter, the Board of Building Appeals may attach such conditions to the granting of variances as it deems necessary to further the purposes of the chapter.

G. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation, and that the cost of flood insurance will be commensurate with the increased risk resulting from the granting of the variance.

H. The Buildings Official shall maintain the records of all opposed actions and report any variances to the Federal Insurance Administration upon request.

2.12.090 Appeals.

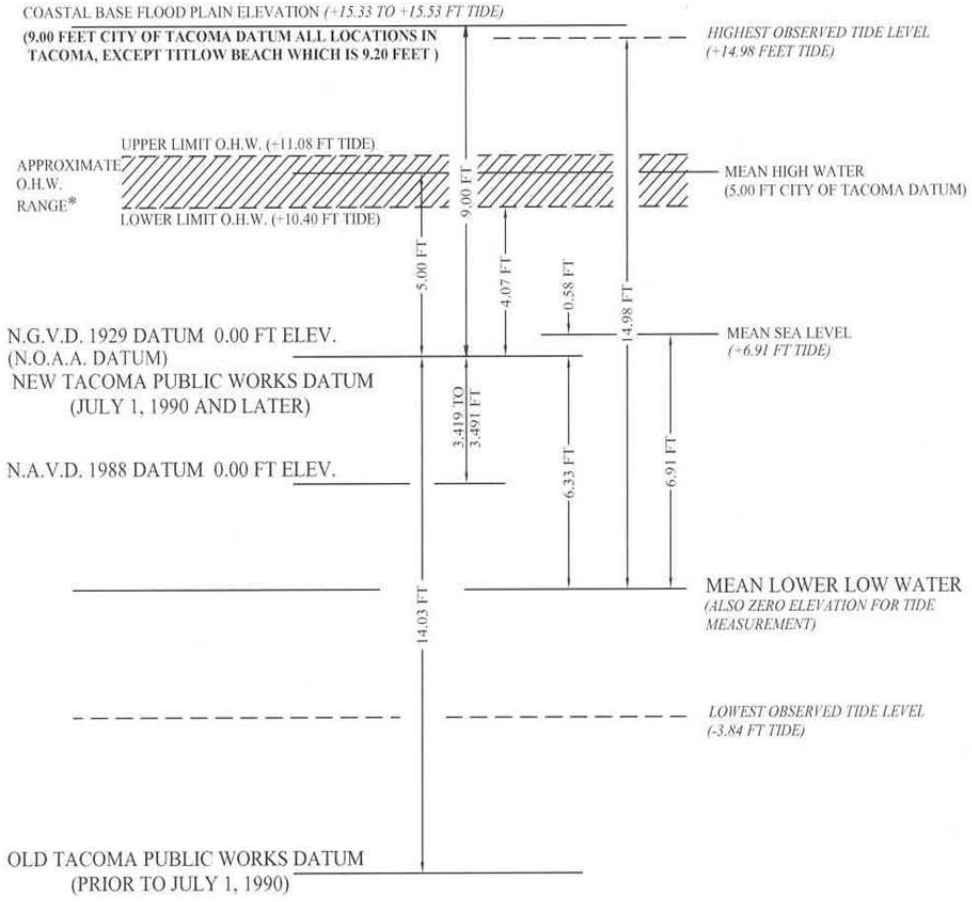
A. The decision of the Building Official to approve or disapprove a building permit in a Flood Hazard Area or Coastal High Hazard Area may be appealed to the Board of Building Appeals. The requested building permit shall not be issued during the appeal period.

B. The Board of Building Appeals shall consider all technical evaluations, all relevant standards, and the criteria specified in Section 2.12.080.E hereof.

1. The Board of Building Appeals shall prepare a written report and decision containing findings and conclusions which show how its decision implements the purposes of this chapter and is consistent with the criteria, standards, and limitations of this chapter.

2. The decision of the Board of Building Appeals shall be final and conclusive unless, within 20 calendar days from the day of the decision, an aggrieved party obtains a writ of certiorari from the Superior Court of Washington for Pierce County for the purpose of review of the action taken.

CITY OF TACOMA
RELATIONSHIP BETWEEN DATUMS AND COASTAL FLOOD ELEVATION DATA



(O.H.W.) ORDINARY HIGH WATER
(N.G.V.D.) NATIONAL GEODETICAL VERTICAL DATUM (1929)
(N.O.A.A.) NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
ALSO TACOMA PUBLIC WORKS DATUM AFTER JULY 1, 1990
(N.A.V.D.) NORTH AMERICAN VERTICAL DATUM (1988)

* ORDINARY HIGH WATER (O.H.W. IS ESTABLISHED BY ASSESSMENT OF BIOLOGICAL INDICATORS FOR THE SPECIFIC SITE. THE ELEVATION WILL VARY FROM SITE TO SITE. O.H.W. IS NOT LIMITED TO THIS RANGE, BUT USUALLY FALLS WITHIN IT.

September 9, 2009

Chapter 2.13
WATERFRONT STRUCTURES AND MARINA CODE

Sections:

2.13.010 Title.

Chapter 2.13 of the TMC shall be known as the Waterfront Structures and Marina Code ("WFS&MC").

2.13.020 Scope.

This chapter shall pertain to and regulate the fire protection and construction of waterfront structures and marinas, as defined herein, which shall be subject to all requirements of the codes and ordinances of the City of Tacoma relating to other structures, including but not limited to the Building Code, Residential Code, Mechanical Code, Fire Code, Plumbing Code, Minimum Building and Structures Code, Electrical Code, Energy Code, Land Use Regulatory Code, ~~Flood Plain Code,~~ and the Shoreline Management Act as officially adopted by the City of Tacoma, except as may be specifically limited, modified, or amended herein.

