AGENDA

STAFF PRESENTATIONS
PUBLIC COMMENT

SHORELINE CITY COUNCIL
VIRTUAL/ELECTRONIC REGULAR MEETING

Monday, August 16, 2021 — Held Remotely on Zoom
7:00 p.m. — https://zoom.us/j/95015006341

In an effort to curtail the spread of the COVID-19 virus, the City Council meeting will take place online using the Zoom platform and the public will not be allowed to attend in-person. You may watch a live feed of the meeting online; join the meeting via Zoom Webinar; or listen to the meeting over the telephone.

The City Council is providing opportunities for public comment by submitting written comment or calling into the meeting to provide oral public comment. To provide oral public comment you must sign-up by 6:30 p.m. the night of the meeting. Please see the information listed below to access all of these options:

Click here to watch live streaming video of the Meeting on shorelinewa.gov

Attend the Meeting via Zoom Webinar: https://zoom.us/j/95015006341

Call into the Live Meeting: 253-215-8782 | Webinar ID: 950 1500 6341

Click Here to Sign-Up to Provide Oral Testimony
Pre-registration is required by 6:30 p.m. the night of the meeting.

Click Here to Submit Written Public Comment
Written comments will be presented to Council and posted to the website if received by 4:00 p.m. the night of the meeting; otherwise they will be sent and posted the next day.

		Page	Estimated Time
1.	**CALL TO ORDER**		7:00
2.	**ROLL CALL**		
3.	**APPROVAL OF THE AGENDA**		
4.	**REPORT OF THE CITY MANAGER**		
5.	**COUNCIL REPORTS**		
6.	**PUBLIC COMMENT**		

Members of the public may address the City Council on agenda items or any other topic for three minutes or less, depending on the number of people wishing to speak. The total public comment period will be no more than 30 minutes. If more than 10 people are signed up to speak, each speaker will be allocated 2 minutes. Please be advised that each speaker's testimony is being recorded. Speakers are asked to sign up by 6:30 p.m. the night of the meeting via the Remote Public Comment Sign-in form. Individuals wishing to speak to agenda items will be called to speak first, generally in the order in which they have signed up.

7. CONSENT CALENDAR

(a)	Adoption of Ordinance No. 939 - Approving Renewal of Zayo Group LLC Telecommunications Franchise Renewal	7a-1	
(b)	Adoption of Ordinance No. 934 - Amending Development Code Chapter 20.30 to Add Procedures for Subdivision Vacations	7b-1	
(c)	Adoption of Resolution No. 481 – Establishing a Fee for the Processing of Applications for the Vacation of Previously Recorded Subdivisions	7c-1	
(d)	Adoption of Resolution No. 482 - Amending the Employee Handbook	7d-1	
(e)	Authorize the City Manager to Execute a 99-Year Ground Lease with Catholic Housing Services for City-Owned Property Located at 19806 Aurora Avenue N to Provide Affordable Housing with Supportive Services	7e-1	
(f)	Adoption of Resolution No. 479 – Surplus Vehicles and Equipment for the Public Works Wastewater Utility Division in Accordance with Shoreline Municipal Code 3.50.030 (B) and 3.50.060	7f-1	
(g)	Authorize the City Manager to Increase Contract Amendment Authority for Architectural and Engineering Design Services Contract with Rolluda Architects, Inc. in the Amount Not to Exceed $75,000 for the Shoreline City Hall, Highland Plaza, Richmond Highlands Recreation Center, and the Shoreline Swimming Pool	7g-1	
(h)	Authorize the City Manager to Execute a Professional Services Contract with Blueline, Inc. in the Amount of $237,250 for Design of the N/NE155th St Overlay Project	7h-1	

8. STUDY ITEMS

(a)	Discussion of Prohibition of Fossil Fuels in New Construction	8a-1	7:20
(b)	Discussion of Ordinance No. 942 - Amending Shoreline Municipal Code Chapter 15.20 Landmark Preservation	8b-1	8:05

9. ADJOURNMENT 8:25

Any person requiring a disability accommodation should contact the City Clerk's Office at 206-801-2230 in advance for more information. For TTY service, call 206-546-0457. For up-to-date information on future agendas, call 206-801-2230 or visit the City's website at shorelinewa.gov/councilmeetings. Council meetings are shown on the City's website at the above link and on Comcast Cable Services Channel 21 and Ziply Fiber Services Channel 37 on Tuesdays at 12 noon and 8 p.m., and Wednesday through Sunday at 6 a.m., 12 noon and 8 p.m.

Council Meeting Date: August 16, 2021 **Agenda Item:** 7(a)

CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Adoption of Ordinance No. 939 - Authorizing a Non-Exclusive Franchise to Zayo Group, LLC to Construct, Maintain, Operate, Replace, and Repair a Telecommunications System Over, Along, Under, and Through Designated Public Rights-of-way in the City of Shoreline
DEPARTMENT:	City Manager's Office
PRESENTED BY:	Christina Arcidy, Management Analyst
ACTION:	_X__ Ordinance ____ Resolution ____ Motion ___ Discussion ____ Public Hearing

PROBLEM/ISSUE STATEMENT:

As per Shoreline Municipal Code (SMC) Section 12.25.010, all entities using the City's rights-of-way for operation and maintenance of their facilities are required to have a non-exclusive franchise with the City. The City's current franchise with Zayo Group LLC (Zayo), which was granted originally to AboveNet Communications, Inc. (AboveNet) by Ordinance No. 604, expires on September 9, 2021. The City and Zayo negotiated a renewal franchise agreement, which resulted in proposed Ordinance No. 939 (Attachment A). This agreement provides for a 10-year franchise allowing Zayo to install, maintain, operate, replace, and repair a telecommunications system over, along, under, and through designated public rights-of-way, with considerations for being allowed to do so. This staff report provides an overview of the proposed franchise and considerations Council must consider by Code in granting this franchise to Zayo.

Tonight, Council is scheduled to take action on proposed Ordinance No. 939.

RESOURCE/FINANCIAL IMPACT:

There is no fiscal impact to adopting proposed Ordinance No. 939. Pursuant to RCW 35.21.860, the City is precluded from imposing franchise fees upon a telephone business, as defined in RCW 82.16.010, or a Service Provider for use of the Right-of-Way, as defined in RCW 35.99.010, except a utility tax or actual administrative expenses related to the franchise incurred by the City. Zayo does hereby warrant that its operations, as authorized under this Franchise, are those of a Service Provider as defined in RCW 35.99.010. Zayo does not currently provide services to customers within the City, therefore Zayo is not subject to the City's utility tax set forth in Chapter 3.32 of the Shoreline Municipal Code.

RECOMMENDATION

Staff recommends that Council adopt proposed Ordinance No. 939 granting a ten-year non-exclusive franchise to Zayo Group, LLC.

Approved by: City Manager ***DT*** City Attorney ***MK***

BACKGROUND

Shoreline Municipal Code (SMC) Section 12.25.010 requires all entities using the City's rights-of-way for operation and maintenance of their facilities to have a non-exclusive franchise with the City.

On October 9, 2000, the City Council unanimously granted Metromedia Fiber Network Services (MFNS) a franchise to operate and maintain their fiber telecommunications system in Shoreline. At that time, MFNS was a new entrant to Shoreline, as they were preparing to install their fiber network shortly after franchise approval. This franchise, which was granted by Ordinance No. 249, expired on October 17, 2010.

On June 18, 2003, the City received notification that MFNS was being reorganized after their emergence from Title 11 bankruptcy protection, including a name change to AboveNet Communications, Inc. AboveNet is headquartered in White Plains, New York, and they provide both telecommunications capacity for other service providers to lease (referred to in the industry as "dark fiber"), as well as managed telecommunications and data services for clients. According to AboveNet's Right-of-Way Manager that negotiated the franchise on behalf of AboveNet, their end-users in the Puget Sound region are primarily large firms with high bandwidth needs in the Seattle area. The AboveNet Fiber Optic Telecommunications System has no end-user customers in Shoreline, as their fiber cable runs the length of Aurora Avenue N., underground, as a "pass through." AboveNet's network is described as a "ring" that spans around 250 route miles in the Puget Sound region stretching from Mukilteo in the north to Tacoma in the south, with routes throughout downtown Seattle and around Lake Washington. When the initial franchise under Ordinance No. 249 expired, the City granted AboveNet a franchise renewal. This franchise, which was granted by Ordinance No. 604, expires on September 9, 2021. More information about this previous franchise can be found here: Adoption of Ordinance No. 604 Granting a Non-Exclusive Franchise to AboveNet Communication, Inc.

In March 2013, AboveNet merged with Zayo Group (Zayo), and Zayo became successor-in-interest to the assets of AboveNet. As such, the City's franchise with AboveNet was transferred to Zayo, which continued to have no end-user customers in Shoreline. At the time of the transfer, Zayo confirmed that it provided no voice, cable, video, residential or end user service. More information about this franchise transfer can be found here: Adoption of Resolution No. 373 Approving Transfer of Telecommunications Franchise from AboveNet Communications, Inc. to Zayo Group, LLC.

On March 1, 2017, Electric Lightwave, LLC (ELI), a telecommunications company which the City had a non-exclusive franchise with at that time, entered into a purchase agreement with Zayo Group, LLC (Zayo). As a result, Zayo became successor-in-interest to the assets of ELI. The City's franchise with ELI was transferred to Zayo. At the time of the transfer, Zayo confirmed that it provided no voice, cable, video, residential or end user service. More information about this franchise transfer can be

found here: Adoption of Resolution No. 450 - Approving Transfer of Telecommunications Franchise from Electric Lightwave, LLC to Zayo Group, LLC.

The City's current franchise with Zayo expires on September 9, 2021. Zayo's current franchise with the City can be found here: Zayo Franchise (Transferred from AboveNet).

City Council discussed the proposed franchise on August 2, 2021, and directed staff to include it as a consent item on tonight's agenda. More information about the discussion on August 2 can be found here: Discussion of Ordinance No. 939 - Authorizing a Non-Exclusive Franchise to Zayo Group, LLC to Construct, Maintain, Operate, Replace, and Repair a Telecommunications System Over, Along, Under, and Through Designated Public Rights-of-way in the City of Shoreline.

DISCUSSION

The City and Zayo have negotiated a franchise renewal, which resulted in proposed Ordinance No. 939 (Attachment A). This agreement provides for a 10-year franchise allowing Zayo to install, maintain, operate, replace, and repair their telecommunications system over, along, under, and through City of Shoreline rights-of-way, with considerations for being allowed to do so.

As shared with Council during the August 2 Council discussion, the proposed Zayo franchise is almost identical to the current Zayo franchise.

In weighing whether or not to grant a franchise, SMC Section 12.25.070 identifies the considerations the City should review when renewing a right-of-way franchise. These considerations include:

1. The applicant's past service record in the city and in other communities.
2. The nature of the proposed facilities and services.
3. The proposed area of service.
4. The proposed rates (if applicable).
5. Whether the proposal would serve the public needs and the overall interests of the city residents.
6. That the applicant has substantially complied with the material terms of the existing franchise.
7. The quality of the applicant's service, response to consumer complaints, and billing practices.
8. That the applicant has the financial, legal, and technical ability to provide the services, facilities, and equipment as set forth in the application.
9. The applicant's proposal is reasonable to meet the future community needs and interests, taking into account the cost of meeting such needs and interests.

Based on this analysis shared in the August 2 staff report, staff believes Zayo's franchise renewal meets the criteria identified in SMC section 12.25.070 and their franchise should be granted.

RESOURCE/FINANCIAL IMPACT

There is no fiscal impact to adopting proposed Ordinance No. 939. Pursuant to RCW 35.21.860, the City is precluded from imposing franchise fees upon a telephone business, as defined in RCW 82.16.010, or a Service Provider for use of the Right-of-Way, as defined in RCW 35.99.010, except a utility tax or actual administrative expenses related to the franchise incurred by the City. Zayo does hereby warrant that its operations, as authorized under this Franchise, are those of a Service Provider as defined in RCW 35.99.010. Zayo does not currently provide services to customers within the City, therefore Zayo is not subject to the City's utility tax set forth in Chapter 3.32 of the Shoreline Municipal Code.

RECOMMENDATION

Staff recommends that Council adopt proposed Ordinance No. 939 granting a ten-year non-exclusive franchise to Zayo Group, LLC.

ATTACHMENTS

Attachment A: Ordinance No. 939 – Granting a Non-Exclusive Franchise to Zayo to Construct, Maintain, Operate, Replace, and Repair a Telecommunications System Over, Along, Under, and Through Designated Public Rights-of-way in the City of Shoreline

ORDINANCE NO. 939

AN ORDINANCE OF THE CITY OF SHORELINE, WASHINGTON, GRANTING ZAYO GROUP, LLC A NON-EXCLUSIVE FRANCHISE FOR TEN YEARS, TO CONSTRUCT, MAINTAIN, OPERATE, REPLACE AND REPAIR AN UNDERGROUND FIBER OPTIC TELECOMMUNICATIONS SYSTEM, IN, ALONG, UNDER, THROUGH AND BELOW PUBLIC RIGHTS-OF-WAY OF THE CITY OF SHORELINE, WASHINGTON

WHEREAS, the City granted a non-exclusive franchise to AboveNet Communications, Inc. for a period of ten years by City Ordinance No. 604 on August 8, 2011 for the operation of an underground fiber optic telecommunications system within the City Right-of-Way; and

WHEREAS, AboveNet transferred their non-exclusive franchise to Zayo Group, LLC ("Zayo") by City Resolution No. 373 on April 20, 2015; and

WHEREAS, Zayo's current non-exclusive franchise expires in September of 2021; and

WHEREAS, RCW 35A.11.020 grants the City broad authority to regulate the use of the public Right-of-Way; and

WHEREAS, RCW 35A.47.040 grants the City broad authority to grant non-exclusive franchises; and

WHEREAS, Zayo wishes to maintain their underground fiber optic telecommunications system within the City Right-of-Way; and

WHEREAS, the City Council finds that it is in the best interests of the health, safety and welfare of residents of the Shoreline community to renew a non-exclusive franchise to Zayo for the operation of an underground fiber optic telecommunications system within the City Right-of-Way.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SHORELINE, WASHINGTON, DO ORDAIN AS FOLLOWS:

Section 1. **Definitions.**

The following terms contained herein, unless otherwise indicated, shall be defined as follows:

1.1 City: The City of Shoreline, a municipal corporation of the State of Washington, specifically including all areas incorporated therein as of the effective date of this Ordinance and any other areas later added thereto by annexation or other means.

1.2 Days: Calendar days.

1.3 Facilities: All of the plant, equipment, fixtures, appurtenances, and other facilities necessary to furnish and deliver Telecommunications Services, including but not limited to

wires, lines, conduits, cables, communication and signal lines and equipment, fiber optic cable, anchors vaults, and all attachments, appurtenances, and appliances necessary or incidental to distribution and use of Telecommunications Services and all other facilities associated with the Telecommunications System located in the Right-of-Way, utilized by Zayo in the operation of activities authorized by this Ordinance. The abandonment by Zayo of any Facilities as defined herein shall not act to remove the same from this definition.

1.4 Franchise: This document and any amendments or modifications hereto.

1.5 Permitting Authority: The head of the City department authorized to process and grant permits required to perform work in the City's Right-of-Way, or the head of any agency authorized to perform this function on the City's behalf. Unless otherwise indicated, all references to Permitting Authority shall include the designee of the department or agency head.

1.6 Person: An entity or natural person.

1.7 Public Works Director or Director: The head of the Public Works department of the City, or in the absence thereof, the head of the Planning and Development Services department, or the designee of either of these individuals.

1.8 Right-of-Way: As used herein shall refer to the surface of and the space along and below any street, road, highway, freeway, bridge, lane, sidewalk, alley, court, boulevard, sidewalk, parkway, drive, utility easement, and/or road Right-of-Way now or hereafter held or administered by the City of Shoreline.

1.9 Telecommunications Service: The transmission of information by wire, optical cable, or other similar means. For the purpose of this subsection, "information" means knowledge or intelligence represented by and form of writing, signs, signals, pictures, sounds, or any other symbols. For the purpose of this Ordinance, Telecommunications Service excludes wireless communications, over-the-air transmission of broadcast television or broadcast radio signals.

1.10 Telecommunications System: The system of conduit, fiber optic cable, and supporting Facilities in the Rights-of-Way associated with Zayo's provision of Telecommunications Services.

1.11 Zayo: Zayo Group, LLC, a Delaware limited liability corporation, and its respective successors and assigns.

Section 2. **Franchise Granted.**

2.1 Pursuant to RCW 35A.47.040 and SMC Chapter 12.25, the City hereby grants to Zayo, its heirs, successors, and assigns, subject to the terms and conditions hereinafter set forth, a Franchise for a period of ten (10) years, beginning on the effective date of this Ordinance. The effective date shall be that date specified in Section 46.

2.2 This Franchise shall grant Zayo the right, privilege and authority to locate construct, operate, maintain, replace, acquire, sell, lease, and use a Telecommunications System in

the Right-of-Way as approved under City permits issued by the Permitting Authority pursuant to this Franchise and City ordinances.

Section 3. **Nonexclusive Franchise Grant.**

This Franchise is granted upon the express condition that it shall not in any manner prevent the City from granting other or further franchises in any Right-of-Way. This Franchise shall in no way prevent or prohibit the City from using any Right-of-Way or other public property or affect its jurisdiction over them or any part of them, and the City shall retain the authority to make all necessary changes, relocations, repairs, maintenance, establishment, improvement or dedication of the same as the City may deem appropriate.

Section 4. **Franchise Subject to Federal, State and Local Law.**

Notwithstanding any provision contrary herein, this Franchise is subject to and shall be governed by all applicable provisions now existing or hereafter amended of federal, State and local laws and regulations.

Section 5. **No Rights by Implication.**

No rights shall pass to Zayo by implication. Without limiting the foregoing, by way of example and not limitation, this Franchise shall not include or be a substitute for:

5.1 Any other permit or authorization required for the privilege of transacting and carrying on a business within the City that may be required by the ordinances and laws of the City;

5.2 Any permit, agreement or authorization required by the City for Rights-of-Way users in connection with operations on or in Rights-of-Way or public property; or

5.3 Any permits or agreements for occupying any other property of the City or private entities to which access is not specifically granted by this Franchise.

Section 6. **Conveyance of Rights.**

This Franchise is intended to convey limited rights and interests only as to those Rights-of-Way in which the City has an actual interest. It is not a warranty of title or interest in any Rights-of-Way; it does not provide Zayo with any interest in any particular location within the Rights-of-Way; and it does not confer rights other than as expressly provided in the grant hereof.

Section 7. **No Waiver.**

The failure of the City on one or more occasions to exercise a right or to require compliance or performance under this Franchise or any other applicable State or federal law shall not be deemed to constitute a waiver of such right or a waiver of compliance or performance by the City nor to excuse Zayo from complying or performing, unless such right or such compliance or performance has been specifically waived in writing.

Section 8. **Other Ordinances.**

Zayo agrees to comply with the terms of any lawful, generally applicable local ordinance, including but not limited to Chapter 12.25 of the Shoreline Municipal Code in effect upon adoption of this Franchise. In the event of a conflict between any ordinance and a specific provision of this Franchise, the Franchise shall control, provided however that Zayo agrees that it is subject to the lawful exercise of the police power of the City.

Section 9. **Right-of-Way Vacation.**

If any Right-of-Way or portion thereof used by Zayo is vacated by the City during the term of this Franchise, the City shall endeavor to specifically reserve the continued use of the Right-of-Way by Zayo. Unless the City specifically reserves to Zayo the right to continue the use of vacated Rights-of-Way, Zayo shall, without delay or expense to the City, remove its facilities from such Right-of-Way and restore, repair or reconstruct the Right-of-Way where such removal has occurred. In the event of failure, neglect or refusal of Zayo to restore, repair or reconstruct such Right-of-Way after thirty (30) days written notice from the City, the City may do such work or cause it to be done, and the reasonable cost thereof shall be paid by Zayo within thirty (30) days of receipt of an invoice and documentation.

Section 10. **Relocation of Facilities.**

10.1 Zayo agrees and covenants at no cost to the City, to relocate its Facilities when requested to do so by the City for a public project, provided that, Zayo shall in all such cases have the privilege, upon approval by the City, to temporarily bypass, in the authorized portion of the same Right-of-Way any Facilities required to be relocated.

10.2 If the City determines that a public project necessitates the relocation of Zayo's existing Facilities, the City shall:

10.2.1 At least sixty (60) days prior to the commencement of such project, provide Zayo with written notice of known Facilities requiring such relocation; and

10.2.2 Provide Zayo with copies of any plans and specifications pertinent to the requested relocation and a proposed temporary or permanent relocation for Zayo's Facilities.

10.2.3 After receipt of such notice and such plans and specifications, Zayo shall complete relocation of its Facilities at no charge or expense to the City at least ten (10) days prior to commencement of the project.