Exception: This Chapter shall not apply to existing waterfront structures where the International Residential Code is applicable, or classified as Group R, Division 3 occupancies, as defined in the International Building Code.

2.13.030 ~~IFC Chapter 45 and the Washington State Building Code Council amendments~~Tacoma Fire Code.

~~The International Fire Code (IFC) Chapter 45 – Marinas and the Washington State Building Code Council amendments to IFC Chapter 45 are adopted as part of the City of Tacoma's Fire Code and are~~The Tacoma Fire Code requirements pertaining to marinas are specifically included in the City of Tacoma's Water Front Structures and Marina Code by reference.

2.13.040 Existing installations.

Except as specifically provided within this chapter, facilities regulated by this chapter, and in existence at the time of the adoption of this chapter may have their existing use or occupancy continued, subject to the provisions of the building and fire codes, if such occupancy was an approved use at the time of the adoption of this chapter on March 31, 1992.

2.13.050 Definitions.

The following terms used in the succeeding sections of this chapter relating to waterfront structures and marinas shall have the meanings herein indicated. Where specific terms are not defined within this section, their meaning shall be as defined using ~~chapter 4 of~~ the International Building Code definitions as adopted and amended by TMC Chapter 2.02 ~~of the Tacoma Municipal Code~~, or the International Fire Code as adopted and amended by TMC Chapter 3.02~~ of the Tacoma Municipal Code~~.

A. Definitions:

Approach Way: A structure used to gain access to a pier or wharf, but not used to moor vessels.

B. Definitions:

Beam: Maximum overall width of a vessel.

Berth: A place where a vessel may be secured to a fixed or floating structure and left unattended.

Boat House: A boat house shall be a specific type of vessel designed to be moored to a main float system to enclose and protect another vessel or vessels from the elements. The construction of boat houses shall be regulated by this ordinance and the building and fire codes.

Building Code: The International Building, the International Residential, and the International Existing Building Codes, published by the International Code Council as adopted and amended by Chapter 2.02 of the TMC.

Building Official: The individual authorized by the ~~Director of the Planning and Development Services Department of the~~ City of Tacoma, charged with the administration and enforcement of the Building Code, or his or her duly authorized representatives.

C. Definitions:

Corrosion Resistant Steel: For the purposes of this ordinance, unless specifically stated otherwise, corrosion resistant steel shall mean steel which is galvanized, painted or otherwise coated to retard corrosion, or any uncoated steel alloy which is defined by The American Society for Testing and Materials (ASTM) specifications as corrosion resistant.

D. Definitions:

Datum: is the zero point established by the City of Tacoma ~~Public Works Department~~ for measuring elevations. NOAA datum and the City of Tacoma ~~Public Works~~ Datum as of July 1, 1990 are approximately interchangeable. (Tacoma ~~Public Works~~ Datum and NOAA Datum have a zero point which would correspond approximately with +14.03 feet according to the old City of Tacoma ~~Public Works~~ Datum. (Datum published prior to July 1, 1990.))

Deck: That element of a waterfront structure which provides the lowest floor level or platform for use, under which occur only the structural support system for the structure, and no usable space.

Dry Boat Storage: A building, which is either open or subdivided into stalls and is used primarily for the dry storage of vessels, or a building for the dry storage of vessels in racks.

E. Definitions:

F. Definitions:

Fire Chief: Chief of the City of Tacoma Fire Department.

Fire Code: The International Fire Code published by the International Code Council, as adopted and amended by Chapter 3.02 of the TMC.

Float: A floating structure normally used as a point of transfer for passengers and/or goods, and/or for mooring purposes.

1. Finger Float: A narrow float connected to a main float, which defines the length of a berth and separates that berth from adjacent berths.

2. Float System: A combinations of a main float and finger floats, either open or covered, designed to be used to moor vessels.

3. Main Float: A float connected by a gangway to the shore or to a waterfront structure, being restrained laterally by an anchorage system, normally of piles, but free to move vertically, and which provides access to berths. Finger floats may be attached to one or both sides of main floats.

G. Definitions:

Gangway: A bridge affording access from shore, or a waterfront structure to a main float.

H. Definitions:

I. Definitions:

I.B.C. International Building Code. See Definition of Building Code.

I.B.C. Standards: International Building Code Standards shall mean the referenced standards listed in the International Building Code, the International Residential Code, and the International Existing Building Code, as applicable to the subject and existing conditions.

I.F.C. International Fire Code. See Definition of Fire Code.

I.F.C. Standards: International Fire Code Standards shall mean the referenced standards listed in the International Fire Code.

J. Definitions:

K. Definitions:

L. Definitions:

Length, Vessels: For the purposes of this code, vessel length shall be the overall length of the vessel including, but not limited to, bowsprits, overhangs, swimming platforms and dinghies.

Limit Line for Obstructions: Is the imaginary vertical plane along a water access aisle, which is the limit beyond which obstructions are not permitted to encroach into the water access aisle.

M. Definitions:

Marina: Any portion of the ocean or inland water, either naturally or artificially protected, for the mooring, servicing or safety of vessels and shall include artificially protected works, the public or private lands ashore, and structures or facilities provided within the enclosed body of water and ashore for the mooring or servicing of vessels or the servicing of their crews or passengers.

Mean High Water: 5.00 feet City of Tacoma or NOAA Datum. (See the definition of Datum).

Mean Lower Low Water: Minus 6.33 feet City of Tacoma or NOAA Datum. (See the definition of Datum).

Mean Sea Level: Mean sea level is the zero point for tide measurement, and is 0.58 feet City of Tacoma or NOAA Datum established by the National Oceanic and Atmospheric Administration (NOAA). (See the definition of Datum).

Moor: The act of securing a vessel into a berth at a pier, wharf, or float system.

N. Definitions:

NOAA: National Oceanic and Atmospheric Administration.

Nominal Size (Lumber): The commercial size designation of width and depth, in standard sawn lumber and glue-laminated lumber grades; somewhat larger than the standard net size of dressed lumber, in accordance with DOC PS 20 for sawn lumber and with the AF&PA NDS for structural glued laminated lumber.

O. Definitions:

P. Definitions:

Pier: A fixed waterfront structure, usually of greater length projecting from the shore than the width, constructed of timber, stone, concrete, steel, or other material, having a deck and projecting from the shore over waters subject to the Shoreline Management Act so that vessels may be moored alongside for loading and unloading or for storage or repairs. For the purpose of this code, where the word "pier" is used it shall be construed as including "wharf". (Note: This definition supersedes the definition set forth in IFC Chapter 45).

PSF: Pounds per square-foot

Q. Definitions:

R. Definitions:

S. Definitions:

Substructure: That portion of a waterfront structure below and including the deck.

1. Combustible Substructures. A substructure which does not qualify as either a fire resistive substructure or a noncombustible substructure.

2. Fire Resistive Substructures. A noncombustible substructure with all elements, including the deck, having a four hour fire-resistive rating, except that wood piles or wood cribwork or steel piles, which are not fire rated, may be used if they do not extend above Mean Lower Low Water.

3. Noncombustible Substructures. A noncombustible substructure with only the deck having a four hour fire-resistive rating, except that wood piles or wood crib work may be used if they do not extend above Mean Lower Low Water.

Superstructure: That portion of a waterfront structure constructed above the deck.

T. Definitions:

U. Definitions:

V. Definitions:

Vessel: A motorized and/or wind powered watercraft, other than seaplanes on the water, used or capable of being used as a means of transportation. Non-transportation vessels, such as houseboats and boathouses, are included in this definition. (Note: This definition supersedes the definition set forth in IFC Chapter 45).

See the definition of Boat House.

W. Definitions:

Waterfront Structure: A structure or improvement which at any time is over water subject to the Shoreline Management Act, and is constructed with a deck supported on piles or other types of open structural framing, where the under-deck area facing the water remains unenclosed except for fender systems.

Wharf: A fixed waterfront structure, usually of greater width along the shoreline than the length projecting from the shore, constructed of timber, stone, concrete, steel, or other material, having a deck built over, along and parallel to waters subject to the Shoreline Management Act so that vessels may be moored alongside for loading and unloading, or for storage or repairs. For the purpose of this code, where the word "wharf" is used it shall be construed as including "pier". (Note: This definition supersedes the definition set forth in IFC Chapter 45).

X. Definitions:

Y. Definitions:

Z. Definitions:

2.13.060 Waterfront structures.

a. General.

All piers, wharves and waterfront structures as herein defined shall comply and conform to all of the requirements set forth herein.

b. Protection Against Mechanical Damage.

Waterfront structures shall be designed for impact loads from vessels and floating debris.

Regardless of the type of construction of the substructure, fender systems may be built of wood members with a minimum nominal dimension of four inches and a minimum nominal area of forty-eight square inches, provided the outside face of said fender system is located no more than three feet inside the outermost edge of the deck.

c. Combustible Substructures.

1. Piles and Stiffening Members.

The piling and cross bracing of those portions of the substructure which are over water at any time shall be so designed to allow the passage of a six-foot wide boat for access to all points for the purpose of inspection, maintenance or repair.

2. Pier Decks and Supports.

A. Pile caps shall consist of sawed or glue-laminated timber not less than eight-inch nominal minimum dimension and ninety-six square inches nominal cross-sectional area.

B. Deck framing members shall be not less than six-inch nominal minimum dimension and seventy-two square inches nominal cross-sectional area.

C. Deck planking on the deck framing shall be not less than four inches in nominal thickness and on this shall be laid a wearing surface of two-inch nominal wood sheathing, or a layer of concrete or asphalt, or other material of equivalent durability. The sheathing and deck planks shall be laid at right angles, except that in the driveways the sheathing may be laid diagonally.

Exception Pier decks without superstructures may have decks of wood decking or planking of not less than three inches nominal thickness.

D. Pier decks of composite laminated wood and concrete construction shall be acceptable, provided that the wood decking or planking used shall be not less than two inches in nominal thickness and shall be pressure preservative treated in accordance with the Building Code.

E. Piers and walkways which are ten feet or less in width may be constructed with caps and girders which have a minimum nominal width and depth of six-inches. Beams and other members shall have a minimum nominal width of three inches. Wood decking or planking may have a nominal thickness of two inches; and bracing may have a minimum nominal dimension of two inches.

3. Automatic Fire Sprinkling of Combustible Substructures.

A. General. All combustible substructures shall be provided with a complete automatic fire sprinkler system (NFPA 13), in accordance with the IBC and IFC provisions~~Section 903.3.1.1 (N.F.P.A. 13)~~, in the under-deck areas.

B. Standards. Installation of sprinkler equipment shall be in accordance with the Building Code, Fire Code, and the Fire Code Standards. In those parts of waterfront structures where automatic fire sprinkler systems are subject to damage by floating debris, such as beneath depressed sections of pier decks, deviations from the strict application of the standards will be permitted and alternative methods of protection may be required. Where damage to sprinkler equipment by floating objects may occur, adequate provision shall be made to prevent such damage.