10.3 Zayo may, after receipt of written notice requesting a relocation of its Facilities, submit to the City written alternatives to such relocation. The City shall evaluate such alternatives and advise Zayo in writing as soon as practicable if any of the alternatives is suitable to accommodate the work that otherwise necessitates the relocation of the Facilities. If so requested by the City, Zayo shall submit additional information to assist the City in making such evaluation. The City shall give each alternative proposed by Zayo as full and fair a consideration as the project schedule will allow. In the event the City ultimately determines that there is no other reasonable alternative, Zayo shall relocate its Facilities as directed by the City and in accordance with Section 10.2.3 of this Franchise.

10.4 The City will notify Zayo as soon as practical of any facilities that are not identified during the design of the public project, but are discovered during the course of construction and need to be relocated. Zayo will work with the City to design and complete a relocation to facilitate the completion of the public project with minimum delay.

10.5 Failure to complete a relocation requested by the City in accordance with Section 10.2 of this Franchise by the date included in the notice provided for thereby may subject Zayo to liquidated damages as provided in Section 28 of this Franchise.

10.6 The provisions of this Section of this Franchise shall in no manner preclude or restrict Zayo from making any arrangements it may deem appropriate when responding to a request for relocation of its Facilities by any person other than the City, where the improvements to be constructed by said person are not or will not become City-owned, operated or maintained, provided that such arrangements do not unduly delay a City construction project.

Section 11. **Zayo's Maps and Records.**

As a condition of this Franchise, and at its sole expense, Zayo shall provide the City with typicals and as-built plans, maps, and records that show the vertical and horizontal location of its Facilities within the Right-of-Way using a minimum scale of one inch equals one hundred feet (1"=100'), measured from the center line of the Right-of-Way, which maps shall be in hard copy format acceptable to the City and in Geographical Information System (GIS) or other digital electronic format acceptable to the City. If digital route maps are provided, the format of the data for overlaying on the City's GIS mapping system shall utilize NAD 83 as the horizontal datum, and shall be compatible with or can be imported into Arc GIS Version 9.2 or later. This information shall be provided no later than one hundred eighty (180) days after the effective date of this Ordinance and shall be updated within ten (10) business days of a reasonable request of the City.

Section 12. **Undergrounding.**

This Franchise is subject to the undergrounding requirements in Shoreline Municipal Code (SMC) Section 13.20. Consistent with that Section, Zayo shall install all of its Facilities underground in accordance with relevant road and construction standards. Zayo will also share information necessary to facilitate joint-trenching and other undergrounding projects, and will otherwise cooperate with the City and other utility providers to serve the objectives of SMC Section 13.20.

Section 13. **Excavation and Notice of Entry.**

13.1 During any period of relocation or maintenance, all surface structures, if any, shall be erected and used in such places and positions within the Right-of-Way so as to minimize interference with the passage of traffic and the use of adjoining property. Zayo shall at all times post and maintain proper barricades and comply with all applicable safety regulations during such period of construction as required by the ordinances of the City or State law, including RCW 39.04.180, for the construction of trench safety systems.

13.2 Whenever Zayo excavates in any Right-of-Way for the purpose of installation, construction, repair, maintenance or relocation of its Facilities, it shall apply to the City for a permit to do so in accordance with the ordinances and regulations of the City requiring permits to operate in the Right-of-Way. In no case shall any work commence within any Right-of-Way without a permit. During the progress of the work, Zayo shall not unnecessarily obstruct the passage or use of the Right-of-Way, and shall provide the City with plans, maps, and information showing the proposed and final location of any Facilities in accordance with Section 11 of this Franchise.

13.3 At least five (5) days prior to construction of Facilities consisting of digging, trenching, cutting, or other activities that may impact the utilization of the Right-of-Way for more than a four (4) hour period, Zayo shall take reasonable steps to inform all apparent owners or occupiers of property within fifty (50) feet of said activities, that a construction project will commence. The notice shall include, at a minimum, the dates and nature of the project and a toll-free or local telephone number that the resident may call for further information. A pre-printed door hanger may be used to satisfy Zayo's obligations under this Section of this Franchise.

13.4 At least twenty-four (24) hours prior to entering Right-of-Way within ten (10) feet of private property to construct Facilities consisting of digging, trenching, cutting, or other activities that may impact the utilization of the Right-of-Way, Zayo shall post a written notice describing the nature and location of the work to be performed adjacent to the affected private property as well as the information listed in Section 13.3 of this Franchise. Zayo shall make a good faith effort to comply with the property owner/resident's preferences, if any, regarding the location or placement of Facilities that protrude above the prior ground surface level, if any, consistent with sound engineering practices.

Section 14. **Stop Work.**

On notice from the City that any work is being conducted contrary to the provisions of this Franchise, or in an unsafe or dangerous manner as determined by the City, or in violation of the terms of any applicable permit, laws, regulations, ordinances or standards, the work may immediately be stopped by the City. The stop work order shall:

14.1 Be in writing;

14.2 Be given to the Person doing the work and be posted on the work site;

14.3 Be sent to Zayo by overnight delivery at the address given herein;

14.4 Indicate the nature of the alleged violation or unsafe condition; and

14.5 Establish conditions under which work may be resumed.

Section 15. **Emergency Work, Permit Waiver.**

In the event of any emergency where any Facilities located in the Right-of-Way are broken or damaged, or if Zayo's construction area for their Facilities is in such a condition as to place the health or safety of any person or property in imminent danger, Zayo shall immediately take any necessary emergency measures to repair or remove its Facilities without first applying for and

obtaining a permit as required by this Franchise. However, this emergency provision shall not relieve Zayo from later obtaining any necessary permits for the emergency work. Zayo shall apply for the required permits not later than the next business day following the emergency work.

Section 16. **Recovery of Costs.**

Zayo shall be subject to all permit fees associated with activities undertaken pursuant to this Franchise or other ordinances of the City. If the City incurs any costs and/or expenses for review, inspection or supervision of activities undertaken pursuant to this Franchise or any ordinances relating to a subject for which a permit fee is not established, Zayo shall pay the City's reasonable costs and reasonable expenses. In addition, Zayo shall promptly reimburse the City for any costs the City reasonably incurs in responding to any emergency involving Zayo's Facilities. If the emergency involves the facilities of other utilities operating in the Right-of-Way, then the City will allocate costs among parties involved in good faith. Said costs and expenses shall be paid by Zayo after submittal by the City of an itemized billing by project of such costs.

Section 17. **Dangerous Conditions, Authority for City to Abate.**

17.1 Whenever installation, maintenance or excavation of Facilities authorized by this Franchise causes or contributes to a condition that appears to substantially impair the lateral support of the adjoining Right-of-Way, public or private property, or endangers any person, the City may direct Zayo, at Zayo's expense, to take actions to resolve the condition or remove the endangerment. Such directive may include compliance within a prescribed time period.

17.2 In the event Zayo fails or refuses to promptly take the directed action, or fails to fully comply with such direction, or if emergency conditions exist which require immediate action to prevent injury or damages to persons or property, the City may take such actions as it believes are necessary to protect persons or property and Zayo shall reimburse the City for all costs incurred.

Section 18. **Safety.**

18.1 Zayo, in accordance with applicable federal, State, and local safety rules and regulations shall, at all times, employ ordinary care in the installation, maintenance, and repair of its Facilities utilizing methods and devices commonly accepted in their industry of operation to prevent failures and accidents that are likely to cause damage, injury, or nuisance to persons or property.

18.2 All of Zayo's Facilities in the Right-of-Way shall be constructed and maintained in a safe and operational condition, in accordance with applicable federal, State, and local safety rules and regulations.

18.3 The City reserves the right to ensure that Zayo's Facilities are constructed and maintained in a safe condition. If a violation of any applicable safety regulation is found to exist, the City will notify Zayo in writing of said violation and establish a reasonable time for Zayo to take the necessary action to correct the violation. If the correction is not made within

the established time frame, the City, or its authorized agent, may make the correction. Zayo shall reimburse the City for all reasonable costs incurred by the City in correcting the violation.

Section 19. **Authorized Activities.**

This Franchise is solely for the location, construction, installation, ownership, operation, replacement, repair, maintenance, acquisition, sale, lease, and use of the Telecommunications System and associated Facilities for providing Wholesale and Retail Telecommunications Services. Zayo shall obtain a separate franchise for any operations or services other than these authorized activities.

Section 20. **Administrative Fee and Utility Tax.**

20.1 Pursuant to RCW 35.21.860, the City is precluded from imposing franchise fees upon a telephone business, as defined in RCW 82.16.010, or a Service Provider for use of the Right-of-Way, as defined in RCW 35.99.010, except a utility tax or actual administrative expenses related to the franchise incurred by the City. Zayo does hereby warrant that its operations, as authorized under this Franchise, are those of a Service Provider as defined in RCW 35.99.010.

20.2 Zayo shall be subject to a $5,000 administrative fee for reimbursement of costs associated with the preparation, processing and approval of this Franchise Agreement, including wages, benefits, overhead expenses, meetings, negotiations and other functions related to the approval. The administrative fee excludes normal permit fees required for work in the Right-of-Way. Payment of the one-time administrative fee is due 30 days after Franchise approval.

20.3 If Zayo provides services to customers within the City, Zayo shall become subject to the City's utility tax set forth in Chapter 3.32 of the Shoreline Municipal Code.

20.4 If RCW 35.21.860 is amended to allow collection of a franchise fee, this Franchise Agreement shall be amended to require franchise fee payments.

Section 21. **Indefeasible Rights of Use.**

21.1 An Indefeasible Right of Use ("IRU") is an interest in Zayo's Facilities which gives Zayo's customer the right to use certain Facilities for the purpose of providing Telecommunication Services; an IRU does not provide the customer with any right to control the Facilities, or any right of physical access to the Facilities to locate, construct, replace, repair or maintain the Facilities, or any right to perform work within the Right-of-Way.

21.2 A lease or grant of an IRU regarding Zayo's Facilities shall not require that the holder of the lease or IRU to obtain its own franchise or pay any fee to the City, PROVIDED THAT, under such lease or grant of an IRU, Zayo: (i) retains exclusive control over such Telecommunications System and Facilities, (ii) remains responsible for the location, relocation, construction, replacement, repair and maintenance of the Telecommunications and Facilities pursuant to the terms and conditions of this Franchise, and (iii) remains responsible for all other obligations imposed by this Franchise.

Section 22. **Indemnification.**

22.1 Zayo agrees to indemnify, save and hold harmless, and defend the City, its elected officials, officers, authorized agents, boards and employees, acting in official capacity, from and against any liability, damages or claims, costs, expenses, settlements or judgments arising out of, or resulting from the granting of this Franchise or Zayo's activities, or any casualty or accident to Person or property that occurs as a result of any construction, excavation, operation, maintenance, reconstruction or any other act done pursuant to the terms of this Franchise, provided that the City shall give Zayo timely written notice of its obligation to indemnify the City. Zayo shall not indemnify the City for any damages, liability or claims resulting from the City's sole negligence, willful misconduct, or breach of obligation of the City, its officers, authorized agents, employees, attorneys, consultants, or independent contractors for which the City is legally responsible, or for any activity or function conducted by any Person other than Zayo.

22.2 In the event Zayo refuses to undertake the defense of any suit or any claim, after the City's request for defense and indemnification has been made pursuant to the indemnification clauses contained herein, and Zayo's refusal is subsequently determined by a court having jurisdiction (or such other tribunal that the parties shall agree to decide the matter), to have been a wrongful refusal on the part of Zayo, then Zayo shall pay all of the City's reasonable costs and reasonable expenses for defense of the action, including reasonable attorneys' fees of recovering under this indemnification clause, as well as any judgment against the City.

Should a court of competent jurisdiction or such other tribunal as the parties agree shall decide the matter determine that this Franchise is subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of Zayo and the City, its officers, employees and agents, Zayo's liability hereunder shall be only to the extent of Zayo's negligence. It is further specifically and expressly understood that the indemnification provided in Section 22 of this Franchise constitutes Zayo's waiver of immunity under Title 51 RCW, solely for the purposes of this indemnification. This waiver has been mutually negotiated by the parties.

22.3 EXCEPT FOR A PARTY'S INDEMNIFICATION OBLIGATIONS SET FORTH HEREIN AND EXCEPT FOR CLAIMS ARISING FROM A PARTY'S INTENTIONAL MISCONDUCT (INCLUDING EMPLOYEE CONDUCT), IN NO EVENT SHALL EITHER PARTY BE LIABLE TO THE OTHER PARTY FOR ANY INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES WHATSOEVER, ARISING OUT OF, OR IN CONNECTION WITH, THIS AGREEMENT, INCLUDING BUT NOT LIMITED TO, LOST PROFITS, LOST REVENUE, LOSS OF GOODWILL, LOSS OF ANTICIPATED SAVINGS, LOSS OF DATA, INCURRED OR SUFFERED BY EITHER PARTY.

Section 23. **Insurance.**

23.1 Zayo shall procure and maintain for the duration of this Franchise, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the exercise of the rights, privileges and authority granted hereunder to

Zayo, its agents or employees. Zayo shall provide to the City an insurance certificate naming the City as additional insured, for its inspection prior to the commencement of any work or installation of any Facilities pursuant to this Franchise, and such insurance shall evidence:

23.1.1 Automobile Liability insurance for owned, non-owned and hired vehicles with limits no less than $1,000,000 Combined Single Limit per accident for bodily injury and property damage; and

23.1.2 Commercial General Liability insurance policy, written on an occurrence basis with limits no less than $1,000,000 combined single limit per occurrence and $2,000,000 aggregate for personal injury, bodily injury and property damage. Coverage shall include blanket contractual liability and employer's liability.

23.2 Payment of deductible or self-insured retention shall be the sole responsibility of Zayo.

23.3 The coverage shall contain no special limitations on the scope of protection afforded to the City, its officers, officials, or employees. In addition, the insurance policy shall contain a clause stating that coverage shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability. Zayo's insurance shall be primary insurance for the City. Any insurance maintained by the City shall be excess of Zayo's insurance and shall not contribute with it. Coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days prior written notice has been given to the City.

Section 24. **Abandonment of Zayo's Facilities.**

No portion of the Facilities laid, installed, or constructed in the Right-of-Way by Zayo may be abandoned by Zayo without the express written consent of the City. Any plan for abandonment or removal of Zayo's Facilities must be first approved by the Public Works Director, which shall not be unreasonably withheld or delayed, and all necessary permits must be obtained prior to such work.

Section 25. **Restoration After Construction.**

25.1 Zayo shall, after any abandonment approved under Section 24 of this Franchise, or any installation, construction, relocation, maintenance, or repair of Facilities within the Franchise area, restore the Right-of-Way to a same or better condition then it was in immediately prior to any such abandonment, installation, construction, relocation, maintenance or repair pursuant to City standards. All concrete encased monuments which have been disturbed or displaced by such work shall be restored pursuant to all federal, state and local standards and specifications. Zayo agrees to promptly complete all restoration work and to promptly repair any damage caused by such work at its sole cost and expense.

25.2 If it is determined that Zayo has failed to restore the Right-of-Way in accordance with this Section of this Franchise, the City shall provide Zayo with written notice including a description of actions the City believes necessary to restore the Right-of-Way. If the Right-of-Way is not restored in accordance with the City's notice within fifteen (15) Days

of that notice, the City, or its authorized agent, may restore the Right-of-Way. Zayo is responsible for all reasonable costs and expenses incurred by the City in restoring the Right-of-Way in accordance with this Section of this Franchise. The rights granted to the City under this paragraph shall be in addition to those otherwise provided herein.

Section 26. **Bond or Letter of Credit.**

Before undertaking any of the work, installation, improvements, construction, repair, relocation or maintenance authorized by this Franchise, Zayo shall cause to be furnished a bond or Letter of Credit executed by a corporate surety or financial institution authorized to do business in the State of Washington, in a sum to be set and approved by the Director of Public Works as sufficient to ensure performance of Zayo's obligations under this Franchise. The bond shall be conditioned so that Zayo shall observe all the covenants, terms and conditions and faithfully perform all of the obligations of this Franchise, and to erect or replace any defective work or materials discovered in the replacement of the City's streets or property within a period of two years from the date of the replacement and acceptance of such repaired streets by the City. Zayo may meet the obligations of this Section of this Franchise with one or more bonds acceptable to the City. In the event that a bond issued pursuant to this Section of this Franchise is canceled by the surety, after proper notice and pursuant to the terms of said bond, Zayo shall, prior to the expiration of said bond, procure a replacement bond which complies with the terms of this Section of this Franchise.

Section 27. **Recourse Against Bonds and Other Security.**

So long as the bond is in place, it may be utilized by the City as provided herein for reimbursement of the City by reason of Zayo's failure to pay the City for actual costs and expenses incurred by the City to make emergency corrections under Section 17 of this Franchise, to correct Franchise violations not corrected by Zayo after notice, and to compensate the City for monetary remedies or damages reasonably assessed against Zayo due to material default or violations of the requirements of City ordinances.

27.1 In the event Zayo has been declared to be in default of a material provision of this Franchise by the City and if Zayo fails, within thirty (30) days of mailing of the City's default notice, to pay the City any penalties, or monetary amounts, or fails to perform any of the conditions of this Franchise, or fails to begin to perform any condition that may take more than 30 days to complete, the City may thereafter obtain from the bond, after a proper claim is made to the surety, an amount sufficient to compensate the City for its damages. Upon such withdrawal from the bond, the City shall notify Zayo in writing, by First Class Mail, postage prepaid, of the amount withdrawn and date thereof.

27.2 Thirty (30) days after the City's mailing of notice of the bond forfeiture or withdrawal authorized herein, Zayo shall deposit such further bond, or other security, as the City may require, which is sufficient to meet the requirements of this Ordinance.

27.3 The rights reserved to the City with respect to any bond are in addition to all other rights of the City whether reserved by this Ordinance or authorized by law, and no action, proceeding, or exercise of a right with respect to any bond shall constitute an election or waiver of any rights or other remedies the City may have.

Section 28. **Liquidated Damages.**

28.1 The City and Zayo recognize the delays, expense and unique difficulties involved in proving in a legal preceding the actual loss suffered by the City as a result of Zayo's breach of certain provisions of this Franchise. Accordingly, instead of requiring such proof, the City and Zayo agree that Zayo shall pay to the City, the sum set forth below for each day or part thereof that Zayo shall be in breach of specific provisions of this Franchise. Such amount is agreed to by both parties as a reasonable estimate of the actual damages the City would suffer in the event of Zayo's breach of such provisions of this Franchise.

28.1.1 Subject to the provision of written notice to Zayo and a thirty (30) day right to cure period, the City may assess against Zayo liquidated damages as follows: two hundred dollars ($200.00) per day for any material breaches of the Franchise.

28.1.2 The City shall provide Zayo a reasonable extension of the thirty (30) day right to cure period described in Section 28.1.1 of this Franchise if Zayo has commenced work on curing the violation, is diligently and continuously pursuing the cure to completion and requested such an extension, provided that any such cure is completed within one hundred and twenty (120) days from the written notice of default.

28.1.3 If liquidated damages are assessed by the City, Zayo shall pay any liquidated damages within forty-five (45) days after they are assessed.

28.1.4 In the event Zayo fails to cure within the specified cure period, or any agreed upon extensions thereof, liquidated damages accrue from the date the City notifies Zayo that there has been a violation.

28.2 The recovery of amounts under Section 28.1.1 of this Franchise shall not be construed as a limit on the liability of Zayo under the Franchise or an excuse of unfaithful performance of any obligation of Zayo. Similarly, the imposition of liquidated damages are not intended to be punitive, but rather, for City cost recovery purposes.

Section 29. **Remedies to Enforce Compliance.**

In addition to any other remedy provided herein, the City and Zayo each reserve the right to pursue any remedy to compel the other to comply with the terms of this Franchise, and the pursuit of any right or remedy by a party shall not prevent such party from thereafter declaring a breach or revocation of the Franchise.

Section 30. **Modification.**

The City and Zayo hereby reserve the right to alter, amend or modify the terms and conditions of this Franchise upon written agreement of both parties to such amendment.

Section 31. **Force Majeure.**

This Franchise shall not be revoked due to any violation or breach that occurs without fault of Zayo or occurs as a result of circumstances beyond Zayo's reasonable control.

Section 32. **City Ordinances and Regulations.**

Nothing herein shall be deemed to direct or restrict the City's ability to adopt and enforce all necessary and appropriate lawful ordinances regulating the performance of the conditions of this Franchise, including any reasonable lawful ordinance made in the exercise of its police powers in the interest of public safety and for the welfare of the public. The City shall have the authority at all times to control, by appropriate lawful regulations, the location, elevation, and manner of construction and maintenance of any fiber optic cable or of other Facilities by Zayo. Zayo shall promptly conform to all such regulations, unless compliance would cause Zayo to violate other requirements of law.

Section 33. **Acceptance/Liaison.**

Zayo's written acceptance shall include the identification of an official liaison who will act as the City's contact for all issues regarding this Franchise. Zayo shall notify the City of any change in the identity of its liaison. Zayo shall accept this Franchise in the manner hereinafter provided in Section 43 of this Franchise.