C. Additional Provisions. In addition to the standards referred to in subsection B hereof, the following provisions shall apply:

i. Sprinkler systems, including fittings and hangers, used in under-deck areas shall be protected from corrosion in accordance with NFPA Standards for the Construction and Fire Protection of Marine Terminals, Piers and Wharves, current edition.~~.~~

ii. Water supply mains on substructures without superstructures shall be installed in under-deck space. If it is inadvisable to install mains in the under-deck space, they may be installed in the superstructure or on the deck of the substructure, with approval from the Building and Fire Officials.

iii. Automatic fire sprinkler systems and supply piping subject to freezing shall be installed as dry pipe systems.

iv. Automatic fire sprinkler systems installed in waterfront structures shall be maintained in accordance with the Fire Code.

4. Subdivision of Combustible Substructures.

All substructures of combustible construction shall have the under-deck area subdivided as follows:

A. Fire Walls. Fire walls shall be required in combustible substructures at intervals not to exceed 450 feet in each direction. Fire walls shall also be provided at each location a fire wall occurs in a superstructure located on the substructure and shall constitute a continuation of the fire walls in the superstructure. Substructure fire walls shall be of reinforced concrete having a fire resistance of at least four hours, except that fire walls made of other approved noncombustible materials may be used, provided they are equivalent in stability and have an equivalent fire resistance. Walls shall be free of holes and shall extend from the deck down to Mean Lower Low Water. Where aprons or platforms are built along the sides of the waterfront structure, fire walls shall extend to the outside edges of such aprons or platforms.

B. Fire Stops. Spacing between fire walls and fire stops or between fire stops shall not exceed 150 feet. Fire stops shall fit tightly up against the deck and around any structural members or pipes that pass through the fire stop so that an effective barrier to fire and draft will be maintained. Fire stops shall be constructed of wood planking built up to a thickness of six

inches and securely fastened to the supporting structure, or they may be of other construction approved by the Building Official. Fire stops shall extend from the deck down to Mean Lower Low Water. Where aprons or platforms are built along the sides of the waterfront structure, fire stops shall extend to the outside edges of such aprons or platforms.

d. Fire Flow Required.

A water supply for fire flow shall be provided in accordance with the Fire Code.

e. Water Supply and Design of System.

Water may be supplied from the municipal water system or any other water supply meeting the approval of the Fire Code Official. The minimum residual water pressure shall be 20 psi at all fire hydrants. Private water systems shall be designed and installed in accordance with the applicable requirements of referenced standards NFPA 24, Standard for the Installation of Private Fire Service Mains and their Appurtenances.

f. Superstructures.

1. General.

Superstructures shall comply with all the provisions of the Building and Fire Codes. Superstructures which are required by the provisions of the Building Code to be either type IA or type IB construction shall be constructed on fire-resistive substructures. Superstructures which are required by provisions of Building Code to be either IIA or IIB construction shall be constructed on noncombustible substructures.

2. Automatic Fire Sprinkler Systems.

All superstructures shall be provided with an automatic fire sprinkler system complying with the provisions of the Building Code, and the Fire Code. Area and height limits for superstructures may be increased as permitted by the Building Code for automatic fire sprinkler systems.

Exception: Automatic fire sprinkler systems need not be installed in superstructures constructed on noncombustible substructures as defined herein, provided that all of the following conditions are met:

i. The aggregate area of all superstructures on the substructure does not exceed 1,500 square feet, and

ii. The aggregate occupant load of the superstructures, as calculated in accordance with the provisions of the Building Code, does not exceed fifteen, and

iii. The occupancy classification of the superstructures on the substructure is Group B, Group F, Division 2 or Group S, Division 2 occupancies as defined in the Building Code.

2.13.070 Dry boat storage.

a. General.

Dry boat storage shall meet all requirements of the Building and Fire Codes for a Group S, Division 1 Occupancy, and the requirements set forth within this section.

b. Automatic Fire Sprinkler Systems.

When required by the building code or fire code dry boat storage shall have an automatic fire sprinkler system (NFPA 13 system) installed throughout which meets the requirements of the Building Code ~~an IBC Section 903.3.1.1 system (N.F.P.A. 13 system)~~ and ~~N.F.P.A. 303~~Fire Code Fire Protection Standards for Marinas.

c. Area.

Dry boat storage shall be limited in area as set forth in the Building Code for Group S, Division 1 Occupancies, including allowing increases for yards, and automatic fire sprinkler systems, except as modified within this section:

d. Construction Type:

Dry boat storage may be constructed of any type of construction permitted by the Building Code for a group S, division 1 occupancy, except an automatic fire sprinkler system shall not be substituted for one-hour fire resistive construction.

In non-rated types of construction, floors in multistory dry boat storage buildings shall be of one-hour fire-resistive construction, or heavy timber construction as defined in the Building Code.

e. Height:

Dry boat storage shall be limited in height in accordance with the provisions of the Building Code.

f. Rack Storage of Boats:

Rack storage shall meet the following conditions:

1. Rack boat storage buildings or structures shall be a maximum of one story in height and constructed entirely of noncombustible construction conforming to the requirements for type IA, IB, IIA or IIB construction for a group S, division 1 occupancy. Buildings or structures housing rack boat storage shall be fully protected with an automatic fire sprinkler system (NFPA 13 system) meeting the requirements of ~~IBC section 903.3.1.1~~the Building Code. The allowable area for the building may be increased by open areas around the building in accordance with the building code, and for the automatic fire sprinkler

system, The automatic fire sprinkler system shall not be used to increase the building height beyond the one story maximum height limitation, but may be used to increase the height of the building in feet in accordance with the building code.

2. Interior longitudinal walls shall not be permitted. Interior noncombustible transverse walls which are a minimum of two-hour fire-resistive fire walls shall be permitted for the purposes of dividing the rack boat storage buildings into two or more structures for purposes of area limitation. No other transverse walls shall be permitted. Except for the first level of the rack storage, there shall be no floors and no permanent catwalks.

3. Rack structures shall be limited to a maximum of three levels of boat storage. An automatic fire sprinkler system shall be installed within all boat storage racks in accordance with the building and fire codes and reference standards N.F.P.A 13, Standard for the Installation installation of Ssprinkler Ssystems and N.F.P.A. 303 the NFPA Fire Protection Standard for Marinas, so as to provide coverage of all stored boats.

Exception: Additional levels of boat storage within a rack may be permitted, provided technical assistance in the form of a technical opinion and report will be required in accordance with the Fire Code to evaluate the level of safety of the proposed design. However, when this provision is used, the maximum number of in rack storage racks shall not exceed five.

4. A Class I standpipe system designed and installed with the Fire Code reference standard N.F.P.A 14, Standard for Installation of Standpipe and Hose systems shall be provided for all rack boat storage structures.

5. Rack structures shall be designed to support the weight of all the boats plus the weight of water any two boats in a vertical storage column may collect in the event that the automatic fire sprinkler systems are triggered.

6. Boats shall be prepared for storage in racked storage by:

A. Disconnecting the battery while the boat is in storage. An adequately sized power disconnect switch shall be provided for this purpose.

B. The bilge drain plug shall be removed.

C. A water impermeable boat cover shall be installed to cover all open parts of the boat while being stored in the rack. The cover when installed shall be taut and shall not have sags or other concavities which will collect water. (Note: the cover is to prevent filling the boats with water in the event that the automatic fire sprinkler systems are triggered.)

2.13.080 Marinas.

a. General:

Marinas, because of their character, present unique problems in providing access for fire-fighting purposes, for providing water supply, and for providing exiting. In order to mitigate these problems all Marinas shall conform to the provisions of this section and the Fire Code.

b. Float System Layout.

1. Water Access Aisles:

A. Where vessels are moored to a main float system on either side of the maneuvering aisle such that the berths are not parallel to the maneuvering aisle, the clear distance between the limit lines for obstructions, measured perpendicular to the maneuvering aisle, shall be a minimum of 1.25 times the length of the longest vessel served but not less than forty (40) feet.

Vessels in berths between finger floats may extend a maximum of five (5) feet beyond the ends of the finger floats into the access aisle, thereby establishing the limit line for obstructions. The extension into the access aisle shall be measured to the furthest extension of the vessel which shall include but not be limited to bowsprits, overhangs, swimming platforms and dinghies.

Where vessels are housed in boat houses, the boat houses may extend to the limit line for obstructions. The maneuvering aisle shall be established by assuming a center line between or along the rows of boat houses. The limit lines for obstructions shall be established at points on both sides of the assumed center line of not less than five-eighths (5/8) of the longest boat house along the aisle, but not less than twenty feet. The centerline shall be relatively straight down the aisle length, with no changes of direction by less than a 40 foot radius, except at the ends of aisles where additional maneuvering room is provided. Where vessels are housed in boat houses, and the water access aisles exceed 300 feet in length the limit lines for obstructions shall be not less than 40 feet on each side of the assumed center line for the entire length of the aisle.

Exception: Where water access aisles exceed 300 feet, the Fire Chief may allow narrower water access aisles where site conditions require or permit narrower water access aisles, and alternate fireboat access is possible.

B. Where vessels are moored parallel to and on one side of a water access aisle, the water access aisle widths shall be not less than forty (40) feet, plus 1.25 times the beam of the largest vessel expected to be moored at the facility. If vessels are moored parallel to and on both sides of an access aisle, the access aisle shall be not less than forty (40) feet, plus 2.5 times the beam of the largest vessel expected to be moored at the facility.

C. Water access routes and entries for vessels to a marina facility, shall be not less than forty (40) feet in width.

2. Fire Department Access Passages:

Access passages along uncovered finger floats, through covered boat storage sheds or between boat houses shall be provided between the water access aisles and the main floats, at intervals not to exceed two-hundred (200) feet. When vessels are moored on both sides of main floats the access passages shall be staggered by one-hundred (100) feet from one side to the other. Access Passages shall extend to the limit line for obstructions.

Fire Department access passages shall have a minimum unobstructed width of forty-eight (48) inches. Toe rails or curbs a minimum of five (5) inches in height shall be provided along both sides of access passages. The clear distance between the toe rails shall be not less than forty-one (41) inches.

3. Main Float Length:

No portion of a main float shall exceed one-thousand (1000) feet in distance from the bottom of a gangway providing access to the shore or to a waterfront structure. The position of the bottom of the gangway shall be measured at Mean High Water (+5.00 Feet NOAA Datum).

For fuel dispensers on a float system see the Fire Code provisions for marine service stations.

4. Main Float Widths: Main floats shall provide an unobstructed pathway with minimum dimensions of forty-four (44) inches in width by seven (7) feet in height, which shall be maintained the length of the main float at all times.

5. Finger Float Widths:

Finger floats shall be not less than thirty-six (36) inches in width.

6. Gangway Width:

Gangways shall have a minimum clear width of forty-four (44) inches. Handrails may extend a maximum of 3.5 inches into the required width on each side.

7. Gangway Slope:

Gangways which are ramps shall not slope more than one (1) vertical to two and one-half (2.5) horizontal when tide is at Mean Lower Low Water (-6.33 Feet NOAA Datum). Cleats and a nonslip surface shall be provided on ramp gangways. Gangways constructed with self-leveling stairs shall provide treads runs of not less than eleven (11) inches nor more than eighteen (18) inches, and risers of not less than four (4) inches nor more than seven (7) inches. An approved nonslip surface shall be applied to all stair treads.