Section 34. **Survival.**

All of the provisions, conditions and requirements of Sections10, Relocation of Facilities; 13, Excavation And Notice Of Entry; 17, Dangerous Conditions; 22, Indemnification; 24, Abandonment of Zayo's Facilities; and 25, Restoration After Construction, of this Franchise shall be in addition to any and all other obligations and liabilities Zayo may have to the City at common law, by statute, or by contract, and shall survive the City's Franchise to Zayo and any renewals or extensions thereof. All of the provisions, conditions, regulations and requirements contained in this Franchise Ordinance shall further be binding upon the heirs, successors, executors, administrators, legal representatives and assigns of the parties and all privileges, as well as all obligations and liabilities of each party shall inure to its heirs, successors and assigns equally as if they were specifically mentioned wherever such party is named herein.

Section 35. **Severability.**

If any section, sentence, clause or phrase of this Franchise Ordinance should be held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity or constitutionality of any other section, sentence, clause or phrase of this Franchise Ordinance. In the event that any of the provisions of this Franchise Ordinance or of this Franchise are held to be invalid by a court of competent jurisdiction, the City reserves the right to reconsider the grant of this Franchise and may amend, repeal, add, replace or modify any other provision of this Franchise Ordinance or of the Franchise granted herein, or may terminate this Franchise.

Section 36. **WUTC Tariff Filings, Notice Thereof.**

If Zayo intends to file, pursuant to Chapter 80.28 RCW, with the Washington Utilities and Transportation Commission (WUTC), or its successor, any tariff affecting the City's rights arising under this Franchise, Zayo shall provide the City with fourteen (14) days written notice.

Section 37. **Binding Acceptance.**

This Franchise shall bind and benefit the parties hereto and their respective successors and assigns.

Section 38. **Assignment.**

This Franchise shall not be sold, transferred, assigned, or disposed of in whole or in part either by sale or otherwise, without the written approval of the City. The City's approval shall not be unreasonably withheld or delayed. Any reasonable costs associated with the City's review of any transfer proposed by Zayo shall be reimbursed to the City by the new prospective Franchisee, if the City approves the transfer, or by Zayo if said transfer is not approved by the City.

38.1 The City shall receive notice and approve any proposed change in control of Zayo or assignment of this Franchise to a subsidiary or affiliate of Zayo, which causes a change in control of the Franchisee. The City shall be notified but need not approve changes or assignments that do not result in a change in control of the Franchisee. Neither approval nor notification shall be required for mortgaging purposes.

38.2 A change in control shall be deemed to occur if there is an actual change in control or where ownership of fifty percent (50%) or more of the beneficial interests, singly or collectively, are obtained by other parties. The word "control" as used herein is not limited to majority stock ownership only, but includes actual working control in whatever manner exercised or changes in business form that act to materially reduce the resources available to Zayo to perform its obligations under the Franchise granted herein.

38.3 A lease or grant of an Indefeasible Right of Use ("IRU") in the Telecommunications System, the associated Facilities, or any portion thereof, to another Person, or an offer or provision of capacity or bandwidth from the Telecommunications System or associated Facilities shall not be considered an assignment for purposes of this Section of this Franchise, PROVIDED THAT, under such lease, IRU, or offer, Zayo: (i) retains exclusive control over the Telecommunications System, (ii) remains responsible for the location, construction, replacement, repair and maintenance of the Telecommunications System pursuant to the terms and conditions of this Franchise, and (iii) remains responsible for all other obligations imposed hereunder.

Section 39. **Alternate Dispute Resolution.**

If the City and Zayo are unable to resolve disputes arising from the terms of the Franchise granted herein, prior to resorting to a court of competent jurisdiction, the parties shall submit the dispute to an alternate dispute resolution process in King County agreed to by the parties. Unless otherwise agreed between the parties or determined herein, the cost of that process shall be shared equally.

Section 40. **Venue.**

If alternate dispute resolution is not successful, the venue for any dispute related to this Franchise shall be the United States District Court for the Western District of Washington, or King County Superior Court.

Section 41. **Entire Agreement.**

This Franchise constitutes the entire understanding and agreement between the parties as to the subject matter herein and no other agreements or understandings, written or otherwise, shall be binding upon the parties upon execution and acceptance hereof.

Section 42. **Notice.**

Any notice or information required or permitted to be given to the City or to Zayo under this Franchise may be sent to the following addresses unless otherwise specified:

Zayo Group, LLC
1805 29th Street, Suite 250
Boulder, CO 80301
Attn: General Counsel

City of Shoreline
City Manager
17500 Midvale Avenue N
Shoreline, WA 98133

With a Copy to:

Zayo Group, LLC
Attn: Director, Underlying Rights – West Region
1821 30th St., Unit A
Boulder, CO 80301

Emergencies:

Network Operations Center & Repair
Phone: (888) 404 9296
E-mail: zayoncc@zayo.com

Either party can alter their official address for notifications provided in this Section of this Franchise by providing the other party written notice thereof.

Section 43. **Directions to City Clerk.**

The City Clerk is hereby directed to publish a summary of this Ordinance and forward certified copies of this Ordinance to Zayo. Zayo shall have thirty (30) days from receipt of the certified copy of this Ordinance to execute the "Acceptance Agreement," a copy of the Acceptance Agreement will be appended to this Ordinance by the City Clerk. If Zayo fails to accept this Franchise in accordance with the above provisions, this Franchise shall be null and void.

Section 44. **Corrections by City Clerk or Code Reviser.**

Upon approval of the City Attorney, the City Clerk and/or the Code Reviser are authorized to make necessary corrections to this Ordinance, which shall be limited to the corrections of scrivener or clerical errors; references to other local, state, or federal laws, codes, rules, or regulations; or ordinance numbering and section/subsection numbering and references.

Section 45. **Publication Costs.**

Zayo shall reimburse the City for the cost of publishing this Franchise Ordinance within thirty (30) Days of receipt of the City's invoice.

Section 46. **Effective Date.**

This Ordinance shall take effect and be in full force upon receipt of Zayo's acceptance by the City Clerk as provided in Section 43.

PASSED BY THE CITY COUNCIL ON AUGUST 16, 2021.

_____
Mayor Will Hall

ATTEST:

_____
Jessica Simulcik Smith
City Clerk

APPROVED AS TO FORM:

_____
Julie Ainsworth-Taylor, Assistant City Attorney
On behalf of Margaret King, City Attorney

Date of Publication: _____, 2021
Effective Date: _____, 2021

Council Meeting Date: August 16, 2021 **Agenda Item:** 7(b)

CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Action on Ordinance No. 934 – Amending Shoreline Municipal Code Chapter 20.30 to Add Procedures for Subdivision Vacations
DEPARTMENT:	Planning & Community Development
PRESENTED BY:	Cate Lee, AICP, Senior Planner
ACTION:	__X_ Ordinance ____ Resolution ____ Motion ____ Discussion ____ Public Hearing

PROBLEM/ISSUE STATEMENT:

Although the Revised Code of Washington (RCW) 58.17.212 provides for the vacation of a subdivision, the City currently has no process established in the Shoreline Municipal Code (SMC) for such a vacation. There are subdivisions throughout the City, particularly in the Mixed Use Residential (MUR) zoning districts, that make fully implementing the vision of special area plans, like the Light Rail Station Subarea Plans (145th & 185th), complicated due to these prior subdivisions, primarily for detached single-family development.

Tonight, Council is scheduled to take action on proposed Ordinance No. 934 (Attachment A), which would provide for recorded subdivision vacation procedures by amending Chapter 20.30 of the SMC.

RESOURCE/FINANCIAL IMPACT:

The new regulations will result in increased fee collection related to staff processing of subdivision vacation applications. These fees are intended to cover the costs of staff time and the Hearing Examiner to review and consider the application, so there likely will be no net impact on City finances. In addition, vacating such subdivisions will allow properties to be redeveloped under current zoning standards, which will likely result in increased construction permit application fee revenue for the City related to multifamily and commercial development.

RECOMMENDATION

Staff recommends that the City Council adopt Ordinance No. 934 as set forth in Attachment A to this staff report.

Approved By: City Manager ***DT*** City Attorney ***MK***

BACKGROUND

Since the 1900s, much of the City of Shoreline has been subdivided. These subdivisions are memorialized by a final drawing and depiction of the subdivision (the "Plat") that is filed in the King County land records office. This statutory procedure related to subdivision and Plats is set out in State law (RCW 58.17). RCW 58.17.212 provides for the vacation of a previously recorded subdivision.

A subdivision vacation is different than a plat alteration, which the City adopted regulations for on April 1, 2019 through Ordinance No. 857, now codified in Shoreline Municipal Code (SMC) Section 20.30.425. Plat alterations generally result in substantial revisions to a recorded subdivision, such as removal of conditions of approval, but do not eliminate the subdivision itself. In contrast, a subdivision vacation results in the abandonment of approved plans, designs and conditions associated with an existing subdivision. In other words, a vacation returns the land to its pre-subdivision state.

As provided for in RCW 58.17.212, a subdivision vacation may be a total vacation or a partial vacation. A total vacation eliminates the entire subdivision, including all lots and public rights-of-way, as well as any restrictions that may have been contained on the plat. A partial vacation eliminates only the designated lots, public rights-of-way, and/or plat restrictions indicated in the vacation document. Land dedicated to the public in the original plat is required to be deeded to the City unless retaining the land does not benefit the City. This vacation process is not used when the applicant only wants to vacate a public street; in those situations the procedures in SMC 12.17 Street Vacation are used.

The City currently does not have regulations for processing subdivision vacations. Staff believe regulations to process subdivision vacations are necessary to develop properties as allowed by the City's current zoning. The Planning Commission held a study session on this topic on May 20, 2021, and more information on this study session can be found here: Subdivision Vacation Development Code Amendments. The Planning Commission later held a Public Hearing on the issue on June 17, 2021, and more information from this Hearing can be found here: Public Hearing on the Subdivision Vacation Development Code Amendments.

During the June 17th Planning Commission meeting and following the Public Hearing, the Planning Commission voted 5-0 to recommend the proposed Subdivision Vacation Development Code amendments as proposed in Ordinance No. 934, be adopted.

The City Council discussed the proposed Development Code amendments on July 19, 2021. More information on this discussion can be found here: Discussion of Ordinance No. 934 - Amending Shoreline Municipal Code Chapter 20.30 to Add Procedures for Subdivision Vacations and Resolution No. 481 - Adopting a Fee for Subdivision Vacations.

DISCUSSION

During the July 19, 2021, City Council discussion on the Subdivision Vacation Development Code Amendments, two questions were raised that are answered below:

1. **Councilmember Roberts:** Under what conditions is someone eligible to apply for a subdivision vacation?

   Staff Response: All property owners within the subdivision, or portion of subdivision requested to be vacated, must agree to the application. This is a requirement of RCW 58.17.212, therefore the City's proposed regulations are consistent with state law.

2. **Councilmember Roberts:** What is the expected outcome of a neighborhood meeting?

   Staff Response: Neighborhood meetings are required for all Type C land use actions. City Council could choose to exempt subdivision vacations from this requirement, but staff recommends keeping the requirement. Neighborhood meetings are an early opportunity to make the surrounding community aware of development that likely will take place in their area, and it is also an opportunity to receive feedback from the community regarding if the public interest will be served by the vacation. The neighborhood meeting may bring up issues early in the process, such as an easement that would be extinguished as part of the subdivision vacation that could have implications beyond just the properties subject to the easement. One such example would be a pedestrian access easement through a subdivision that connects the public sidewalk to a school property. It is not likely staff would miss such an obvious example, but this is to illustrate the potential benefit of retaining the neighborhood meeting requirement.

RESOURCE/FINANCIAL IMPACT

The new regulations will result in increased fee collection related to staff processing of subdivision vacation applications. These fees are intended to cover the cost of staff time and the Hearing Examiner to review and consider the application, so there likely will be no net impact on City finances. In addition, vacating such subdivisions will allow properties to be redeveloped under current zoning standards, which will likely result in increased construction permit application fee revenue for the City related to multifamily and commercial development.

RECOMMENDATION

Staff recommends that the City Council adopt Ordinance No. 934 as set forth in Attachment A to this staff report.

ATTACHMENTS

Attachment A – Proposed Ordinance No. 934
Attachment A, Exhibit A – Planning Commission Recommended Code Amendments

ORDINANCE NO. 934

AN ORDINANCE OF THE CITY OF SHORELINE, WASHINGTON AMENDING CHAPTER 20.30 OF THE SHORELINE MUNICIPAL CODE TO ADD A NEW SECTION PROVIDING PROCEDURES FOR THE VACATION OF RECORDED SUBDIVISIONS PURSUANT TO RCW 58.17.212.

WHEREAS, the City of Shoreline is a non-charter optional municipal code city as provided in Title 35A RCW, incorporated under the laws of the state of Washington, and planning pursuant to the Growth Management Act, Title 36.70A RCW; and

WHEREAS, RCW 58.17.212 authorizes the vacation of previously recorded subdivisions, however, the Shoreline Municipal Code (SMC) does not set forth procedures for processing of applications for such vacations; and

WHEREAS, on May 20, 2021, the City of Shoreline Planning Commission reviewed proposed amendments and on June 17, 2021, held a public hearing on the proposed amendments so as to receive public testimony; and

WHEREAS, at the conclusion of the June 17 public hearing, the Planning Commission voted to recommend the proposed amendments, as presented by staff, to the City Council for approval; and

WHEREAS, on July 19, 2021, the City Council held a study session on the proposed amendments establishing procedures for the vacation of previously recorded subdivisions as recommended by the Planning Commission; and

WHEREAS, the City Council has considered the entire public record, public comments, written and oral, and the Planning Commission's recommendation; and

WHEREAS, the City provided public notice of the proposed amendments and the public hearing as provided in SMC 20.30.070; and

WHEREAS, pursuant to RCW 36.70A.370, the City has utilized the process established by the Washington State Attorney General so as to assure the protection of private property rights; and

WHEREAS, pursuant to RCW 36.70A.106(3)(b), on June 29, 2021, the City has provided the Washington State Department of Commerce with a notice of its intent to adopt the amendment(s) to its Unified Development Code; and

WHEREAS, pursuant the State Environmental Policy Act, chapter 43.21C RCW (SEPA), the City issued a Determination of Non-Significance on May 28, 2021; and

WHEREAS, the City Council has determined that the amendments are consistent with and implement the Shoreline Comprehensive Plan and serve the purpose of the Unified Development Code as set forth in SMC 20.10.020;

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF SHORELINE, WASHINGTON DO ORDAIN AS FOLLOWS:

Section 1. Amendment of Chapter 20.30 SMC.

A. Shoreline Municipal Code, Title 20, Table 20.30.060 is amended as set forth in Exhibit A to this Ordinance.

B. A new section, Section 20.30.427, Vacation of Recorded Subdivisions, is added to Title 20, Chapter 20.30, of the Shoreline Municipal Code as set forth in Exhibit A to this Ordinance.

Section 2. Transmittal to Department of Commerce. As required by RCW 36.70A.106, the Director of Planning and Community Development shall transmit a complete and accurate copy of this Ordinance and Exhibit A to the Washington State Department of Commerce within ten (10) calendar days of adoption by the City Council.

Section 3. Corrections by City Clerk or Code Reviser. Upon approval of the City Attorney, the City Clerk and/or the Code Reviser are authorized to make necessary corrections to this Ordinance, including the corrections of scrivener or clerical errors; references to other local, state, or federal laws, codes, rules, or regulations; or ordinance numbering and section/subsection numbering and references.

Section 4. Severability. Should any section, subsection, paragraph, sentence, clause, or phrase of this Ordinance or its application to any person or situation be declared unconstitutional or invalid for any reason, such decision shall not affect the validity of the remaining portions of this Ordinance or its application to any person or situation.

Section 5. Publication and Effective Date. A summary of this Ordinance consisting of the title shall be published in the official newspaper. This Ordinance shall take effect five days after publication.

PASSED BY THE CITY COUNCIL ON AUGUST 16, 2021.

_____
Mayor Will Hall

ATTEST:

_____
Jessica Simulcik Smith

APPROVED AS TO FORM:

_____
Julie Ainsworth-Taylor

City Clerk

Assistant City Attorney
On behalf of Margaret King, City Attorney

Date of Publication: , 2021
Effective Date: , 2021

20.30.060 Quasi-judicial decisions – Type C.

These decisions are made by the City Council or the Hearing Examiner, as shown in Table 20.30.060, and involve the use of discretionary judgment in the review of each specific application.

Prior to submittal of an application for any Type C permit, the applicant shall conduct a neighborhood meeting to discuss the proposal and to receive neighborhood input as specified in SMC 20.30.090.

Type C decisions require findings, conclusions, an open record public hearing and recommendations prepared by the review authority for the final decision made by the City Council or Hearing Examiner. Any administrative appeal of a SEPA threshold determination shall be consolidated with the open record public hearing on the project permit, except a determination of significance, which is appealable under SMC 20.30.050.

There is no administrative appeal of Type C actions.

Table 20.30.060 – Summary of Type C Actions, Notice Requirements, Review Authority, Decision Making Authority, and Target Time Limits for Decisions

Action	Notice Requirements for Application and Decision (3), (4)	Review Authority, Open Record Public Hearing	Decision Making Authority (Public Meeting)	Target Time Limits for Decisions	Section
Type C:					
1. Preliminary Formal Subdivision	Mail, Post Site, Newspaper	HE (1), (2)	City Council	120 days	20.30.410
2. Rezone of Property and Zoning Map Change	Mail, Post Site, Newspaper	HE (1), (2)	City Council	120 days	20.30.320
3. Site-Specific Comprehensive Plan Map Amendment	Mail, Post Site, Newspaper	HE (1), (2)	City Council		20.30.345

Action	Notice Requirements for Application and Decision (3), (4)	Review Authority, Open Record Public Hearing	Decision Making Authority (Public Meeting)	Target Time Limits for Decisions	Section
4. Special Use Permit (SUP)	Mail, Post Site, Newspaper	HE (1), (2)		120 days	20.30.330
5. Critical Areas Special Use Permit	Mail, Post Site, Newspaper	HE (1), (2)		120 days	20.30.333
6. Critical Areas Reasonable Use Permit	Mail, Post Site, Newspaper	HE (1), (2)		120 days	20.30.336
-7. Secure Community Transitional Facility – Special Use Permit	Mail, Post Site, Newspaper	HE (1), (2)		120 days	20.40.502
8. Essential Public Facility – Special Use Permit	Mail, Post Site, Newspaper	HE(1), (2)		120 days	20.30.330
9. Master Development Plan	Mail, Post Site, Newspaper	HE (1), (2)		120 days	20.30.353
10. Plat Alteration with Public Hearing (5)	Mail	HE (1), (2)		120 days	20.30.425
11. Subdivision Vacation	Mail, Post Site, Newspaper	HE (1), (2)		120 days	20.30.427

(1) Including consolidated SEPA threshold determination appeal.

(2) HE = Hearing Examiner.

(3) Notice of application requirements are specified in SMC 20.30.120.

(4) Notice of decision requirements are specified in SMC 20.30.150.

(5) A plat alteration does not require a neighborhood meeting.

20.30.427 Vacation of recorded subdivisions.

A. **Applicability.** A subdivision vacation provides a process to vacate a previously recorded subdivision, short subdivision, binding site plan, or any portion thereof, or any area designated or dedicated for public use. The subdivision vacation results in the nullification of the recorded subdivision or portion thereof.

1. Any person seeking a subdivision vacation shall comply with the applicable requirements set forth in Chapter 58.17 RCW and this section in effect at the time a complete application is submitted to the City.

2. If the application is for the vacation of a subdivision together with the public rights-of-way, the procedures of this section shall apply except as prohibited by RCW 35.79.035, as amended, or other applicable law.

3. This section shall not apply to the:

    a. Vacation of any plat of State-granted tide- or shorelands.
    b. Vacation specifically of public rights-of-way which shall adhere to SMC 12.17.

B. **Application.** A request to vacate a recorded subdivision shall be submitted on official forms prescribed and provided by the Department along with the applicable fees.

1. The application shall contain the signatures of all persons having an ownership interest in the subject subdivision or portion to be vacated.

2. If the subdivision is subject to restrictive covenants which were recorded at the time of the approval of the subdivision, and the application for vacation would result in the violation of a covenant, the application shall contain an agreement signed by all parties subject to the covenants providing that the parties agree to terminate or alter the relevant covenants to accomplish the purpose of the vacation of the subdivision or portion thereof.

C. **Review Procedure and Criteria.**

1. The City will provide notice of the application for subdivision vacation and public hearing as provided in SMC 20.30.120 and 20.30.180.

2. The City shall hold a public hearing, review the submittal materials, and may approve or deny after a determination is made whether the public use and interest will be served by the vacation. Such determination shall be in writing and supported by findings of fact.

    a. If any portion of the land contained in the subdivision to be vacated was dedicated to the public for public use or benefit, such land, if not

deeded to the City, shall be deeded to the City unless the decision-making authority sets forth findings that the public use would not be served in retaining title to those lands.

b. Title to the vacated property shall vest as provided in RCW 58.17.212, as amended.

D. **Recording.** No later than 30 calendar days after approval of the subdivision vacation, the applicant shall file, at their sole cost and expense, the approval of the vacated subdivision with the King County Recorder.

E. **Appeal.** The decision of the Hearing Examiner on the subdivision vacation shall be the final decision of the City; no administrative appeal is provided. Appeals of the final decision may be appealed to superior court pursuant to Chapter 36.70C RCW, Land Use Petition Act.

Council Meeting Date: August 16, 2021 **Agenda Item:** 7(c)

CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Action on Resolution No. 481 – Establishing a Fee for the Processing of Applications for the Vacation of Previously Recorded Subdivisions
DEPARTMENT:	Planning & Community Development
PRESENTED BY:	Cate Lee, AICP, Senior Planner
ACTION:	____ Ordinance _X__ Resolution ____ Motion ____ Discussion ____ Public Hearing

PROBLEM/ISSUE STATEMENT:

Although the Revised Code of Washington (RCW) 58.17.212 provides for the vacation of a subdivision, the City currently has no process established in the Shoreline Municipal Code (SMC) for such a vacation. There are subdivisions throughout the City, particularly in the Mixed Use Residential (MUR) zoning districts, that make fully implementing the vision of special area plans, like the Light Rail Station Subarea Plans (145th & 185th), complicated due to these prior subdivisions, primarily for detached single-family development.

Tonight, Council is scheduled to a separate action on proposed Ordinance No. 934, which would provide for recorded subdivision vacation procedures by amending Chapter 20.30 of the SMC. If adopted, proposed Resolution No. 481 (Attachment A) would provide for an amendment to the City's Fee Schedule to establish review fees for subdivision vacation applications.

RESOURCE/FINANCIAL IMPACT:

The proposed fees are intended to cover the cost of staff time and the Hearing Examiner to review and consider the subdivision vacation application, so there likely will be no net impact on City finances.

RECOMMENDATION

Staff recommends that the City Council approves Resolution No. 481, which adopts a fee for subdivision vacations as set forth in Attachment A.

Approved By: City Manager ***DT*** City Attorney ***MK***

BACKGROUND

The City currently does not have regulations for processing subdivision vacations. Staff believe regulations to process subdivision vacations are necessary to develop properties as allowed by the City's current zoning. The Planning Commission held a study session on this topic on May 20, 2021, and more information on this study session can be found here: Subdivision Vacation Development Code Amendments. The Planning Commission later held a Public Hearing on the issue on June 17, 2021, and more information from this Hearing can be found here: Public Hearing on the Subdivision Vacation Development Code Amendments.

During the June 17th Planning Commission meeting and following the Public Hearing, the Planning Commission voted 5-0 to recommend the proposed Subdivision Vacation Development Code amendments as proposed in Ordinance No. 934, be adopted.

The City Council discussed the proposed Development Code amendments and fees for Subdivision Vacations on July 19, 2021. More information on this discussion can be found here: Discussion of Ordinance No. 934 - Amending Shoreline Municipal Code Chapter 20.30 to Add Procedures for Subdivision Vacations and Resolution No. 481 - Adopting a Fee for Subdivision Vacations.

DISCUSSION

City Council established the fee schedule for 2021 through Resolution No. 471 on March 15, 2021. The fee schedule includes established fees for subdivisions. The proposed subdivision vacation fee will be added as a line item to this sub-category under Planning and Community Development applications. As required by state law, the proposed fee does not exceed the actual cost of providing the services for which the fee is charged.

Council did not have any questions related to updating the fee schedule as part of its June 19 discussion on the Subdivision Vacation Development Code Amendments.

RESOURCE/FINANCIAL IMPACT

The proposed fees are intended to cover the cost of staff time and the Hearing Examiner to review and consider the subdivision vacation application, so there likely will be no net impact on City finances.

RECOMMENDATION

Staff recommends that the City Council approves Resolution No. 481, which adopts a fee for subdivision vacations as set forth in Attachment A.

ATTACHMENTS

Attachment A – Proposed Resolution No. 481

RESOLUTION NO. 481

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SHORELINE, WASHINGTON AMENDING RESOLUTION NO. 471 TO ESTABLISH A FEE FOR THE PROCESSING OF APPLICATIONS FOR THE VACATION OF PREVIOUSLY RECORDED SUBDIVISIONS.

WHEREAS, the City of Shoreline is a non-charter optional municipal code city as provided in Title 35A RCW, incorporated under the laws of the State of Washington and is authorized by state law to impose fees to recoup the costs of processing of land use applications, including but not limited to RCW 35A.11.020 and 82.02.020; and

WHEREAS, SMC Section 3.01.010 provides that the City Council is to establish fees for services provided by the City from time to time by Resolution; the 2021 Fee Schedule was adopted by Resolution No. 471; and

WHEREAS, with the adoption of Ordinance No. 934, the City Council established procedures for the vacation of previously recorded subdivisions as authorized by RCW 58.17.212 and a fee needs to be adopted for the processing of applications for a vacation; and

WHEREAS, the proposed fee does not exceed the actual cost of providing the services for which the fee is charged, as required by state law; and

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SHORELINE, WASHINGTON, HEREBY RESOLVES:

Section 1. Adoption of Fee. The Fee Schedule, as adopted by Resolution No. 471, for Planning and Community Development, Section M Subdivisions, is amended to include a new fee for Subdivision Vacations as follows:

9.	Vacation of subdivision	$206.00 hourly rate, 10-hour minimum plus public hearing ($3,914.00).

Section 2. Effective Date. This Resolution shall take effect and be in full force on the same date as the effective date of Ordinance No. 934.

ADOPTED BY THE CITY COUNCIL ON AUGUST 16, 2021.

_____
Mayor Will Hall

ATTEST:

_____
Jessica Simulcik Smith, City Clerk

Council Meeting Date: August 16, 2021 **Agenda Item:** 7(d)

CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Adoption of Resolution No. 482 – Amending the Employee Handbook
DEPARTMENT:	City Manager's Office
PRESENTED BY:	John Norris, Assistant City Manager
ACTION:	____ Ordinance _X__ Resolution ____ Motion ____ Discussion ____ Public Hearing

PROBLEM/ISSUE STATEMENT:

The Employee Handbook ("Handbook") contains the City's personnel policies and practices. It was first adopted in 1996 by Council Resolution No. 104 and is periodically updated as laws or policies change. In 2017, the Handbook received a comprehensive review and update. Since then, specific policies have been incorporated into the Handbook through additional updates, the most recent update occurred on November 1, 2020.

Proposed Resolution No. 482 (Attachment A) would provide for a number of updates to the Employee Handbook, including "housekeeping" changes; inclusion of Juneteenth (June 19th) as an officially recognized City paid holiday; modification of select practices to be consistent between the represented and non-represented policies; the expansion of the Inclement Weather and Natural Disaster policy provisions; the addition of a "cap" or "ceiling" on the number of accrued vacation hours an employee can donate to another employee; the revision of the education and training section; and clarification that an employee may use other earned leave accruals (vacation, personal days, management days) as an extension of sick leave. A summary of changes is provided as Attachment B for Council's review.

The City Council discuss proposed Resolution No. 482 on August 2, 2021 and directed staff to return the proposed Resolution to Council for potential adoption. Tonight, Council is scheduled to take action on proposed Resolution No. 482.

FINANCIAL IMPACT:

The financial impacts of the various components of these Employee Handbook amendments are as follows:

Two Additional Vacation Days: The addition of two vacation days earned after 20 years of service primarily impacts productivity. This benefit was already granted to represented employees. Currently, there are 15 non-represented employees who would be eligible for the additional accruals. Loss productivity for these individuals equates to 240 hours in a year. It is anticipated that an additional 1 -2 employees will qualify to earn these additional vacation day accruals each year.

Juneteenth Holiday: The addition of June 19th as a recognized paid holiday would equate to a loss productivity of 1,524 hours, based on our current employee FTE count, plus marginal additional overtime if an employee is required to report to work because of a need to respond to an urgent issue.

Expansion of break time from 10 – 15 minutes: Similar to above, increasing the rest period for employees from 10 – 15 minutes results in loss productivity. This cost is primarily associated with non-exempt, non-represented, hourly employees, as the increased break time has already been granted to represented employees. Expansion of break time to non-represented staff: 78 non-represented hourly employees (78 x 10 (two additional 5-minute breaks) = 780 minutes per day) x 260 days = 2600 hours of lost productivity by the 78 hourly non-represented employees who will have break time expanded by 5 minutes.

12-hour Shift Differential of $3.00 per hour: Applying the $3.00 shift differential to non-represented employees would be negligible. Our most recent snow event where the 12-hour shift was activated had two (2) non-represented employees assigned to 12-hour shifts. The cost impact for these individuals would have been $37.50 each per shift.

Alternative Night Shift Premium of $3.00 per hour: Few non-represented staff are utilized for this purpose. Cost estimate for this is minimal.

Remote Call Back of 15 minutes per incident: In the past 12 months, only one hour was attributed to responding to an urgent issue remotely. Cost estimate for this is minimal.

In summary, the primary costs associated with the proposed policy changes are those that impact productivity.

RECOMMENDATION

Staff recommends that Council adopt Resolution No. 482 to update the Employee Handbook.

Approved By: City Manager ***DT*** City Attorney ***MK***

BACKGROUND

The Employee Handbook ("Handbook") contains the City's personnel policies and practices. It was first adopted in 1996 by Council Resolution No. 104 and is periodically updated as laws or policies change. In 2017, the handbook received a comprehensive review and update. Since then, specific policies have been incorporated into the Handbook through additional updates. The Handbook was most recently updated November 1, 2020.

The City Council discussed proposed Resolution No. 482 on August 2, 2021, and directed staff to include it on tonight's agenda as a consent item. More information about the August 2 discussion can be found at the following link: Discussion of Resolution No. 482 - Updating the Employee Handbook.

DISCUSSION

Proposed Resolution No. 482 (Attachment A) would provide for the following updates to the Employee Handbook:

1) "Housekeeping" changes to language, formatting, and structure, including clarifications of existing policies to make them more easily understandable to employees and to ensure their consistent application.

2) Clarification in the recruitment and selection section to note that a hiring manager can use candidate lists from recent recruitments if the previous recruitment was for the same classification.

3) Inclusion of Juneteenth (June 19th) as an officially recognized City holiday.

4) Modification of select practices to be consistent between the represented and non-represented policies. These include:
   a) The addition of the two earned vacation days to the vacation accrual table, which is earned after achieving 20 years of service with the City;
   b) modification of paid rest period from 10 minutes to 15 minutes;
   c) clarification that overtime is charged in 15-minute increments (current handbook does not reference increments that overtime is paid);
   d) the addition of 12-hour shift differential premium of $3.00 per hour; and
   e) the addition of the alternative night shift premium of $3.00 per hour.

5) The expansion of the Inclement Weather and Natural Disaster policy provisions to include other unplanned events that can result in the closure of City facilities and services.

6) The addition of a "cap" or "ceiling" on the number of accrued vacation hours an employee can donate to another employee.

7) Revision of the education and training section to emphasize the City's support of both academic and non-academic learning opportunities for employees.

8) Clarification that an employee may use other earned leave accruals (vacation, personal days, management days) as an extension of sick leave, after an employee has exhausted their own sick leave accruals.

A redlined version of the proposed changes to the Employee Handbook are included in Exhibit A to Attachment A, and a summary of changes is provided as Attachment B.

Proposed Resolution No. 482 includes an effective date of September 1, 2021. Staff recommends delaying the effective date of this Resolution to September 1st to allow sufficient time to communicate the Handbook changes to employees throughout the organization. Given that the more substantive changes to the Handbook involve changes to employee leave benefits (supplemental paid family and medical leave), staff believes it is important that employees fully understand these changes as well as the impact of these changes, so that they may plan accordingly.

FINANCIAL IMPACT

The financial impacts of the various components of these Employee Handbook amendments are as follows:

Two Additional Vacation Days: The addition of two vacation days earned after 20 years of service primarily impacts productivity. This benefit was already granted to represented employees. Currently, there are 15 non-represented employees who would be eligible for the additional accruals. Loss productivity for these individuals equates to 240 hours in a year. It is anticipated that an additional 1 -2 employees will qualify to earn these additional vacation day accruals each year.

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Remote Call Back of 15 minutes per incident: In the past 12 months, only one hour was attributed to responding to an urgent issue remotely. Cost estimate for this is minimal.

In summary, the primary costs associated with the proposed policy changes are those that impact productivity.

RECOMMENDATION

Staff recommends that Council adopt Resolution No. 482 to update the Employee Handbook.

ATTACHMENTS

Attachment A: Proposed Resolution No. 482
Attachment A: Exhibit A - Updated Employee Handbook Redline Version
Attachment B: Summary of Proposed Employee Handbook Changes

RESOLUTION NO. 482

A RESOLUTION OF THE CITY OF SHORELINE, WASHINGTON, ADOPTING REVISIONS TO PERSONNEL POLICIES AND PRACTICES SET FORTH IN THE EMPLOYEE HANDBOOK, ESTABLISHING AN EFFECTIVE DATE OF SEPTEMBER 1, 2021.

WHEREAS, the City Council has provided for benefits and working conditions in the Employee Handbook which sets forth the City's personnel policies and practices; and

WHEREAS, the Employee Handbook was last updated in October 2020, with the adoption of Resolution No. 463; and

WHEREAS, the Human Resource Department reviewed the Employee Handbook and identified certain housekeeping amendments to reflect current practices and/or provide clarity as well as to improve readability, comprehension, and consistency in policies and practices applied to represented and non-represented employees; and

WHEREAS, the COVID-19 Pandemic required many employees to work remotely from their homes and continuing to allow this alternative under certain terms benefits both the employee and the City by allowing a better work-life balance without a loss in productivity; and

WHEREAS, during the 2021 regular session of the Washington State Legislature, RCW 1.16.050 was amended making June 19, "Juneteenth," a state legal holiday effective July 25, 2021, requiring addition to the City's observed holidays;

WHEREAS, on August 2, 2021, the City Council discussed the proposed revisions to the Employee Handbook and have given full consideration to the proposed revisions;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SHORELINE, WASHINGTON, HEREBY RESOLVES AS FOLLOWS:

Section 1. Employee Handbook Revision. The Employee Handbook is revised as set forth in Exhibit A to this Resolution.

Section 2. Corrections by City Clerk. Upon approval of the City Attorney, the City Clerk is authorized to make necessary corrections to this Resolution, including the corrections of scrivener or clerical errors; references to other local, state, or federal laws, codes, rules, or regulations; or resolution numbering and section/subsection numbering and references.

Section 3. Severability. Should any section, subsection, paragraph, sentence, clause, or phrase of this Resolution or its application to any person or situation be found

unconstitutional or invalid for any reason by any court of competent, such decision shall not affect the validity of the remaining portions of this Resolution or its application to any person or situation.

Section 4. Effective Date. This Resolution shall be in full force on September 1, 2021.

ADOPTED BY THE CITY COUNCIL ON AUGUST 16, 2021.

_____
Will Hall, Mayor

ATTEST:

_____
Jessica Simulcik Smith, City Clerk

EMPLOYEE HANDBOOK

Last updated: ~~10/12/20~~9/1/21
Council Resolution No.4826~~2~~

Contents

I. INTRODUCTION

The Handbook is prepared so that employees will better understand how the City operates and what is expected of employees. It is a summary of the City's personnel policies and practices and is intended as a general guide to how the organization functions. We want to create a work environment that allows individuals to maximize their contribution to the organization and results in personal satisfaction. We believe that when consistent personnel policies are known and communicated to all, the chances are increased for greater job satisfaction.

While the City hopes that the employment relationship will be positive, things do not always work out as planned. Either party may decide to terminate the employment relationship. No supervisor, manager or representative of the City, other than the City Manager, has the authority to enter into any agreement with an individual for employment for any specified period or to make any promises or commitments contrary to the contents of this handbook. This handbook is not intended as a contract, express or implied, or as a guarantee of employment for any specific duration**.** As the need arises, the City may from time to time modify these policies. The City also reserves the right, at its sole discretion, to depart from the guidelines outlined in this handbook, in order to meet the business needs of the City. If an employee of the City, has any questions about any of the City's policies, they should direct those questions to their supervisor or the Human Resources Department.

II. APPLICABILITY AND AUTHORITY

A. Applicability

This Handbook is applicable to all employees except the City Manager who serves at the discretion of the City Council and except where specifically stated otherwise.

B. At-Will

At-will positions include specific senior management positions designated by the City Manager; temporary, extra help and limited term positions; and regular employees who have not yet completed the orientation period. No provisions of this Handbook shall change at-will status.

C. Local, State, Federal Law or Collective Bargaining Agreement

In cases where these policies conflict with local, state, federal law, or a collective bargaining agreement, the provisions of local, state, federal law, or collective bargaining agreement will govern. If any provision of these policies or their application to any person or circumstance is held invalid, the remainder of the policies will not be affected.

D. Authority

Authority to take personnel actions is vested in the City Manager. This authority shall include but not be limited to hiring, promoting, demoting, evaluating, reclassifying and terminating employees. Authority for personnel actions is frequently delegated to Department Directors and immediate supervisors; however, all such actions must be coordinated through Human Resources.

III. DEFINITIONS

A. Accrued Leave
Leave accruals earned but not yet taken including: sick leave, vacation leave, comp time, management leave, or personal days.

B. Alternative Work Schedule
A work schedule which is different from the standard 8:00 a.m.– 5:00 p.m. Monday to Friday schedule.

C. Anniversary Date
The date used for the purpose of calculating leave benefits and length of service. Usually the anniversary date is the date the employee began work for the City, but adjustments to the anniversary date shall be made proportionate to any unpaid time off.

D. Break in Service
The period between the date an employee separates from employment with the City and the date the employee is rehired.

E. Callback
All time worked in excess of a scheduled shift, which is not an extension of that shift, and is unanticipated, unforeseen, and not a regular function of the employee's work schedule.

F. City
The City of Shoreline, Washington.

G. City Manager
The individual appointed by the City Council to serve in this capacity or their designee.

H. Core Hours
Those hours during which City offices are open to the public and during which staffing is available to provide service to our customers. Core hours for the City are 8:00 a.m. to 5:00 p.m. Monday through Friday. Individual departments may establish~~ed~~ different core hours for purposes of performing their operations with City Manager approval.

I. Demotion
Any case where a regular employee moves to an ongoing regular position in a classification in a lower salary range, except for such movement resulting from a compensation study or salary survey.

J. De Facto Parent
A person who has had their parental rights and responsibilities determined by a court as to a child for whom they are not the legal parent, whether biological, adoptive or otherwise.

K. Department Director
An individual appointed by the City Manager to serve as Assistant City Manager, Administrative Services Director, City Attorney, Human Resources and Organizational Development Director, ~~Parks,~~ Recreation, ~~and~~ Cultural and

Community Services Director, Planning and Community Development Director, or Public Works Director, or designee.

L. Domestic Partner

The individual named in a current, valid Affidavit of Marriage/Domestic Partnership on file with the City's Human Resources Department. The Partnership may be of the same or opposite sex and must satisfy the following criteria:

- Partners shall not be part of another Domestic Partnership or marriage,
- Partners shall be mentally competent, 18 years of age or older, not related by blood closer than permitted for marriage under RCW 26.04.020.1a and .2.
- Partners share a regular and permanent residence and living expenses.

M. Drugs

Includes any substance which is controlled in its distribution by federal or state law, including but not limited to, narcotics, depressants, stimulants, hallucinogens, cocaine and cannabis. This does not include prescription and over-the-counter medication used according to prescription or consistent with standard dosage.

N. Employment Status Definitions

1. Regular Full Time

A regular position established by the City budget that is expected to be ongoing and to work a 40-hour week.

2. Regular Part Time

A regular position established by the City budget that is expected to be ongoing and to work at least 20 but less than 40 hours per week.

3. Limited Term

A position that has a specific end date, works 20 or more hours a week and is not Extra Help. The maximum term is limited to three years.

4. Extra Help

A position that is employed in activities related to seasonal programs, variable intermittent workloads, short duration, or ongoing work of less than 20 hours a week, further defined below.

a) Seasonal

Work that is seasonal beginning approximately the same season of each calendar year, customarily less than six months in duration.

Maximum Hours:

- 1,040 hours a year with no limit on weekly hours if all work is seasonal.
- If some of the work is not seasonal then all hours worked count toward a maximum average of 29 per week in the first 3 months of employment and during 12 months of employment.

Break in Service Requirement before Rehire:

- 13 weeks, or
- Longer than the employee was employed, or
- With approval from Human Resources based on an evaluation of employment status including measurement period implications.

b) Variable-hour

Work that is not seasonal but is intermittent and/or hours that are unpredictable from week to week.

Maximum Hours:

- 1,040 a year and
- Aan average of 29 per week during the first three (3) months of employment and during 12 months of employment.