8. Gangway Handrails and Guardrails:

Guardrails shall be provided on both sides of gangways. Guardrails shall be a minimum of forty-two (42) inches in height measured perpendicular to the slope of the gangway surface. Guardrails shall be provided with intermediate bars or a pattern spaced to prevent a sphere four (4) inches in diameter from passing through. Handrails shall be provided on both sides of the gangway and shall be placed thirty-four (34) inches measured perpendicular to the slope of the gangway surface. The grip portion of the handrail shall be of a graspable shape not less than one and one-half (1.5) inches nor more than two (2) inches in diameter, and there shall be a space of one and one-half (1.5) inches between the backside of the handrail and the guardrail.

c. Covered Moorage Size and Spacing Limitations

Covered moorage shall be considered to be of two types, enclosed and open. Enclosed covered moorage are boat houses which are enclosed on three or more sides. Open covered moorage are roof structures which are generally supported on posts or frames, and which are open on two or more sides. The area of covered moorages shall be subject to the limitations set forth in the following table:

Allowable Areas For Covered Moorages [2, 3, 4, 5, 6, 7]

Building Code Type of Construction	Allowable Single Boat House Area [1]	Allowable Area for Boat Covers and Area of Combined Boat Houses [7]
VB	3000 sq-ft	9000 sq-ft
IIB	3000 sq-ft	17,500 sq-ft

Footnotes:

[1] Sidewalls for all new boat houses, for all new enclosed boat covers and all boat houses relocated from other locations outside the marina in question, shall be sheathed with corrosion resistant steel. Aluminum, wood and plastic siding materials shall be prohibited.

[2] Provide smoke venting for all new structures and for all structures relocated from other locations outside of the marina in question in accordance with the Fire Code~~IFC Chapter 45 as amended by the Washington State Building Code Council~~.

[3] Clearances for calculated area increases shall be in accordance with the building code.

[4] Unroofed areas to separate adjacent covered moorage areas on the same float system shall be a minimum of sixteen (16) feet or 33 percent of the longest finger float whichever is greater. Unroofed areas may be used for moorage.

[5] The areas listed in the table, including those for single boat houses may be tripled if the boat house or the covered boat moorages are provided throughout with an automatic fire sprinkler system. The area of individual boat houses may be tripled if the boat house alone is fire sprinklered, but no area increase is permitted for the combined boat house areas unless all the boat houses and open boat covers are fire sprinklered.

[6] Draft curtains shall be provided in accordance with the Fire Code~~IFC Chapter 45 as amended by the Washington State Building Code Council~~; however, if draft stops are constructed of sheet metal, the sheet metal shall be steel, with rust protection.

[7] The areas of open boat covers and the combined area of boat houses may be increased for yards or open spaces in accordance with the provisions of the Building Code. The area of individual boat houses shall not be increased for yards or open spaces.

d. Structural Design Criteria

1. Vertical Design Loads.

A. Float systems including the finger floats shall be designed to support all dead loads plus a superimposed live load of twenty (20) pounds per square-foot over their entire walking surface.

B. Covers or boat houses supported by a float system shall be designed to support all dead loads plus a snow load of twenty (20) pounds per square-foot. Float systems supporting covers or boat houses shall be designed to support the dead loads and snow loads contributed by the covers or boat houses plus the live and dead loads prescribed in item A above. Snow sliding off upper roofs onto floats or lower roofs shall be taken into consideration in the design.

C. Float systems, including the finger floats shall be designed to withstand a minimum concentrated load at any location on the walking surfaces of five-hundred (500) pounds, without causing any of the elements of the float system to tilt more than six (6) degrees from level (10.5% Slope). The concentrated load is to be located at any thirty (30) by thirty (30) inch square on the walking surface and shall be applied simultaneously with the uniform load. Snow loading on covers or boat houses may be reduced to ten (10) pounds per square-foot while applying the concentrated loads.

D. Gangways shall be designed to support a minimum of fifty (50) pounds per square-foot live load over their horizontal projected area at Mean High Water, along with all dead loads. Gangways shall also be designed to support a concentrated load of one-thousand pounds (1000) pounds on any thirty (30) by thirty (30) inch square on the gangway; however the concentrated load need not be applied simultaneously with the required uniform live load. The reaction of the gangway under full load shall not cause the main float to tilt out of level by more than six (6) degrees (10.5% slope).

2. Wind Design Loads

The float systems and their anchorages shall be designed to withstand wind as prescribed in the building code; however the design wind load need not exceed twenty (20) pounds per square-foot. The wind load shall be applied to the projected areas of the covers, boat houses and moored vessels. It shall be assumed that all berths are occupied. Covers and boat house structures shall be designed to withstand wind uplift loads as prescribed in the Building Code.

3. Stresses Induced by Waves

A. Vertical Loads: Float systems shall be designed to carry all dead loads, plus 20 PSF live load on all walking surfaces, plus 20 PSF snow load on all covers supported by the float system, over a span of not less than ten (10) feet. The float system shall be able to carry these loads over the design spans in both the transverse and longitudinal directions. The design spans shall be located along the floats system for analysis to produce the greatest stresses along the float system.