Break in Service Requirement before Rehire:

- 13 weeks, or
- Longer than the employee was employed, or
- With approval from Human Resources based on an evaluation of employment status including measurement period implications.

c) Less than 20 Hours Ongoing

Work that is ongoing and consistent with few hours but regularly scheduled each week.

Maximum Hours:

- 1,040 a year and
- Aan average of less than 20 hours per week during the first three (3) months of employment and during 12 months of employment.

Break in Service Requirement before Rehire:

- 13 weeks, or
- Longer than the employee was employed, or
- With approval from Human Resources based on an evaluation of employment status including measurement period implications.

O. ESD

Washington State Employment Security Department

P. Exempt Employee

An employee exempt from the minimum wage and overtime provisions of the Fair Labor Standards Act (FLSA) as defined by that Act or applicable state law and designated as such by the City Manager. Exempt positions are so indicated on the salary table adopted by the City Council and often referred to as salaried employees.

Q. Fit for duty

Physically and mentally capable of safely performing the essential functions of the job, this includesing not being under the influence of nor impaired by alcohol, marijuana, certain prescription medications, illegal substances, or other drugs and medications that impact one's physical or mental capacity.

R. Flex Schedule

A work schedule that permits flexible starting and quitting times or other alternative work schedules within limits set by the respective Department Director.

S. Flex Time

Adjusting one's work day schedule on a specific occassion, but making up that time either by coming into work early or staying late the same day or on aonther day during that same work week so that they may take care of personal needs.

~~S.~~

T. FMLA

Family and Medical Leave Act enacted by the U.S. Federal Government.

U. FMLA Covered Family Member

An employee may use FMLA to care for the following family members: employee's child, parent, or spouse. An employee may also use FMLA to care for next of kin who has a serious health condition as a result of military service.

V. Furlough

A temporary reduction of work hours due to a lack of work, shortage of funding, or for other business reasons.

W. Immediate Family

Unless defined otherwise in these policies, immediate family is:

- A spouse or domestic partner,
- A child, parent or sibling of the employee, or
- A child, parent or sibling of the employee's spouse or domestic partner.

Note: Child includes adopted, biological, foster, grand, step, child of a legal guardian or a person standing in loco parentis or a de facto parent, regardless of age or dependency status. Parent includes adoptive, biological, foster, grand, step and a person who was a legal guardian or stood in loco parentis or was a de facto parent. Sibling includes adopted, biological, foster, or step.

In appropriate circumstances, an employee may believe that another individual should be considered a member of the immediate family for the purpose of applying these policies. The employee shall make a written request explaining to Human Resources why 6the employee believes that this individual should be considered a member of the immediate family. If Human Resources concurs, they shall forward a recommendation to the City Manager for approval. The City Manager shall decide to approve or deny the request. If the definition of immediate family is different in certain approved benefit plans or policies, the provisions of those plans or policies will govern.

X. Insubordination

Expressed hostility or contempt for an employee's supervisor or willful disregard of a supervisor's reasonable directive.

Y. Intern

A position that is a form of on-the-job training that may be either voluntary or on paid status.

Z. In Loco Parentis

A person who acts in the place of a parent with legal responsibility to take on some of the functions and responsibilities of a parent.

AA. Non-Exempt Employee

An employee covered by the minimum wage and overtime provisions of the Fair Labor Standards Act, often referred to an hourly employee.

BB. Base Pay Rate

Pay for scheduled hours of work at 1.0 (one) times the hourly rate of pay.

CC. PFML

Paid Family and Medical Leave enacted by and administered through the State of Washington.

DD. PFML Benefit Payment

Weekly wage replacement benefit paid an employee who is enrolled in and receiving leave benefits through the State of Washington Paid Family and Medical Leave (PFML).

EE. PFML Covered Family Member

An employee may utilize Paid Family and Medical Leave to care for the following family members: employee's child, grandchild, parent (including in-laws), grandparent (including in-laws), sibling, sons and daughters-in-law, and the employee's spouse or domestic partner.

FF. PFML Qualifying Period

A qualifying period is the first four of the last five completed calendar quarters or, if that does not get the employee to the required 820 hours, the last four completed calendar quarters immediately preceding the application for leave.

GG. Promotion

Any case where a regular employee moves to a different classification on an ongoing basis in a higher salary range, with the exception of such movement resulting from a compensation study or salary survey.

HH. Remote Work

A discretionary, management approved alternative work arrangement in which an employee spends some portion of their regular work schedule working from an alternative work location.

~~HH.~~II. Separation from Service

Any case where employment ends through death, retirement, resignation, layoff or other reason that results in a termination of employment.

~~II.~~JJ. Standby

Specific assignment of an employee during off-hours to be available to come to work if needed. Standby is not considered as time worked.

~~JJ.~~KK. **Step Increase Date**

The date that is used for the purpose of step increase. Usually the step increase date is the date the employee began work in their current position, but adjustments shall be made proportionate to any unpaid time off.

~~KK.~~LL. **Supplemental Benefit**

The use of accrued leave or Supplemental Paid Medical and Family Leave to cover the difference (gap) between the partial wage replacement payment provided through Washington State Paid Family and Medical Leave and an employee's regular full pay check.

~~LL.~~MM. **Time in Paid Status**

The period of hours during a pay cycle for which an employee receives compensation including hours worked, vacation, sick, holiday, management, personal or other paid leaves.

~~MM.~~NN. **Transfer**

Any case where a regular employee moves to a different classification on an ongoing basis in the same salary range as the classification they are moving from.

~~NN.~~OO. **Waiting Period**

The time period between when one is approved for Paid Family and Medical Leave benefits and when one receives their first wage replacement check

~~OO.~~PP. **Work Location**

Work locations are the places employees work. The locations include city-owned buildings, adjacent structures and parking lots, and grounds. Current work locations include:

City Hall: 17500 Midvale Avenue North
Hamlin ~~Park~~ Maintenance ~~Yard~~Facility: 16006 15th Avenue N~~.~~E~~.~~
Linden Maintenance Facility: 17505 Linden Avenue N
North Maintenance Facility: 19547 25th Avenue NE
Richmond Highlands Recreation Center: 16544 Fremont Avenue N
~~**Ronald Wastewater Facility:** 17505 Linden Avenue N~~
Spartan Recreation Center: 202 NE 185th Street

~~PP.~~QQ. **Work Week**

A fixed and regularly recurring period of seven (7) consecutive twenty-four (24) hour periods. The standard workweek for employees consists of the period from 12:01 a.m. Sunday to 12:00 midnight the following Saturday. Other regular work weeks may be established, but where a different work week is required, the City Manager will define an appropriate work week and communicate that to the employees.

~~QQ.~~RR. **Y-Rating**

The continuation of a regular employee's salary above the highest step of a salary range when a classification is reassigned to a lower salary range as a result of a market survey or other factors.

IV. EMPLOYMENT POLICIES

A. Recruitment and Selection

1. External and Internal Recruitment

Job Posting and Application: Open positions will be posted on the City's website ~~page~~ with links to the application process. The opening will be posted for a minimum of five (5) working days. To ensure internal employees are aware of an open position, Human Resources will announce openings through email. Hiring managers may use an existing applicant pool, from a recruitment that occurred no more than six (6) months prior, unless otherwise approved by the City Manager, to identify and interview candidates to fill a vacant position in a same job classification

Selecting Candidates for an Interview: The hiring manager will review the applications and identify candidates that will proceed to an interview. Additionally, all regular employees who applied will be granted an interview if they possess the experience, training, and other qualifications listed in the job announcement.

Selecting the Best Candidate: The City's policy is to hire the best candidate for any job vacancy. The best candidate is an applicant who meets the qualifications for the position and has the strongest match between their knowledge, skills and abilities and the work responsibilities of a position. The best candidate will be determined based upon a review of application materials, the results of tests and/or background checks required by positions, an evaluation of responses to interview questions, and favorable references.

2. Internal Recruitment Only

The Department Director, after consultation with the Director of Human Resources, will determine if an opening will be available internally only. All employees who are currently working for the City would be considered internal applicants.

Job Posting and Application: Human Resources will announce openings through email, directing interested employees to apply through the City's web page with links to the application process. The opening will be posted for a minimum of five working days.

Selecting Candidates for an Interview: The hiring manager will review the applications and identify candidates that will proceed to an interview. All regular employees who applied will be granted an interview if they possess the experience, training and other qualifications listed in the job announcement.

Selecting the Best Candidate: The City's policy is to hire the best candidate for any job vacancy. The best candidate is an applicant who meets the minimum qualifications for the position and has the strongest match between their knowledge, skills and abilities and the work responsibilities of a position. The

best candidate will be determined based upon a review of application materials, the results of tests and/or background checks required by positions, an evaluation of responses to interview questions, and favorable references.

If there is not an internal candidate who has a strong match between their knowledge, skills and abilities and the work responsibilities of the position, the position may be re-posted and made available to external applicants.

B. Reference Checking

All requests for information regarding past or present employees shall be directed to the Human Resources Department. Human Resources will then release information stating job title, length of service and eligibility for rehire. If the employee has signed a statement releasing the City from liability, additional information may be given.

C. Subpoenas and Depositions

Sometimes an employee may receive a notice that they are being subpoenaed regarding City business, such as being required to give a deposition. If an employee receives such a notice directly, the employee is to immediately notify the City Attorney's office. The City Attorney's office will assist the employee in preparing for the deposition and will accompany the employee to the deposition, providing the appropriate support for the employee during the deposition as provided by court rule and law.

D. Prohibited Political Activities – Code of Ethics, Appendix A

While all employees have the right to participate in political or partisan activities of their choosing, employees are stewards of the public's trust in matters of City government. Political activity may not adversely affect the responsibilities of employees in their official duties. Because of the sensitive nature of the services in which the City is engaged, the following activities are prohibited:

1. **Use of City Resources, Property, Authority and Influence**
   Employees may not campaign on City time or in City uniform or while representing the City in any way. Employees may not allow others to use City facilities or funds for political activities. Employees may not use City authority or influence for the purpose of interfering with or affecting the result of an election or a nomination for office.

2. **Coercion**
   Employees may not directly or indirectly coerce, attempt to coerce, or command a state or local officer or employee to pay, lend, or contribute anything of value to any party, committee, organization, agency, or person for political purposes.

3. **Elected Office, Commission or Board Service**
   Employees may not serve as an elected official of the City, a member of a City commission, or a member of a City board while an employee of the City. Employees that serve as an elected or appointed official for another governmental entity must comply with the provisions and restrictions of this subsection D.

4. Conflict of Interest
If there is a conflict of interest between an employee's elected position outside of the City and their position with the City, the employee must resign from one of the positions.

Violation of any part of this policy may be grounds for disciplinary action, up to and including termination.

E. <u>Prohibited Personal Gain - Code of Ethics, Appendix A</u>

The following standards are established for all City employees for conducting business within the guidelines of the Code of Ethics and providing friendly and courteous service to the public. The Code of Ethics is located in Appendix A of this manual.

Employees are prohibited from:

1. Receiving proceeds or having any financial interest in any sale to the City of any service or property when such proceeds or financial interest was received with the prior knowledge that the City intended to purchase such property or obtain such service.
2. Soliciting or accepting anything of economic value as a gift, gratuity, or favor from any person, firm or corporation involved in a contract or transaction which is or may be the subject of official action of the City, provided that the such prohibitions shall not apply to:
    a. Attendance at a hosted meal when it is provided in conjunction with a meeting directly related to the conduct of City business or where attendance is appropriate as a staff representative.
    b. An award publicly presented in recognition of public service.
    c. Attendance at a hosted meal where general information is being presented, but where no active consideration of a contract is being discussed.
    d. Advertising items of no material value which are widely distributed to others under essentially the same business relationship with the donor or any other gift that is deemed by the City Manager to be of insignificant value such that it does not present a conflict of interest.
3. Disclosing confidential information (except as provided for under public disclosure regulations), participating in the making of a contract, accepting private employment, or providing private services that would be in conflict or incompatible with the performance of official duties as a City employee.

Violation of this policy may be grounds for disciplinary action, up to and including termination.

F. <u>Employee Orientation</u>

Upon hire or appointment, the Department Director, or their designee and Human Resources shall be responsible for the orientation of the new employee. Orientation may include explanation of the organization and services of the City,

work and safety rules, personnel manual and procedures, departmental rules and procedures, completion of payroll forms and introduction to other City personnel.

1. **Orientation Period for Initial Hire**
   Upon hire to a regular position, each employee will be at-will while serving in a six-month orientation period. Upon the recommendation of the Department Director and the Human Resources Director, the orientation period may be extended up to an additional 6 months at the discretion of the City Manager.

   The orientation period is part of the selection process and affords the employee and the City an opportunity to evaluate whether the match between the job and the employee is appropriate.

   An employee may be discharged without cause or notice prior to the completion of the orientation period. Successful completion of the orientation period means a regular employee is no longer at-will; however, this should not be construed as creating a contract or as guaranteeing employment for any specific duration.

   This section shall not apply to specified senior management positions, temporary, extra help, and limited term positions.

2. **Orientation Period for Promoted, Demoted or Transferred Employees**
   A promoted, transferred or demoted employee shall serve a 3-month orientation period in the new position, if they have never worked in nor served an orientation period in the classification previously. Upon the recommendation of the Department Director and the Human Resources Director, the orientation period may be extended up to an additional 3 months at the discretion of the City Manager.

   The promoted, transferred, or demoted employee may be removed from the new position at any time prior to the completion of the orientation period by the Department Director giving written notice of failure to complete the orientation period. The Department Director shall consult with Human Resources before making the decision to remove an employee.

   If involuntarily removed from their current position, the employee may return to the position from which they promoted or transferred from, provided that the position is vacant and the employee has provided a written request to the Department Director for the former position. This request must be provided within 5 days of the notice of failure to complete the orientation period.

   During the orientation period, the promoted or transferred employee may request to voluntarily return to the former position by making a written request to the Department Director for the former position. If the position has not yet been filled, the Department Director, after consulting with Human Resources and any other affected department, may approve the return.

G. <u>Equal Employment Opportunity</u>
It is the intent of the City to provide equal employment opportunity for all employees and applicants for employment without regard to race, color, religion, gender, national origin, marital status, age, sexual orientation or disability (as

defined under state and federal law). This policy applies to all terms and conditions of employment, including, but not limited to: hiring, placement, promotion, termination, layoff, recall, transfer, leave of absence, compensation, and training. If an employee believes that their rights under this provision have been violated, they should follow the complaint reporting and resolution process outlined in the Section IV.I, Discrimination Complaint Procedure.

H. Prohibition of Discrimination and Harassment

The City expressly prohibits any form of unlawful discrimination or harassment based on race, color, religion, sex, national origin, marital status, age, sexual identity, sexual orientation or disability (as defined under state and federal law) which includes behavior by co-workers, supervisors, vendors, citizens, or any other individual or group with whom an employee may come in contact in the course of their job duties. Improper interference with the ability of employees to perform their jobs will not be tolerated.

With respect to sexual harassment, the City expressly prohibits the following:

1. Unwelcome sexual advances; requests for sexual favors; and all other verbal or physical conduct of a sexual or otherwise offensive nature, especially where:
    a) Submission to such conduct is made either explicitly or implicitly a term or condition of employment;
    b) Submission to or rejection of such conduct is used as the basis for decisions affecting an individual's employment; or
    c) Such conduct has the purpose or effect of creating an intimidating, hostile, or offensive working environment.
2. Offensive comments, jokes, innuendoes, and other sexually oriented statements or displays.

I. Discrimination or Harassment Complaint Procedure

Each member of management is responsible for creating and maintaining an atmosphere free of discrimination and harassment, sexual or otherwise. Further, employees are responsible for respecting the rights of all co-workers.

If an employee believes they have experienced any job related discrimination or harassment based upon sex, race, color, religion, national origin, marital status, age, sexual orientation or disability, or believe they have been treated in an unlawful, discriminatory manner, the employee should promptly:

1. Report the incident to their supervisor. The supervisor will immediately report the information to the Department Director who will consult with Human Resources and together they will determine how to investigate the matter and ensure that appropriate action is taken. Human Resources shall also report the information to the City Manager.
    a) If an employee believes it would be inappropriate to discuss the matter with their supervisor, the employee may bypass the supervisor and report the complaint directly to the Department Director or to Human Resources or to the City Manager. The person receiving the report shall consult with other appropriate parties, and together they will determine

how to undertake an investigation and ensure appropriate action is taken.

2. The complaint will be kept confidential to the extent possible.

3. If the City determines that an employee is guilty of harassing or discriminating against another employee, appropriate disciplinary action will be taken against the offending employee, up to and including termination of employment.

4. The City prohibits any form of retaliation against any employee for filing a good faith complaint under this policy or for assisting in a complaint investigation.

5. Any employee who makes a complaint in bad faith, who provides false information regarding a complaint, or who engages in any form of retaliation, will be subject to disciplinary action, up to and including termination.

J. Employment of Immediate Family

1. Members of the immediate family of City elected officials will not be employed by the City in any capacity.
2. Members of the immediate family of employees will not be hired if:
   a) One individual would have the authority or power to influence decisions, supervise, hire, remove or discipline the other;
   b) One individual would be responsible for financially auditing the work of the other;
   c) One individual would handle confidential material that creates improper or inappropriate exposure to that material by the other; or
   d) The member of the immediate family would be employed in the same department as the employee with the following two exceptions:
      (1) Extra help employees may be employed in the same department as an immediate family member if no conflict of interest exists, including those outlined above.
      (2) Spouses may be employed in the same department if no conflict of interest exists, including those outlined above.
3. If two employees marry, enter into a domestic partnership or become related, and in the judgment of the City Manager, the problems noted above exist or could exist, one of the employees will be required to terminate employment unless some step can be taken to eliminate the problem. The decision to define and implement steps to eliminate the problem is at the sole discretion of the City Manager. A decision as to which employee will remain must be made by the two employees within 30 days of the date they marry, enter ~~into~~ a domestic partnership or become related. If the parties do not make a decision within 30 days, the City Manager shall make the determination.

K. Personnel Files

Official personnel files are maintained by Human Resources. An employee has the right to inspect their personnel file at reasonable times during regular business hours. An employee wishing to see their personnel file should contact Human

Resources. An employee has the right to have a copy of any information in their personnel file.

Personnel files are kept confidential to the maximum extent permitted by law.

L. <u>Reporting Improper Governmental Action and Protecting Employees Against Retaliation</u>

1. It is the policy of the City to encourage reporting by City employees of improper governmental action and to protect City employees who have reported improper governmental action in accordance with City policy by providing remedies for retaliation.

2. Key Definitions:

a) **Improper Governmental Action** is any action by a City officer or employee that is:
(1) undertaken in the performance of the official's or employee's official duties, whether or not the action is within the scope of the employee's employment; and
(2) in violation of any federal, state, or local law or rule, is an abuse of authority, is of substantial and a specific danger to the public health or safety, or is a gross waste of public funds. "Improper governmental action" does not include personnel actions. In addition, employees are not free to disclose matters that would affect a person's right to legally protected confidential communications.

b) **Retaliatory Action** means (a) any adverse change in a City employee's employment status, or in the terms and conditions of employment including: denial of adequate staff to perform duties, frequent staff changes, frequent and undesirable office changes, refusal to assign meaningful work, unwarranted and unsubstantiated letters of reprimand or unsatisfactory performance evaluations, demotion, transfer, reassignment, reductions in pay, denial of promotion, suspension, dismissal, or any other disciplinary action, not independently justified by factors unrelated to the reporting of improper government action; or (b) hostile actions by another employee that were encouraged by a supervisor or manager.

c) **Emergency** means a circumstance that, if not immediately changed, may cause damage to persons or property.

3. Reporting Mechanism

a) An employee who becomes aware of improper governmental action shall report the action to the Department Director. If the employee reasonably believes that the improper governmental action involves the Department Director, then the employee shall report the action to the City Manager. If the employee reasonably believes that the improper governmental action involves the City Manager, then the employee shall report the action to the Mayor. The person receiving the report shall notify the City Attorney. In an emergency, the employee may report the improper governmental action

directly to the government agency with responsibility for investigating the improper action.

4. **Investigation**
   a) The person receiving the report shall confer with the City Attorney and they shall agree upon an appropriate method of investigation. The person receiving the report shall ensure that prompt action is taken to properly investigate.

5. **Confidentiality**
   a) The investigation should be conducted as confidentially as possible. Until the investigation is final, the identity of all employees involved shall be kept confidential to the extent permitted by law. At all times, the identity of the reporting employees shall be kept confidential to the extent possible under law, unless the employee authorizes the disclosure of theiier identity in writing.

6. When the investigation is completed, the person receiving the report shall advise all employees involved in the investigation of a summary of the results of the investigation, except that personnel actions taken as a result of the investigation may be kept confidential.

7. If an employee fails to make a good faith attempt to follow the provided reporting mechanism, the employee shall not be entitled to receive the protection against retaliation provided by this policy. Any false or frivolous claims or reporting will be subject to disciplinary action up to and including termination.

8. **Protection against Retaliatory Actions**
   The City is prohibited from taking retaliatory action against an employee because they have in good faith reported an improper government action in accordance with this policy.

   a) An employee who believes they have been retaliated against shall provide written notice of the charge of retaliatory action to the City Manager (or to the City Attorney if the charge is against the City Manager) within 30 days of the alleged retaliatory action. The notice shall specify the alleged retaliatory action and the relief requested.
   b) The City Manager shall have 30 days to respond to the charge.

9. **Appeal to the State**
   Upon receipt of the City Manager's response, or after the 30-day response period, the employee may request a hearing before a state administrative law judge for the purpose of establishing that a retaliatory action occurred and to obtain appropriate relief provided by law. The employee must submit the request for a hearing to the City Manager within 15 days of delivery of the City Manager's response, or within 15 days after the response period has expired. Within 5 working days of receipt of a request for hearing, the City shall apply to the State Office of Administrative Hearings for an adjudicative proceeding before an administrative law judge (ALJ).

10. Relief Granted Under The Act

a) Reinstatement, with or without pay.
b) Injunctive relief necessary to return the employee to the position they held before the retaliatory action and to prevent the recurrence of retaliation.
c) Costs and reasonable attorneys' fees.
d) Penalty assessed against each individual retaliator or up to $3,000 plus recommendation to City Manager that retaliator be suspended or dismissed.
e) State law does not provide for general economic damages or damages for emotional distress.

11. List of Agencies

The following is a partial list of agencies responsible for enforcing federal, state and local laws and investigating other issues involving improper governmental action. Employees having questions about these agencies or the procedures for reporting improper governmental action are encouraged to contact the following:

City of Shoreline

City Attorney or
City Manager
Shoreline City Hall
17500 Midvale Ave N
Shoreline, WA 98133
206-801-2700
Web: www.shorelinewa.gov

King County

Ombudsman or
Prosecuting Attorney
516 Third Ave
Seattle, WA 98104
206-477-1050 or
206-296-9000
Web: www.kingcounty.gov

State of Washington

Auditor's Office
302 Sid Snyder Avenue SW
Olympia, WA 98504-0021
Web: www.sao.wa.gov

Human Rights Commission
711 South Capitol Way, St 402
Olympia, WA 98504-2490
Web: www.hum.wa.gov

Dept. of Ecology
3190 - 160th SE
Bellevue, WA 98008-5852
Web: www.ecy.wa.gov

Dept. of Labor & Industries
PO Box 44000
Olympia, WA 98504
Web: www.lni.gov

M. Outside Employment

1. The City expects that it shall be the primary employer for all regular employees. Therefore, employees shall not engage in employment or render services for pay for any public or private interest (including self-employment) when such activity may:

a) Occur during working hours;
b) Detract from the efficiency of the employee while performing City duties;
c) Constitute a conflict of interest or create an appearance of impropriety as determined by the City Manager;
d) Utilize confidential information or contacts made during City employment which would give an unfair insider advantage or would otherwise be an inappropriate use or disclosure of such information or contacts;
e) Take preference over extra duty required by City employment;

f) Interfere with emergency callout duty;
g) Tend to impair independence of judgment or action in performance of official duties;
h) Involve the use of any City resources such as copiers, telephones, supplies, other equipment, or time; or
i) Interfere in any other manner with the employee's provision of quality customer service.

2. In order to protect the interests of both the City and the employee, it is important that an employee and their Department Director have an opportunity to discuss any outside employment with the goal of avoiding any possible conflicts between the City and the other employment.

   a) Prior to engaging in any outside employment, an employee shall provide their Department Director with written notice of his or her intent to engage in the outside work. If an employee is unsure as to these criteria or the effect of their outside employment, they should consult with their Department Director or the Human Resources Director for clarification.

      (1) After receiving the employee's request, the Department Director shall consult Human Resources and if the request complies with this policy, the Director may approve the outside employment.
      (2) If the Department Director, in consultation with the Human Resources Director, determines that the outside employment interferes with or reduces the efficiency of City employment, then the Director shall recommend to the City Manager that the request to engage in the employment shall be denied.

   b) After considering the employee's written request and the recommendation of the Department Director and Human Resources, the City Manager shall make a decision approving or denying the request.

3. Failure to comply with these provisions concerning outside employment may be grounds for disciplinary action, up to and including termination.

V. GENERAL WORKING CONDITIONS AND PERSONNEL ADMINISTRATION

A. Working Hours

1. The workweek for regular, full-time employees is 40 hours. The daily hours of work shall be set by the Department Director with respect to each department as necessary for the efficient operation of the City. Employees may be requested to work different schedules, including varying shifts, weekends, holidays and overtime to meet the needs of the City or of specific departments. Varying schedules or overtime may also be required in emergency situations as defined by the City Manager.

2. Employees may request to work a flex ~~time~~ schedule or to job share. Flex ~~time~~ schedule and job share arrangements may not interfere with efficient City

operation and must provide for effective service delivery. Flex ~~time~~ schedules and job share must be approved by the Department Director, after consultation with Human Resources.

~~An employee, with approval of the supervisor, may~~ On occasion an employee may request to flex their time and adjust ~~flex/shift~~their regular work schedule to facilitate dental, doctor and similar appointments that fall within their workday. ~~Flexing a schedule~~Approval of flex time will be based on specific need or circumstance, ~~and~~ is not intended to occur on a regular basis, and is not to result in overtime. Any change to an employee's schedule must be approved by their supervisor.

~~B.~~

~~C.~~B. Breaks

1. **Lunch and Rest Breaks**
   All employees working an 8-hour day shall be entitled to at least a one-half hour unpaid meal period within five (5) hours of the beginning of their shift~~,~~ and scheduled as close to the midpoint of the day as possible. In addition, employees are entitled to a paid ~~ten~~fifteen15-minute rest break for each four (4) hours of working time. Employees who are able to take a break as needed do not have to take a formally scheduled break and it is the employees' responsibility to take these breaks. Breaks shall be arranged so as not to interfere with normal business operations. All lunch and rest breaks should be taken away from the employee's immediate work area. Breaks cannot be combined or saved until the end of the day in order to arrive at work late or to leave work early.

2. **Lactation Breaks**
   For one year after her child's birth, nursing employees are allowed to take reasonable breaks to express breast milk whenever the nursing employee feels it is necessary to do so. A private space for this purpose will be established at all City work locations. For more information on the designated lactation space, an employee should contact her supervisor or Human Resources.

~~D.~~C. Overtime

This section applies to non-exempt employees. Employees will receive compensation for approved time in paid status in excess of 40 hours in a work week. Overtime shall be paid for in increments of fifteen (15) minutes. Employees who have been authorized to flex their work schedule do not incur overtime for the hours worked beyond their normally scheduled shift on the approved flex days(s). Employees who have been authorized for and who earned overtime will be paid at one and one-half the regular hourly rate of pay. All overtime must be authorized in advance by the supervisor.

~~E.~~D. Standby

This section applies to non-exempt employees. A department may assign an employee who may be needed to work during off-hours to be on standby. Standby assignment normally will be rotated among similarly situated employees. An

employee placed on standby shall be provided with a cellular phone so that they may be reached to conduct official business. Each employee on standby will receive compensation at the currently established rate for those hours on standby, and this allowance will be suspended when callback commences. Standby is not to be counted as hours worked for purposes of computing overtime or eligibility to receive benefits. Employees on standby must make every attempt to report to work within 60 minutes, but no later than within 90 minutes of notification. If an employee on standby status fails to respond to a call to return to work, the employee may be subject to disciplinary action. The Employee must remain Fit for Duty for the entire period of their standby duty.

~~F.~~E. Callback

This section applies to non-exempt employees. Employees called back to work shall be paid a minimum of three hours at a rate of time and one-half. Hours worked on callback beyond the three-hour minimum shall be paid at the overtime rate of pay, unless such time is part of the employee's regularly scheduled work shift. When work to resolve an issue occurs remotely, such as by phone or email without physically arriving to the work site, the minimum increment of compensation is fifteen (15) minutes at a rate of time and one-half.

~~G.~~F. Compensatory Time

This section applies to non-exempt employees. Limited amounts of compensatory time may be granted. An employee who is in paid status more than 40 hours in a work week may earn compensatory time at one and one-half times the straight time, instead of paid overtime, when requested by the employee and approved by the employee's supervisor. Compensatory time may not accumulate beyond 40 hours~~,~~ and must be used within six months of award. Compensatory time not used within six months will be paid.

~~H.~~G. Twelve Hour Shift

This section applies to non-exempt employees. From time to time the City Manager may determine the need to assign City employees to work 12-hour shifts in order to effectively respond to inclement weather, natural disasters or other similar emergency events. The provisions of this policy apply in the case where the City Manager makes a declaration assigning employees to a "City Manager designated 12-hour shift".

~~1.~~ **Pay to transition assigned employees into the 12-hour shift**.When employees are working at the time the City Manager declares a 12-hour shift, night shift employees shall be sent home with pay to rest and prepare for the night shift. This period of pay shall cover the time between the declaration of the 12-hour shift until the end of their regularly scheduled work day. Example: An employee is at work and is scheduled to work until 4:00 p.m. The employee normally takes a half hour lunch at noon. At 11:00 a.m. the City Manager declares a 12-hour shift. The employee, assigned to the night shift, is sent home at 11:00 a.m. to rest and report to work at 9:00 p.m. for the night shift. The employee receives 4½ hours pay—1 hour from 11:00 a.m. to noon and 3½ hours from 12:30 p.m. – 4:00 p.m.

1.

~~2.~~ **Shift Differential**. In recognition of the inconvenience of having to work unusual hours with very little notice and under conditions that are generally difficult due to weather or other uncomfortable conditions, employees assigned to the declared 12-hour shift shall receive an additional three dollars ($3.00) per hour shift differential for all hours worked. ~~beyond their normal assigned shift.~~ Employees assigned to the night shift will receive a night shift premium of three dollars ($3.00) per hour in addition to the shift differential received for hours worked on a declared 12-hour shift. For purposes of this section, night shift constitutes a 12-hour shift beginning on or after 9 p.m. ~~When an employee is working a 12-hour shift on a day they are not normally scheduled to work, all hours worked shall be considered to be "beyond their normal assigned shift". An example of how the policy would apply: Assume the following facts:~~

~~Both Employee A and Employee B normally work a schedule of 7:00 a.m. – 4:00 p.m. (with an hour unpaid lunch break).~~

~~Employee A is assigned to the 9:00 p.m. – 9:00 a.m. night shift. For each full night shift worked, Employee A will receive 10 hours of shift differential pay from 9:00 p.m. until 7:00 a.m. to compensate for hours that Employee A does not normally work. This same amount of differential pay will apply regardless of which day of the week the work is being performed.~~

~~Employee B is assigned to the 9:00 a.m. – 9:00 p.m. day shift. For each full day shift worked, Employee B will receive 5 hours of shift differential pay from 4:00 p.m. until 9:00 p.m. to compensate for hours that Employee B does not normally work. This same amount of differential pay will apply regardless of which day of the week the work is being performed.~~

~~3.~~2.

~~4.~~3. **Pay for meal breaks.** During the declared 12-hour shifts, employees shall be paid for both required meal breaks.

~~5.~~4. **Premium Pay for work on days when the City is closed.** In the event that the City Manager closes the City for any period of time during any normal work day during the period of the declared 12-hour shift, any employee assigned to the 12-hour shift who works during the calendar day the City is closed shall receive straight time "comp time" for the ~~time~~ standard operating hours that the City is closed, in addition to their pay for their shift. For the purposes of a full day City closure, the "time closed" shall be 8 hours.

1. Example: The City experiences severe snow storms and the City Manager declares a 12-hour shift beginning on Monday and the 12-hour shifts continue through the weekend. During the work week, due to the snow, the City Manager closes the City for the entire work day on Wednesday. In addition, the City Manager closes the City 2 hours early on Thursday to allow employees at work to drive home safely.
2. Employee A is assigned to the night shift and works the night shift on both Wednesday and Thursday as scheduled. In addition to appropriate pay for the hours worked, Employee A will receive 10 hours of comp

time. (8 hours for having worked on Wednesday and 2 hours for having worked on Thursday).

3. Employee B is assigned to the day shift and works the day shift both Wednesday and Thursday as scheduled. In addition to appropriate pay for the hours worked, Employee B will receive 10 hours of comp time. (8 hours for having worked on Wednesday and 2 hours for having worked on Thursday).
4. Employee C is assigned to the day shift and is scheduled to work both Wednesday and Thursday; however, Employee C works Wednesday but then calls in sick and does not work as scheduled Thursday. Employee C will receive 8 hours comp time. (8 hours for having worked on Wednesday but 0 hours for Thursday).

H. Alternative Night Shift Premium

Employees scheduled to work a shift beginning on or after 9 p.m. or before an employee's regularly scheduled shift and not a part of a 12-hour shift declaration shall receive a night shift premium of three dollars ($3.00) per hour for the duration of the shift. This work could include street sweeping, road repairs, or any other authorized work. Employees who are receiving Callback are not eligible for Alternative Night Shift Premium.

I. Remote Work

Regular, on-going remote work is allowed and is a discretionary, management approved alternative work arrangement in which an employee spends some portion of the workweek working from an alternative work location. Regular, on-going remote work requires an agreement between the employee and their supervisor. Employees working remotely must comply with all of the terms and conditions outlined in the City's Remote Work Administrative Policy. A remote work agreement may be modified or revoked by management, with notice to the employee working remotely, at any time.

~~I.~~J. Inclement Weather and Natural Disaster

1. The City is in the business of providing vital public services and therefore does not cease operations during times of inclement weather or natural disasters. The City may be the only organization providing essential services to citizens. Therefore, all employees are asked to make every reasonable effort to report to work during such times even if it is inconvenient.
2. A non-exempt employee who is unable to get to work or who leaves work early because of weather or natural disaster conditions may either charge the time missed against accrued vacation leave, compensatory time, or with approval, may take leave without pay for the time missed. Tardiness due to an employee's inability to report for scheduled work because of severe weather conditions may be allowed up to one hour at the beginning of the work day or at the discretion of the City Manager, or their designee. Inclement weather or natural disaster tardiness in excess of that allowed by the City Manager shall be charged as provided above.
3. In the event that the City Manager advises employees not to report to work or to leave early due to inclement weather, ~~or~~ natural disaster, or other event that

results in the unplanned closure of a City facility, such time off will be paid time off and not charged to accrued vacation leave or compensatory time.

~~3.~~4. In the event that the City Manager closes City Hall due to inclement weather, natural disaster, or other event that results in an unplanned closure, if directed by the City Manager, ~~N~~non-exempt employees who are available and report to work or continue to work ~~in this situation, if requested by the City Manager,~~ shall either be paid time and one-half for the actual hours worked or be given compensatory time off, at another time mutually agreed upon by the employee and the supervisor.

~~J.~~K. Performance Planning and Appraisal

1. Each regular employee's performance will be reviewed by their supervisor on an ongoing basis. The City also has a formal performance appraisal system.
2. Employees who disagree with their formal performance appraisal may provide comments on the evaluation form itself and may also submit a rebuttal in writing that will be physically or electronically attached to a copy of their performance appraisal and kept in their official personnel file. Employees may also appeal pursuant to Section VII.L Complaint Resolution Procedure.

~~K.~~L. Classification and Compensation Plan

It is the policy of the City to maintain a comprehensive classification and compensation program. Within budget limitations, the City endeavors to pay salaries competitive with those paid within comparable jurisdictions and within the applicable labor market.

The City Manager shall be responsible for the administration of the classification and compensation plan. All changes in classifications and changes in assignment of classifications to salary ranges must be approved by the City Manager.

1. Job Classification

The Job Description and Salary Range assigned to the responsibilities of a position is the 'job classification.' A job description includes a job title and statements that define the position, including essential and marginal job functions and qualifications for knowledge, ability, experience and training. The experience and training qualifications in the job description are considered to be minimum qualifications. Salary range assignments are recommended by the Human Resources Director to the City Manager, with input from the Department Director. Periodically, the City may revise job classifications as needed or as part of a compensation study.

2. Classification Review

Positions sometimes evolve as a result of changed duties and responsibilities assigned by a supervisor. A classification review studies these changes to determine if a different job description and salary range assignment is appropriate. Importantly, not all changes warrant a different salary range assignment. The majority of the assigned duties must be a different type or complexity that is compensated at a different level to warrant ~~a different~~adjusting a position's salary range assignment.

a) Requesting a Classification Review

(1) **Management Requested Classification Review:** A Department Director may request a classification review when planning to change the assigned duties of a position, or if they believe ~~the or if they believe~~ the position duties being performed are outside of the current classification specifications.

(2) **Employee Requested Classification Review:** An employee who does not believe that their current classification accurately reflects the current duties of the position may request in writing to the Human Resources Director a classification review if it has been more than one year since the last classification review and the majority of duties have changed.

b) Performing the Classification Review

1. The Human Resources Department performs the classification review and will ask the requestor for updated job information which may include the use of a job analysis questionnaire.
2. After review by the Department Director and the Human Resources Director, any changes shall be recommended to the City Manager for reclassification as appropriate. The City Manager retains the final authority to approve or disapprove changes in classifications, within budgetary guidelines, and/or assignment of duties to employees.

~~2.~~3. Any changes resulting from a request for a classification review will be retroactive to the date of written submittal of the request for review to the Human Resources Director.

~~3.~~4. An employee who is reclassified is considered to have met the requirements of an orientation period and will not need to serve an orientation period in their newly reclassified position. I~~fn the event that~~ a classification review results in a denial of a change in classification but also results in a determination the employee was working out of class, the employee will be awarded out of class pay. The out of class pay will be effective on the date the employee submitted the written request for classification review and end on the date the Out-of-Class duties are no longer performed and will be based on the Out-of-Class Pay provisions noted in this handbook.

~~5. If the classification review results in a reclassification to a higher salary range, the employee will be placed at a step in the new range that is closest to, but not less than their current rate of pay.~~

~~Market Salary Surveys and Range Adjustments~~

~~The City periodically conducts external market salary surveys of designated comparable cities to ensure the wages paid our employees are competitive with the local market. If a market salary survey results in an adjustment to the salary range assigned to a job classification, incumbeants of that classification will be placed in the new salary range that is closest to, but not less than their current rate of pay. If the~~

~~employee's current rate of pay is less than the first step of the newly assigned salary range, the employee will be placed at Step 1 in the new range. If the employee's current rate of pay exceeds the maximum step of the newly assigned salary range, the employee will be placed at the highest step of the new range.~~

3. Steps and Increases

The compensation plan consists of salary steps ranging from 1 to 6, as reflected in the annual salary schedule. Step 0 is considered a training step. In general, there is a 2.5% difference between ranges, and a 4% difference between steps within a range.

Regular employees not at the top step are eligible for advancement to the next step annually. The step increase will be effective one year following the most recent step increase date. Once the top step is reached, the employee remains in the top step as long as the employee remains in that position.

4. Starting Rates of Pay

New employees generally will begin their employment at step 1 of the salary range for the position. At the request of a Department Director, the Human Resources Director may recommend to the City Manager that a new employee start at a higher step. The City Manager must give approval prior to offering a salary above step 1. Offers will be extended by either the Human Resources Department, the Department Director or their designee.

Circumstances that support hiring above step 1 include:

a) Additional and directly applicable education or experience above the minimum requirements;
b) Market conditions that support a higher starting salary;
c) The proposed higher salary will not create inequities with existing internal salaries.

5. Promotion

A regular employee receiving a promotion shall be placed in the closest step in the new salary range that provides for at least a 5% increase, or the top step of the new salary range if there is not a step that allows at least a 5% increase. The employee's promotion date becomes the employee's new step increase date.

If the Department Director believes that circumstances warrant an exception to the 5% placement rule, and if the Human Resources Director concurs, they may recommend to the City Manager a higher placement.

Circumstances that support a placement greater than a 5% increase are:

a) Additional and directly applicable education or experience above the minimum requirements;
b) Market conditions that support a higher starting salary;
c) The proposed higher salary will not create inequities with existing internal salaries.

6. Transfer

A regular employee receiving a transfer shall remain in the same step and retain the same step increase date.

7. Demotion

Disciplinary Demotion. If the demotion is a result of a disciplinary action, the employee shall be placed in the highest step in the new salary range that provides for a decrease. The demotion date will become the employee's new annual step increase date.

Any Other Demotion. If the demotion is a result of any reason other than discipline and the employee's current salary is within the new salary range, the employee shall remain at the same rate of pay until the employee's next step increase date. On the step increase date, if the employee has not reached the top step of the salary range, the employee shall move to the next step in the new salary range that provides for an increase. The employee shall retain the same step increase date.

If the employee's current salary is higher than the top step of the new salary range, the employee shall be placed in the top step of the new salary range.

8. Y-Rating

When a regular employee's position has been y-rated, the employee will remain at the same rate of pay until the salary range increases enough to include that rate. At that time, the employee shall be placed at the equivalent rate of pay on a step in the new range that does not result in a decrease. No Cost-of-Living Adjustment or step increase will be awarded during this period.