B. Lateral Loads: In addition to the wind loads, float systems and their anchorage systems shall be designed to resist lateral loads induced by wave action. Unless supported by a dynamic analysis, those float systems and their anchorage systems protected by breakwaters or otherwise sheltered from wind and waves or are subject to waves with heights of two (2) feet or less, shall be designed to withstand lateral loads of not less than one-half (1/2) gravity. Those float systems exposed to open water, or subject to waves in excess of two (2) feet in height shall be designed to withstand lateral loads of not less than full gravity. The calculation of lateral forces shall be based on the total dead load of the float system and all structures supported by the float system.

4. Special Loads

Guardrail and Handrail Assemblies: Guardrail and Handrail assemblies shall be designed to withstand a load of not less than twenty (20) pounds per lineal foot applied horizontally at the top most rail of the guardrail and handrail assembly.

5. Special Considerations

Provision shall be made to prevent individual boat houses from "hammering" into each other.

e. Construction Materials:

1. Flotation Materials:

A. Timber logs and other wood flotation shall not be used within float systems in Marinas.

Exception: Wood flotation may be approved by the Building Official when unusual circumstances warrant its use.

B. Foam flotation shall meet the following minimum specifications:

i. Physical Properties:

Density: Not less than 0.9 pounds per cubic foot. (ASTM D-1622)

Compressive Strength: Not less than 10 psi. (ASTM D-1621)

Flexural Strength: Not less than 25 psi ultimate strength. (ASTM C-203)

Moisture Absorption: The maximum water absorption shall be not greater than four (4) percent when tested by the immersion method. (ASTM C-272)

ii. Chemical Properties:

Hydrocarbon Resistance: Foam flotation to be used within flotation systems shall be resistant to the chemical reaction with hydrocarbon fuels and lubricants or protected by an approved encapsulation system.

iii. Protection from Mechanical Damage:

Foam flotation systems shall be protected from direct contact by vessels, floating debris and foot traffic by wood or concrete decking and wood or concrete fender or skirt systems.

C. Steel or metal flotation systems are not permitted in salt water applications but may be used in fresh water marinas.

Exception: The Building Official may permit steel or metal flotation systems in applications which are temporary. Approvals shall be limited to a maximum of one-year. An additional year may be approved if, on inspection after the first year, it is determined that the flotation system is in good condition.

D. Concrete pontoon floats shall be constructed using an approved concrete design mix of not less than six (6) sacks of cement per cubic yard, and a 28 day ultimate strength of not less than 4000 pounds per square inch. The concrete mix shall meet ACI specifications for use within a salt water environment and to provide corrosion resistance for the structural, temperature and shrinkage reinforcement within the concrete pontoons. Concrete pontoon reinforcing shall be epoxy coated. The interior cavity of the concrete pontoons shall be filled with foam flotation meeting the requirements of this code.

E. Fueling Floats: All floats used for fuel docks shall have a Portland cement concrete or other approved nonabsorbent surface impervious to fuel spillage.

2. Decking, Fender, and Float Encasement Materials:

Decking, fender and float encasement materials shall be sized to withstand the design loads, both vertical and horizontal as prescribed by this code. Materials shall be compatible with the marine environment.

Wood materials shall be pressure treated meeting AWPA ~~Standard U1 and M4~~standards for the species, product, preservative, and end use.

Concrete materials shall have a minimum compressive stress of 4000 psi at 28 days. Concrete mixes shall have a minimum of six (6) sacks of cement per cubic yard.

Metal materials shall be galvanized, painted or otherwise coated to retard corrosion, and if necessary cathodically protected.

3. Boat House and Boat Cover Framing:

Boat house and boat cover framing shall be sized to meet the design criteria prescribed in this code, for vertical, horizontal and uplift loads.

Materials shall meet the requirements for decking, fenders and float encasement as prescribed in item No. 2 above for a minimum distance of three (3) feet above the float system. From three (3) feet above the float system, framing materials shall comply with the Building Code.

4. Boat House and Boat Shed Roof and Wall Coverings:

Boat house and boat shed roof and wall coverings shall be galvanized or painted steel. Approved wood-based structural panels manufactured with exterior glue may be used in boat houses, under the steel roof or wall covering, to provide vertical and/or lateral strength. Such structural panels shall not be directly exposed to the weather, and shall not be used in locations which become submerged or are subject to water splash.

Exception: Approved wood-based structural panels manufactured with exterior glue may be used in open boat covers for the construction of gusset plates.

f. Draft Curtains:

Draft curtains shall be provided in accordance with the Fire Code~~IFC Chapter 45 as amended by the Washington State Building Code Council~~; however, if draft stops are constructed of sheet metal, the sheet metal shall be steel, with rust protection.

*** * ***

Chapter 2.17
BOARD OF BUILDING APPEALS

Sections:

2.17.010 Board of Building Appeals.

There is hereby created and established the Board of Building Appeals of the City of Tacoma, hereinafter called "the Board," which shall consist of seven members to be appointed by the City Council, pursuant to Section 2.4 of the Charter of the City of Tacoma. Such members shall be selected from persons qualified by training and experience to pass upon matters pertaining to the Building Code, ~~the~~ Residential Code, ~~the~~ Existing Building Code, ~~the Tacoma~~ Mechanical Code, ~~the~~ Fire Code, ~~the~~ Plumbing Code, Waterfront Structures and Marina Code, ~~TMC Chapter 2.12 entitled Flood Hazard and Coastal High Hazard Areas, the~~ Minimum Building and Structures Code, and ~~the~~ Energy Code, none of whom may be a public employee or paid public official. Each member shall hold office for a term of five years or until ~~his~~ a successor is appointed. In the event of the death, resignation or removal of any member of the Board, ~~his~~ a successor, to serve ~~his~~the unexpired term, shall be appointed in the same manner heretofore provided. The members of the Board shall serve without compensation. The City of Tacoma shall provide such clerical help to the Board as may be required. The Board shall select from among its members a chair~~man~~ and a vice chair~~man~~ who shall serve for one year or until their successors are selected. The Board shall adopt its own rules or procedures to fulfill its function under this Code.