9. Pay Schedule

The City is on a bi-weekly pay schedule that provides the equivalent of 26 paydays during a standard year (52 weeks divided by two).

10. Out of Class Pay

When a Department Director or the City Manager assigns a regular employee substantially higher level duties that fall outside the scope of their job classification and the assignment exceeds ten (10) working days, the employee shall be paid an ~~and~~ additional 5% ~~or be placed at the Step 1 of the higher assigned classification, which ever is greater,~~ for the entire period of the out-of-class work. The assignment and the out-of-class pay must be in writing and approved by Human Resources prior to the Department Director making the assignment.

If the Department Director believes that circumstances warrant an exception to the 5% placement rule, and if the Human Resources Director agrees, they may recommend to the City Manager a higher placement. Circumstances that support an exception to the 5% placement include:

a) The duties the employee is performing is of a significantly higher classification;
b) The proposed higher salary will not create inequities with existing internal salaries;

c) The proposed out-of-class salary is not higher than what would be awarded if the employee were promoted into the position.

~~L.~~M. **Garnishment**

The City will honor and process any legally served writ of garnishment against any employee without prejudice towards the employee.

M. Employee Training and Development

It is the intent of the City to provide training opportunities to employees for building of skills directly related to the job. These opportunities may include in-house workshops, or workshops and seminars sponsored by other agencies or institution, andbut are subject to approval based on operational needs and budget availability.

N. Educational Reimbursement Program

The City has established an educational reimbursement program to help eligible regular employees develop their skills and upgrade their performance. All full-time regular employees who have completed a minimum of one year of service are eligible to participate in the program.

1. Under the program, and within budget guidelines, educational reimbursement is provided for courses offered by approved institutions of learning, such as accredited colleges, universities and secretarial and trade schools. Courses must be, in the City's opinion, directly or reasonably related to the employee's present job or consistent with the employee's performance development plan. Courses must not interfere with job responsibilities and must be taken on the employee's own time.

2. Reimbursement covers actual costs of tuition and registration fees only and is limited to a maximum of six credits per semester or nine credits per quarter for approved courses. The employee must pass the course in order to receive reimbursement.

3. Employees eligible for reimbursement from any other source (e.g., a government sponsored program or a scholarship) may seek assistance from this program but will be reimbursed only for the difference between the amount received from the other funding source and the actual course cost up to the maximum reimbursement allowable under this policy.

4. To be eligible for reimbursement, the employee must submit a tuition reimbursement form to their supervisor prior to the scheduled commencement of the course(s), receive written approval from the Department Director and Human Resources in advance, be actively employed by the City at the time of course completion and pass the course. The employee should also have raised the subject of pursuing this education as part of the performance development planning discussions of the Performance Management System.

5. On completion of the course, the employee must submit to the Human Resources Department an official transcript from the school, indicating grade received and a receipt or other official proof of payment.

N. Employee Education, Training and Development

It is the intent of the City to provide education and training opportunities to employees so that they can increase their job related skills and maximize performance. Regular employees may request reimbursement for and/or seek payment of registration and tuition fees associated with educational courses and training directly related to the employee's job function or professional development goals. All requests for payment of or reimbursement for education courses, training or conferences must be approved in advance by the employee's supervisor and Department Director.

1. Academic Courses: Employees may request reimbursement for or payment of registration fees and tuition fees when taking courses from an accredited vocational school, college or university. Courses must be reasonably related to the employee's current job function or must be in alignment with the employee's professional development goals, as documented in the employee's Professional Development Plan. Tuition reimbursement is limited to six credit hours per semester or nine credit hours per quarter, and must be approved in advance by the supervisor, Department Director and Human Resources Director. Courses are not to interfere with the employee's work schedule and must be taken on the employee's own time. Reimbursement is contingent upon departmental budget and funding resources, and achieving a passing grade.

2. Non-Academic Courses, Conferences & Training: Employees may request reimbursement for or payment of registration fees for training, workshops, or conferences that, in management's opinion, is related to the employee's job duties and will enhance their job skills. Funding is limited and subject to Department Director approval and budgetary resources. Employees who have received educational funding support from the City, but fail to attend the workshop/conference, or do not complete the training, may be asked to reimburse the City for any costs incurred.

O. Reasonable Accommodation

1. Medical Accommodation

The City of Shoreline does not discriminate against qualified individuals with a disability with regard to any aspect of employment and is committed to complying with the Americans with Disabilities Act.

The City recognizes some individuals with disabilities may require reasonable accommodations. If an employee is disabled or becomes disabled (meaning they have a mental or physical impairment substantially limiting one or more of the major life activities) and requires a reasonable accommodation, the employee will contact the Human Resources Department to begin the interactive process. Accommodation requests may be made orally or in writing to the Human Resources Department. Requests may be made by the employee, the employee's supervisor or someone on behalf of the employee.

A reasonable accommodation is assistance or changes to a position or working conditions that will enable an employee with a disability to perform the essential functions of their job. The City will provide reasonable

accommodation to employees with medically certified disabilities, unless doing so would pose an undue hardship.

Human Resources will meet with the employee to review the accommodation process, answer questions and provide the necessary forms which include a Medical Certification form to be completed by the employee's physician.

If the Medical Certification does not confirm that the employee has a disability, Human Resources will seek clarification from the medical provider and the employee before rejecting the request. If the Medical Certification confirms that the employee has a disability, the employee, supervisor and human resources representative will meet and engage in an interactive process. The interactive process will include discussing the disability, limitations, and possible reasonable accommodations that may enable the employee to perform the essential functions or their position, make the workplace readily accessible to and usable by the employee, or otherwise allow the employee to enjoy equal benefits and privileges of employment. Following the interactive process, a decision will be made, and the employee will be notified if the accommodation is approved or denied.

2. **Religious Accommodation**
   Employees whose religious beliefs, practices or observances conflict with work requirements may request an accommodation. Upon notice of a request to reasonably accommodate, Human Resources will examine the request and respond to the employee.

3. **Pregnancy Accommodation**
   Employees who have health conditions related to pregnancy can request workplace accommodation recommended by their physician in form of leave, schedule adjustment, workplace or working conditions adjustments.

   Accommodation requests related to more frequent breaks or limitations for lifting object over 17 pounds do not require medical documentation.

4. **Accommodations after the Birth of Child**
   Eligible employees may request a reasonable amount of time during the work shift to express breast milk for a nursing child within one year after the child's birth.

VI. BENEFITS

All benefits apply to regular and limited term employees and selected benefits apply to extra help employees and paid interns. These benefits contribute to total compensation. Complete descriptions of these benefits are available from Human Resources.

A. Group Insurance

Applies to: Regular and limited term employees.
Employees and their dependents are generally eligible for medical, dental, vision, long term disability, life insurance, and the employee assistance program as defined by the City and as authorized by the carrier. The City makes contributions to the cost of these benefits as authorized by the City Council by resolution.

Regular and limited term part-time employees and their dependents, if eligible, receive City contributions for such insurance prorated based on the ratio of their normally scheduled work week to a ~~forty~~40-hour week.

The City reserves the right to make changes in the carriers and provisions of these programs when deemed necessary or advisable~~,~~ and will make reasonable attempts to give prior notice to employees of any changes.

B. Social Security Replacement Plan

Applies to: All employees.
All employees must participate in a Social Security Replacement Plan (401 a) and Medicare.

C. 457 Plan

Applies to: Regular and limited term employees.
The City provides a 457 Deferred Compensation program for eligible employees. Employees must defer funds into this plan which have been allocated for benefits by the City but are not used by the employee. In addition, an employee may make personal contributions to this plan through payroll deduction, up to the limits set by law.

D. Retirement

Applies to: All employees determined to be eligible by state law.
The City contributes to the Washington State Public Employees Retirement System (PERS) as prescribed by law. State law determines employee eligibility. For more information, contact Human Resources or the Washington State Department of Retirement Systems.

E. Vacation

Applies to: Regular and limited term employees.
Employees accrue paid time off for vacation. Regular and limited term part-time employees receive prorated vacation accrual based on the ratio of their normally scheduled work week to a forty-hour week.

1. Accrual Table

Vacation shall be accrued monthly as follows:

Years of Employment Completed	Days of Vacation per Year	Hours Accrued per Month
0 – 12 Months	12	8.0
1	13	8.6
2	14	9.3
3	15	10.0
4	16	10.6
5	17	11.3
8	18	12.0
10	19	12.6
12	20	13.3
15	23	15.3

20	25	16.7

2. **Carryover Maximum**
   The maximum number of vacation hours that may be carried over from December 31 of one year to January 1 of the next year is equal to two years' vacation accrual accumulation.

3. **Carryover Exceptions**
   Employees with a vacation balance in excess of the carryover maximum should reduce the balance to the maximum carryover allowable. If an employee cannot use vacation because City operations have prevented it, the employee should discuss the matter with their supervisor well ahead of requesting a carryover exception. If the employee and supervisor are unable to plan for the employee to take the time off, they may request a carryover exception. Requests for vacation carryover shall be made in writing by the employee and submitted to the Human Resources Director. The request will include a plan for bringing the vacation accrual balances within the accrual cap during the next year. The request will be reviewed by the Department Director and is subject to approval by the City Manager. An employee will not be granted an exception two years in a row.

4. **Forfeiture**
   Unused vacation leave in excess of the carryover maximum shall be forfeited at the end of the calendar year unless a carryover exception has been granted.

5. **Requesting Vacation**
   In requesting vacation, employees should consider the City's needs to conduct the public business and to have time to plan for vacation coverage. Managers should respect employees' needs to take vacation. An employee's reasonable request for vacation should be approved unless the granting of the vacation would negatively impact the business operations of the City. In cases where there is a conflict in scheduling vacation leave among employees, the supervisor will determine the criteria for approving vacation requests based on a fair and equitable methodology.

   An exempt employee shall not have deductions taken for vacation absences of anything less than a full day.

   Vacation hours earned for a new employee shall accrue but shall not be available for use until after an initial six months of employment with the City unless special authorization has been granted by the City Manager. Employees who have moved to a new classification, and who have already served a six-month orientation period in a previous position with the City, may request use of vacation leave accruals immediately. An orientation period may be extended to account for leaves (unpaid, vacation, etc.) taken during that period of time. The City Manager is authorized to negotiate higher accrual levels and/or starting balances of vacation with individual staff members.

   An employee may cash out accrued vacation leave one time each calendar year. To be eligible for the cash out, an employee must have used at least 80

hours of vacation since the first of the year. The maximum cash out shall be 40 hours. The amount of the cash out shall be based upon the employee's base hourly rate/salary at the time of the written request. If approved by the department director, the 80-hour minimum threshold may include vacation approved for the current calendar year, but not yet taken. In this case, the employee may receive the cash out just prior to leaving on the approved vacation. Cash out requirements for part-time regular employees shall be prorated based upon the employee's authorized FTE.

6. Separation from Service

In the event of separation from service for any reason other than at retirement the employee shall be paid-out for any accrued vacation earned and not taken. Payout of accrued vacation leave will be at the base hourly rate and not include out-of-~~-~~class pay or other premium rates. In the case of separation for any reason when the employee is eligible for retirement as defined by the rules and regulations of the Washington State Public Employees Retirement System the maximum cash out shall be 240 hours.

F. Management Leave

Applies to: Exempt Regular and Exempt Limited Term Employees.

On January 1st of each year, each employee shall receive 3 days of management leave. A new exempt employee hired before July 1 shall receive all 3 days. A new exempt employee hired between July 1 and October 1 shall receive 1 day; a new exempt employee hired after October 1 shall not receive any days of management leave until the next calendar year. The leave is to be used each year; any management leave not used during the calendar year shall not be carried into the next year. Exempt staff must use management leave in full day increments.

G. Holidays

1. Observed Holidays

Applies to: Regular and limited term employees.

Employees receive paid time off for holidays. Regular and limited term part-time employees receive prorated holiday benefits based on the ratio of their normally scheduled work week to a ~~forty~~40-hour week. Observed holidays are:

New Year's Day	January 1
Martin Luther King's Birthday	3rd Monday in January
President's Day	3rd Monday in February
Memorial Day	Last Monday in May
Juneteenth	June 19
Independence Day	July 4
Labor Day	1st Monday in September
Veteran's Day	November 11
Thanksgiving	4th Thursday in November
Native American Heritage Day	Day after Thanksgiving
Christmas	December 25

If a designated holiday falls on a Saturday, the preceding Friday shall be observed and if the holiday falls on a Sunday, the following Monday shall be observed. If a designated holiday falls on any other regularly scheduled day off, it shall be observed on the work day immediately preceding or following the holiday as determined by the City Manager.

Employees must be in a paid status on the workday prior to and following a holiday to be eligible for holiday pay.

Non-exempt regular employees working on a holiday (either the actual holiday or the City recognized holiday) shall be paid at time and a half for all hours worked. In the case that an employee works both the actual holiday and the corresponding City recognized holiday, the employee shall only receive the holiday pay for one of the days. The pay shall be for the hours worked on actual holiday, unless the employee makes a written request for pay for the City recognized holiday instead of the actual day. Example: Independence Day falls on Sunday, July 4th; the City recognized holiday is Monday, July 5th. Employee A works Sunday and receives time and a half for all hours worked. Employee B works Monday and receives time and a half for all hours worked. Employee C works both Sunday and Monday and will be paid time and a half only for the hours worked on Sunday, unless they make a written request to be paid time and a half for the hours worked Monday, instead of Sunday.

2. Personal Days

Applies to: Regular and Limited Term employees.

Employees receive paid time off for two (2) personal days a year. Regular and Limited Term part-time employees receive prorated personal day benefits based on the ratio of their normally scheduled work week to a forty-hour week.

A personal day needs to be scheduled by mutual agreement of the employee and the supervisor and may be used for any reason. Non-exempt staff may use these days as normal workdays or in increments of one or more hours (up to the total hours of two normal work days.) Exempt staff must use a full day at a time.

Personal days will be awarded effective January 1 of each year. An employee hired July 1 or later will receive only one personal day in that calendar year. Any personal days not used by the end of the calendar year will be forfeited.

3. Holidays for Reason of Faith or Conscience

Applies to: All Employees.

If an employee's religious beliefs include observance of a holiday or leave is needed to attend a religious activity of faith or conscience that is not a City holiday, the employee may take up to two days off per calendar year unless the leave would create an undue hardship for the City as defined in WAC 82-56-020 or a risk to public safety. Employees must submit a request in advance, but no less than two (2) calendar weeks prior to the start date of the requested leave. The leave requires the approval of the Human Resources Director and the Department Director. Regular employees may use accrued leave or leave without pay if all accruals are exhausted. Extra help employees may use leave without pay.

H. Sick Leave – Regular and Limited Term Employees

Employees accrue paid time off for sick leave at the rate of eight (8) hours for each month worked. Regular and limited term part-time employees receive prorated sick leave accrual based on the ratio of their normally scheduled work week to a forty-hour week. The City Manager is authorized to negotiate starting balances of sick leave with individual staff members.

1. Purpose

The purpose of sick leave is to provide an 'insurance policy' of a bank of paid leave to be used in the event that an employee or immediate family member experiences an illness or disability that requires an employee to be absent from work. Employees who are ill or disabled are expected to use sick leave to recover and to not report to work when they could expose co-workers to illness. Employees shall use leave to account for any sick leave related absence whether full or partial day unless they have otherwise made up the time in the same work week.

2. Use of Sick Leave

a) Employee

Sick leave may be used when an employee is experiencing a physical or mental illness, injury, disability (including a disability due to pregnancy or childbirth), diagnosable health condition, or has been exposed to a contagious disease where there is a risk to the health of others, or for medical or dental examinations or treatment when such appointments cannot be scheduled outside of working hours, or when the use of a prescription drug impairs job performance or safety.

b) Immediate Family Members

Sick leave may be used to care for a member of the immediate family who is ill, injured or disabled, or when the employee's workplace or employee's child's school or place of care has been closed for any health-related reason by order of a public official.

Sick leave may also be used for qualifying family and medical leave provided for in the Washington State Paid Family and Medical Leave (PFML) or Leave under Family and Medical Leave Act (FMLA) sections.

c) Doctor's Note

After three days of sick leave an employee may be asked to provide a doctor's note or other evidence of inability to work at the discretion of the supervisor or Department Director.

d) Notification

Each employee, or someone on their behalf, should inform their supervisor if unable to come to work. This notification should be done each day prior to the scheduled starting time unless on long-term leave, so arrangements can be made to cover the absence.

3. **Conversion of Vacation to Sick Leave**
   If an employee on approved vacation is hospitalized or experiences a similar extraordinary sick leave event, the employee may make a written request to the City Manager to convert the sick leave connected time from vacation leave to sick leave. The City Manager shall consider the facts involved and shall approve or deny the request.

4. **Other Accrued Leave as an Extension of Sick Leave**
   Earned leave may be used in place of and as an extension of sick leave when an employee has exhausted their own sick leave accruals and needs additional time off work due to illness, injury, or disability.

~~4.~~5. **Maximum Balance**
   The maximum banked balance of sick leave is 1040 hours. Regular and limited term part-time employees maximum banked balance will be prorated based on the ratio of their normally scheduled work week to a forty-hour week.

~~5.~~6. **Separation from Service**
   Upon separation, if an employee is eligible for retirement as defined by the rules and regulations of the Washington State Public Employees Retirement System, an employee shall be paid for 10% of their accrued but unused sick leave.

~~6.~~7. **Rehired**
   Employees who are rehired within twelve months of a separation in service shall have their unused sick leave balance restored.

~~7.~~8. **On-the-job Injury**
   An employee who has an on-the-job injury and receives time loss payments from the Washington Department of Labor and Industries (L & I) may not use sick leave for the same hours for which the employee receives the time loss payment. An employee may use sick leave to supplement the time loss payment for the purpose of continuing to receive their normal salary. If sick leave is exhausted, the City will use other available leave to supplement the time loss, unless the employee otherwise notifies Payroll in writing. If an employee is awarded time loss payments for a period that the employee has already used sick leave or other available leave, the employee shall submit the L & I check to Finance and 'buy back' the equivalent amount of leave used. While on time loss, the employee's salary may not exceed the employee's normal salary when not on time loss.

I. Sick Leave – Extra Help Employees

Extra Help employees perform work that is seasonal, variable, intermittent, or part time for a few hours each week; their sick leave benefit is based on actual hours worked.

1. **Accrual and Eligibility to Use Sick Leave**
   Employees will accrue one hour of sick leave for every forty hours worked.

   Beginning on the ninetieth calendar day after being hired, employees may use accrued sick leave for following reasons:

- Own mental or physical illness, injury, or health condition, or when seeking a medical diagnosis or preventative medical care.
- Family member's need for care for a mental or physical illness, injury, or health condition, or when seeking a medical diagnosis or preventative medical care.
- When employee's workplace or employee's child's school or place of care has been closed for any health-related reason by order of a public official.
- When absent from work for reasons that qualify for leave under the state's Domestic Violence Leave Act (DVLA).

2. **Maximum Carryover**
   The maximum unused sick leave that may be carried over from one calendar year to the next is forty hours.

3. **Separation from Service**
   Sick leave hours are not cashed out upon separation from service and may not be used to extend employment beyond the last scheduled day of work.

4. **Rehired within Twelve Months**
   Employees who are rehired within twelve months shall have their unused sick leave balance restored and will have satisfied their eligibility to use sick leave as required in section one of this policy.

5. **On-the-job Injury**
   An employee who has an on-the-job injury and receives time loss payments from the Washington Department of Labor and Industries (L & I) may not use sick leave for the same hours for which the employee receives the time loss payment. An employee may use sick leave to supplement the time loss payment for the purpose of continuing to receive their pay for scheduled hours of work. If an employee is awarded time loss payments for a period that the employee has already used sick leave, the employee shall submit the L & I check to Finance and 'buy back' the equivalent amount of sick leave used. While on time loss, the employee's pay may not exceed the employee's normal pay when not on time loss.

J. Donated Leave

Applies to: Regular and limited term employees.
Upon an employee's request, a~~A~~ Department Director, after consulting with Human Resources, may recommend that the City Manager allow a regular employee to receive donated ~~sick~~ leave from another regular employee. The City Manager may approve the donated leave if they find that the employee meets all ~~of the~~ following criteria.

1. **Criteria**
   a) The employee needs leave that qualifies for sick leave, which is of an extraordinary or severe nature and that has caused, or is likely to cause, the employee to either go on leave without pay or to terminate employment; and

b) The employee does not qualify for other available leave benefits and has depleted all ~~of~~ their available leave time; and
c) The employee has abided by all applicable policies regarding sick leave use; and
d) The employee has been found ineligible for benefits under Worker's Compensation as governed by state law.

2. Donation
An employee may donate up to 25 hours of leave annually ~~of their sick leave and vacation balance~~. An employee is not eligible to donate sick leave hours unless a balance of 80 hours will be maintained. ~~An employee may also choose to donate accrued vacation leave.~~ The donating employee ~~in either case~~ shall submit a written request to Human Resources.