The ~~Director of Planning and Development Services~~Building Official, or ~~his or her~~ appointed representative, shall serve as secretary to the Board of Building Appeals.

2.17.020 Duties and authority of Board of Building Appeals.

The Board of Building Appeals shall:

A. Determine the suitability of alternate materials and methods of construction pertaining to the Building Code, Residential Code, Existing Building Code, ~~Tacoma~~ Mechanical Code, Fire Code, Plumbing Code, Waterfront Structures and Marina Code, Minimum Building and Structures Code, and Energy Code.

B. Review an interpretation of the Building Code, Residential Code, Existing Building Code, Mechanical Code, Fire Code, Plumbing Code, Waterfront Structures and Marina Code,~~TMC Chapter 2.12 entitled Flood Hazard and Coastal High Hazard Areas,~~ Minimum Building and Structures Code, or Energy Code by the ~~Director of Public Works~~Building Official, or ~~his~~ duly authorized representative, or the Chief of the Fire Department, or ~~his/her~~ duly authorized representative, when such interpretation is appealed. The Board shall either concur with the contested interpretation or provide a new interpretation.

Exception: Limitations of Authority. The Board of Building Appeals shall have no authority relative to interpretation of the administrative provisions of these codes, nor shall the Board be empowered to waive requirements of these codes or to grant variances.

C. Hear appeals of orders or decisions based on the Building Code, Residential Code, Existing Building Code, Mechanical Code, Fire Code, Plumbing Code, Waterfront Structures and Marina Code, Minimum Building and Structures Code, or the Energy Code. The Board shall have the authority to concur with or modify such orders provided both of the following conditions are considered:

1. That life safety and/or building structural integrity are not compromised by modification of the Building Official's Order.

2. Where life safety and building structural integrity is not a factor, whether the improvement provided by the Building Official's Order is relevant to the financial impact imposed.

D. Review new editions, suggested amendments, and proposed changes to the Building Code, Residential Code, Existing Building Code, ~~Tacoma~~ Mechanical Code, Fire Code, Plumbing Code, Waterfront Structures and Marina Code,~~TMC Chapter 2.12 entitled Flood Hazard and Coastal High Hazard Areas,~~ Minimum Building and Structures Code, and Energy Code, and may propose amendments to and changes of the aforementioned codes. The Board shall rule on the appropriateness of new editions along with amendments and changes to the aforementioned codes and make recommendations to the City Council concerning the adoption of said editions, amendments or changes.

~~E. The Board of Building Appeals is authorized to grant modifications or variances to the provisions of TMC Chapter 2.12 entitled "Flood Hazard and Coastal High Hazard Areas."~~

2.17.030 Hearings – Procedures – Appeals.

A. An aggrieved party in interest may appeal to the Board, an interpretation, or a decision and order of the ~~Director of Planning and Development Services~~Building Official, or ~~his~~ duly authorized representative, or of the Chief of the Fire

Department, or ~~his~~ duly authorized representative, ~~or the Building Official, or his duly authorized representative,~~ by filing a notice of appeal with the City Clerk and with the secretary of the Board within 30 calendar days from the date of the written interpretation, decision, or order.

B. The appeal shall be in writing and shall clearly and concisely state the basis for such appeal.

C. The Board is authorized to promulgate procedural rules for appeal hearings conducted pursuant to this Chapter.

D. The secretary to the Board shall review the requested appeal and make an initial determination whether said appeal is within the authority of the Board. In the event it is determined that an appeal is not within its authority, the aggrieved party shall be notified, in writing, by the secretary of the Board within ten days following such determination.

E. The Board shall conduct hearings of all timely appeals, determined to be within the Board's authority, at a date and time certain after having given the aggrieved party in interest not less than ten days' notice thereof. At said hearing the Board shall receive evidence as may be presented by any department of the City of Tacoma and by the aggrieved party in interest. Failure of the aggrieved party, or ~~his~~ representative, to appear at the hearing properly noticed may be cause for dismissal of the appeal.

F. The Board shall render its interpretation of the code, or its decision, as it pertains to the question before it, and make its recommendation within 60 days from the date of the completion of the hearing. Such recommendation or decision shall be made to the ~~Director of Public Works~~Building Official, or ~~his~~ duly authorized representative, or to the Chief of the Fire Department, or ~~his~~ duly authorized representative. Such recommendation or decision shall include findings of facts based on the evidence presented at the hearing.

G. For those appeals of dangerous building orders issued by the Hearing Officer pursuant to TMC 2.01.060, the appeal hearing shall be de novo. The Board shall have the authority to affirm, modify, or reverse the Hearing Officer's decision.

H. The ~~Director of Public Works~~Building Official, or ~~his~~ duly authorized representative, or the Chief of the Fire Department, or ~~his~~ duly authorized representative, may seek the advice of the Board as to ~~their~~ its interpretation of any section of a code by filing a request therefore, as described in subsection A, above.

I. Appeals of the Board of Building Appeals' interpretations, decisions, penalties, and/or orders pertaining to appeals filed relative to the codes and laws assigned to the authority of the Board shall be made to the superior court within 21 calendar days, from the date of receipt of the interpretation, decision, penalty, and/or order in conformance with RCW 35.80.030(2).

2.17.040 Board member liability.

Members of the Board of Building Appeals, when executing the duties of the Board as authorized by TMC 2.17.020, are officers of the City of Tacoma and are provided all the protection against personal legal liability provided by TMC 1.12.920.