3. Value of Leave
Donated hours will be used on an hour for hour basis with no consideration given to the dollar value of the leave donated.

4. Treatment of Leave Remaining
If more leave is donated than is used, the hours of leave that remain shall be returned to the employee(s) donating the leave on a pro rata basis.

5. No Cash Out
Donated sick leave hours are not eligible for the cash out provisions in the Separation from Service section.

K. Washington State Paid Family and Medical Leave (PFML)

1. Eligibility
Under PFML, employees may be eligible for paid leave when needing time off for covered reasons. Eligibility requirements are:

a) Monetary Benefits: In order to be eligible to receive monetary benefits from the Washington State Employment and Security Department, the individual must be currently employed with the City of Shoreline and have worked 820 hours in Washington for any employer or combination of employers during the year preceding the application for leave claim.
b) Job Protection: In order to be eligible for job protection under PFML, an employee must have worked for the City of Shoreline for at least 12 months and have worked 1250 hours in the last year.

2. Leave Entitlement
PFML eligible employees are entitled to take up to 12 weeks of medical or family leave, or a combined total of 16 weeks of family and medical leave per claim year; an additional two (2) weeks of leave, for a total of 18 weeks, may be available in the event the employee's leave involves incapacity due to her pregnancy. PFML leave may be taken intermittently, contingent on the current rules or regulations.~~, provided that there is a minimum claim requirement of eight consecutive hours of leave in a week for which benefits are sought. This minimum claim requirement of eight consecutive hours of leave also applies to~~

~~part-time employees.~~ The employee may use the leave within 52 weeks from the date that the leave was approved by the State or for a year following the birth/placement of the employee's child.

PMFL leave may be taken for the following reasons:

a) Medical Leave: Medical leave may be taken due to the employee's own serious health condition, which is an illness, injury, child birth recovery, impairment or physical or mental condition that involves inpatient care or continuing treatment by a health care provider, as those terms are defined under the FMLA and RCW 50A.05.010. However, an employee is not eligible for PFML benefits if the employee is receiving time loss benefits under the workers compensation system.

b) Family Leave: Family leave may be taken to care for a covered family member with a serious health condition; for bonding during the first 12 months following the birth of the employee's child or placement of a child under age 18 with the employee (through adoption or foster care); or for qualifying military exigencies where an employee needs time to prepare for a family member's pre- and post-deployment activities, as well as time for childcare issues related to a family member's military deployment.

   (1) If both parents work for the City of Shoreline, the leave entitlement for bonding with a new child or for a new child placement into their home is independent of each other. Each employee is entitled to the full leave amount, less any PFML or FMLA leave the employee has already taken during the current claim year.

c) If an employee faces multiple events in a year, they may be eligible to receive up to 16 weeks, and up to 18 weeks if they experience a serious health condition during pregnancy that results in incapacity.

3. Concurrency With FMLA

PFML will run concurrently (at the same time) with FMLA when an absence is covered by both leave benefits and the employee meets the eligibility requirements of both leave programs. Hours taken under PFML will be deducted from the 12 weeks of FMLA entitlement.

4. Notification Requirements

An employee must provide written notice to the Human Resources Department of the intent to take PFML leave. If the need for leave is foreseeable, notice must be given at least 30 days in advance of the leave. For unforeseeable leave, notice must be given as soon as practicable. The employee's written notice must include the type of leave taken (family or medical), as well as the anticipated timing and duration of the leave. If an employee fails to provide this required notice to the to the City of Shoreline, ESD will temporarily deny PFML benefits.

If leave is being taken for the employee's or family member's planned medical treatment, the employee must make a reasonable effort to schedule the treatment so as not to unduly disrupt business operations.

Employees should follow the instructions provided by the payroll office regarding how to report their time during a leave.

5. **Coordination with Other Health Programs**
While using PFML, health benefits will remain intact and will continue to be provided by the City as normal.

If an employee is on PFML but does not meet the eligibility requirements for FMLA and is not supplementing PFML with other leave accruals or the City of Shoreline Supplemental Paid Family and Medical Leave (SPFML), the employee is deemed to be in an unpaid status for purposes of City of Shoreline policies and benefit programs. Insurance coverage will be handled in the same manner as other unpaid leaves of absence, pursuant to City of Shoreline policies and subject to any other leave provisions that require continuation of health benefit coverage.

For any unpaid portion of a leave the employee will be required to pay back the employee portion of cost paid by the City through a repayment plan regardless of whether the employee returns to work or does not. Employees that do not return to work from the leave will be required to pay back both the employee and the City portion of the insurance premiums unless failure to return to work was beyond the employee's control.

6. **Monetary Benefits**
Washington State Employment Security Department is responsible for making benefit payments directly to the employee. The amount of the benefit is based on a statutory formula, which generally results in a benefit in the range of 75-90 percent of an employee's average weekly wage. ~~Currently, T~~the maximum weekly benefit amount ~~is $1000 per week and the minimum is $100, but this~~ is subject to adjustments by the State.

7. **Benefit Payment Waiting Period**
With the exception of leave taken in connection with the birth or placement of a child, monetary PFML benefits are subject to a seven-day waiting period. The waiting period begins on the Sunday of the week in which PFML leave is first taken. The waiting period is counted for purposes of the overall duration of PFML leave, but no monetary benefits will be paid by ESD for that week. An employee may use leave during this waiting period, but such usage of accruals must be reported to ESD.

8. **Supplementing PFML with Your Own Leave Accruals or the City's Supplemental Paid Family and Medical Leave (SPFML)**
Employees who meet the eligibility requirements for PFML may use their own leave accruals and the City of Shoreline ~~Supplemental Paid Family Leave~~ SPFML to make up the difference between the PFML benefit received from ESD and their regular full pay for a week in which PFML leave is taken as follows:

a) When the PFML is for the employee's own serious health condition: The employee must use and exhaust all their leave accruals prior to using ~~Supplemental Paid Family leave~~SPFML.
b) When PFML is to care for a family member or for child bonding/placement: The employee must exhaust their sick leave accruals but may reserve 80 hours of their earned accrued vacation leave for future use, prior to using ~~Supplemental Paid Family Leave~~SPFML.
c) The use of ~~Supplemental Paid Family Leave~~ SPFML is contingent on the employee receiving their weekly PFML benefit and submitting proof of payment to the payroll office. Payroll will then calculate the amount of supplemental paid leave needed to bring the employee to their regular full pay for that week and issue payment to the employee in the next payroll process.
d) ~~Supplemental Paid Family Leave~~ SPFML may only be used after PFML benefits have been received by an employee and reported to the payroll office, except if it is being used for the initial waiting period.
e) Regular accrued leave such as sick leave or vacation leave can be used for the initial waiting period.
f) Employees must inform payroll and HR when they no longer are receiving PFML benefits from the Employment and Security Department or when their need for the leave has ended.

9. Job Restoration and Return to Work Recertification

An employee who is eligible for job-protected leave will be restored to the same or equivalent position at the conclusion of PFML leave, unless unusual circumstances have arisen (e.g., the employee's position or shift was eliminated for reasons unrelated to the leave).

An employee may be required to provide a return-to-work certification from a health care provider before returning to work following PFML leave where the employee has taken leave for their own serious health condition.

If an employee taking PFML leave determines they will not be returning to work for any reason, the employee must inform their supervisor and Human Resources immediately.

The City reserves the right to collect the cost of benefits from an employee if the employee does not return to work following their leave of absence.

10. PFML Application Process

An employee must submit an application to ESD (https://paidleave.wa.gov/login/) in order to seek PFML benefits. For guidance on the application process, please refer to the ESD website (https://paidleave.wa.gov/login/). Eligibility determinations will be made by ESD. If approved, the employee will need to file weekly benefit claims with ESD to continue receiving benefits.

11. Payroll Deductions

The PFML program is funded through premiums collected by ESD via payroll deductions and City of Shoreline contributions. The premium rate is established

by law; employees are currently responsible for two-thirds of the total premium amount. Should the State in the future modify the PFML premium rate or the percentage of premiums subject to collection through payroll deduction, the City of Shoreline will modify payroll practices to reflect those statutory changes.

12. Retirement Service Credit and Paid Family Medical Leave

PFML is considered an unpaid, authorized leave of absence. PFML program participants will not receive retirement service credits for the wage replacement payments received through ESD. An employee will receive retirement service credit for any time that they are using their own leave accruals or the City of Shoreline ~~Supplemental Paid Family Medical Leave (~~SPFML~~)~~ leave benefits while on a PFML.

L. Leave Under the Family and Medical Leave Act (FMLA)

Applies to: All employees meeting FMLA eligibility criteria.

The City complies with ~~the Federal Family and Medical Leave Act~~FMLA and all applicable state laws related to family and medical leave. This policy provides detailed information concerning the terms of FMLA.

1. Length of FMLA and Eligibility

Eligible employees may take up to 12 weeks of unpaid, family and medical leave every 12 months for certain family and medical reasons, or up to 26 weeks of unpaid, family leave every 12 months for military family care leave. To be eligible, an employee must have worked for the City for at least 12 months and for at least 1,250 hours over the previous 12 months.

2. Reasons for Taking Leave

FMLA leave is provided for any of the following reasons:

- For a serious health condition that makes the employee unable to perform the essential functions of his or her job, including incapacity due to pregnancy and for prenatal medical care.
- To care for an employee's child after birth or placement for adoption or foster care. Leave to care for a child after birth or placement for adoption or foster care must be concluded within 12 months of the birth or placement.
- To care for an employee's spouse, child or parent who has a serious health condition.
- For qualifying exigencies arising out of the fact that a spouse, parent, son or daughter is a military member on covered active duty or called to covered active duty. Eligible employees may take up to 26 workweeks to care for a spouse, son, daughter, parent or next of kin who is a covered service member and has a serious health condition as a result of military service (military caregiver leave). An eligible employee is limited to a combined total of 26 workweeks of leave for any FMLA-qualifying reason during the single 12-month period.

3. Definitions

For the purposes of Family Leave, the following definitions apply:

- **Child**: A biological, adopted or foster child, a stepchild, a legal ward or a child of a person standing in loco parentis (in place of the parent) if the child is younger than 18; or a biological, adopted or foster child, a stepchild, a legal ward or a child of a person standing in loco parentis if the child is 18 or older and incapable of self-care because of a mental or physical disability.
- **Military Caregiver Leave**: Caring for a spouse, parent, son, daughter or next of kin with a serious injury or illness as a result of military service.
- **Parent**: A biological parent of an employee or an individual who stood in loco parentis to that employee when the employee was a child.
- **Next of Kin**: A servicemember's nearest blood relative, other than the servicemember's spouse, parent, son, or daughter.
- **Serious Health Condition**: An injury, illness, impairment or physical or mental condition that involves:
    - **Hospital care**: any period of incapacity or subsequent treatment connected with or consequent to inpatient care (an overnight stay) in a hospital, hospice or residential medical care facility; or
    - **Incapacity plus treatment**: any period of incapacity of more than three consecutive calendar days including any subsequent treatment, or period of incapacity relating to the same condition that also involves 1) 2 or more visits to a health care provider within 30 days of the first day of incapacity; or 2) treatment by a health care provider on at least 1 occasion, within 7 days of the first day of incapacity, which results in a regimen of continuing treatment under the supervision of a health care provider;
    - **Pregnancy**: any period of incapacity due to pregnancy or for prenatal care;
    - **Chronic conditions requiring treatments:** a chronic condition which 1) requires periodic visits for treatment by a health care provider or by a nurse or physician's assistant under the direct supervision of a health care provider at least twice a year; 2) continues over an extended period of time; and 3) may cause episodic rather than a continuing period of incapacity;
    - **Permanent or ~~long term~~long-term conditions requiring supervision**: a period of incapacity which is permanent or long term due to a condition for which treatment may not be effective. The employee or family member must be under the continuing supervision of, but need not be receiving active treatment by a health care provider;
    - **Multiple treatments (non-chronic conditions):** any period of absence to receive multiple treatments (including any period of recovery there from) by a health care provider or by a provider of health care services under orders of or on referral by, a health care provider, whether for restorative surgery after an accident or other injury, or for a condition that would likely result in a period of

incapacity of more than three consecutive calendar days in the absence of medical intervention or treatment.
    - **Incapacity**: inability to work, attend school, or perform other regular daily activities due to the serious health condition, treatment therefore or recovery there from.

- **Qualifying Exigency**: An urgent need that arises from the foreign deployment of a covered military member is on, called to, or notified of impending call to covered active duty status. The most common qualifying exigencies include attending military functions, making financial and legal arrangements, and arranging for child care. The Department of Labor maintains a complete list of qualifying exigencies.

4. **Intermittent Leave or Reduced Schedule Leave**
   Under some circumstances, family leave may be taken in separate blocks of time or by reducing a normal weekly or daily work schedule. Family leave may be taken intermittently if medically necessary because of a serious health condition (the employee's, or that of a spouse, child or parent). If family leave is for birth or placement for adoption or foster care, use of intermittent leave is subject to Department Director approval.

5. **Paid Leave before Unpaid Leave**
   When an employee has paid leave or comp time available, that paid leave must be exhausted before unpaid leave is allowed as family or medical leave.

6. **Advance Notice**
   An employee shall provide advance notice of the need for family or medical leave along with the requested dates for the leave. Taking leave, or reinstatement after leave, may be denied if these requirements are not met.

   When foreseeable, notice must be provided at least 30 days in advance of the need to take FMLA leave. The employee should make reasonable efforts to schedule the leave to not unduly disrupt the City's operations. If 30 days advance notice is not possible because the foreseeable situation has changed or the employee does not know exactly when leave will be required, the employee must provide notice of the need for leave as soon as possible and practical.

7. **Certification**
   The City requires the provision of a medical certification within 15 calendar days to support a request for FMLA leave because of a qualifying event. The City may require second or third opinions, at its option and expense. When incomplete and insufficient certification is submitted, employees are required to correct deficiencies in the certification within 7 calendar days.

   Employees may be asked for a periodic recertifications or when circumstances described by the previous certifications have significantly changed.

   The City may require employees on FMLA leave due to the employee's serious health condition or due to the birth of a child to provide a medical

certification of fitness-for-duty prior to return to work after a medical leave, dependent on the circumstance as it relates to the employees duties.

Employees requesting qualifying exigency leave or military caregiver leave may submit related certification forms or a copy of the duty orders (for exigency leave only).

8. **Designation Notice**
   A written Designation Notice will be sent to the employee requesting family or medical leave informing them that the requested leave will be designated as FMLA leave and setting out the requirements applicable while the employee is on leave. The Notice may be used to deny the leave request or inform the employee that additional information is needed.

9. **Periodic Reporting**
   Depending on the employee's circumstances and/or medical documentation, the City may require the employee to periodically report on their status and intent to return to work.

10. **Health Insurance**
    When an employee is provided group health insurance, the employee is entitled to the continuation of the insurance coverage during FMLA leave. If an employee is in an unpaid status and unable to pay their portion of contributions for health insurance, the City will pay the City's portion and the employee's portion of the cost as governed by FMLA regulations. Therefore, employees covered by the City's group health plan (medical, dental or vision) will continue to receive health insurance during FMLA leave on the same basis as during regular employment. An employee will be required to pay back the employee portion of cost paid by the City through a repayment plan regardless of whether the employee returns to work or does not. Employees that do not return to work after the leave will be required to pay back both the employee and the City portion of the insurance premiums unless failure to return to work was beyond the employee's control as governed by FMLA regulations.

11. **Other Insurance**
    For employees covered by other insurance plans through the City, those coverages will continue during paid leave on the same basis as during regular employment. For any period of unpaid leave, the employee wishing the insurance to continue must pay for the coverage on a monthly basis prior to the month of coverage. Check with Human Resources for current information and costs for coverages.

12. **Couples Employed by the City**
    If employees married to each other request leave for the birth, adoption or foster care placement of a child, each parent will have12 weeks of leave available to them independent of each other. The scheduled leave time off must be coordinated between the two employees and their supervisors so as not to cause an operational hardship.

13. Determining Leave Availability

Family or medical leave is available for up to 12 weeks during a 12-month period. For purposes of calculating leave availability, the 12-month period is a rolling 12-months measured backward from the first date any family leave is used. The employee is required to notify the City if any leave qualifies as FMLA leave. All leave qualifying for FMLA leave shall be designated and tracked as such upon the request of the employee.

14. Special Rule for Leave Related to Pregnancy

Leave taken for the disability phase of pregnancy or childbirth when physically unable to work, is counted against the 12-week FMLA family leave allowance. In some cases, State law may entitle the disabled employee to leave beyond the standard 12-week period. Human Resources can provide information concerning the state law and its applicability.

15. Job Restoration

When an employee returns to work after FMLA leave the City shall place the employee in the same position the employee held when the leave began or in another City position with equivalent benefits and pay; the return is subject to bona fide changes in compensation or work duties; the employee does not have return rights if:

- the City eliminates the employee's position by a bona fide restructuring or reduction-in-force; or
- the employee takes another job; or
- the employee fails to provide the required timely notice of family leave or fails to return on the established ending date of the leave.

M. Supplemental Paid Family & Medical Leave (SPFML)

Applies to: Regular employees, including lLimited tTerm eEmployees. Supplemental Paid Family & Medical Leave (SPFML) affords employees an increased ability to attend to their own health needs or those of their family by providing additional pay as a supplement to the partial wage replacement benefit received from the ~~Washington State Paid Family and Medical Leave (~~PFML~~)~~ program. This benefit is used to fill the gap between what the employee receives as a benefit from the PFML and their regular full pay.

SPFML is used only in conjunction with and concurrently (at the same time) as the ~~Washington State Paid Family and Medical Leave (~~PFML~~)~~ and as noted below, with the exception if use is for a victim of domestic violence:

1. Eligibility

SPFML is available to all eligible employees who:

a) Are the victim of domestic violence and have requested time off as a victim of domestic violence; or

~~a)~~b) Have a qualifying family member as a victim of domestic violence; or

~~b)~~c) Are currently employed with the City and have worked at least six months with the City or the equivalent of 1040 hours (pro-rated for part-time employees) and have successfully passed their orientation period, and

c)d) Experienced a qualifying event as defined by the Washington State Paid Family and Medical Leave (PFML); or, and

d)e) Are eligible for, have applied to, and have been approved for PFML or be in the initial waiting week of the leave; and

e)f) Have not exhausted the 12 weeks of SPFML in the current calendar year; and

f)g) Have depleted available leave accruals:

(1) Must have exhausted all available leave accruals including sick leave, vacation, personal days, management leave, and accrued comp time if the leave request is for the employee's own serious health condition, childbirth recovery, or as a victim of domestic violence.

(2) Must have exhausted all available leave accruals but may reserve a bank of 80 hours of accrued vacation leave, if the leave request is to care for a family member; in response to a military exigency; or when bonding after birth or placement of a child into their home.

2. Benefit Amount

a) An employee's SPFML benefit is calculated based on the difference between what is received from the Washington State PFML benefit and what the employee normally would receive in their regular check.

b) The employee will receive the equivalent of their full salary through use of supplemental paid leave for up to a total of twelve (12) weeks, when combined with payments received from the Washington State PFML.

c) SPFML will cease after using a total of 12 weeks in a calendar year or at the expiration of the approved PFML, whatever occurs first.

d) Regular part time employees will receive this benefit on a pro-rated basis based on their budgeted FTE.

e) If the qualifying event is the birth, adoption or foster care placement of a child and both parents work for the City and meet the eligibility requirements, both parents will independently have the equivalent of 12 weeks available to them for bonding with a new child or for child placement. In these circumstances the employees should coordinate with their supervisors to ensure that there is no negative impact to business operations for their requested time off. Any overlap of both parents taking the same time period off for bonding should be coordinated with their supervisor(s) in advance.

f) In no circumstances may an employee use SPFML in combination with PFML and receive more than their regular paycheck amount.

g) SPFML may not be cashed out under any circumstance.

h) If using SPFML during the initial waiting week, or while waiting for the leave approval, and the leave is denied from the State, the employee will be required to pay back any Supplemental monetary benefit that has been received.

3. Benefit Period, Frequency, and Concurrency

a) May be used on a continuous or intermittent basis consistent with PFML.

b) Will run concurrently with PFML.

c) Is limited to a maximum of 12 weeks per calendar year.
d) May be used to cover the waiting period (first week) of PFML if the employee lacks enough leave accruals.

4. Health Benefits

The employee will continue to receive health benefits according to the underwriting rules of the relevant health plans and shall continue to accrue vacation and sick leave according to City policy during the period of ~~Supplemental Paid Family Leave~~SPFML.

For any unpaid portion of a leave the employee will be required to pay back the employee portion of cost paid by the City through a repayment plan regardless of whether the employee returns to work or does not. Employees that do not return to work from the leave will be required to pay back both the employee and the City portion of the insurance premiums unless failure to return to work was beyond the employee's control.

5. Procedure for Requesting Supplemental Paid Family & Medical Leave

a) Provide notice – Employees who anticipate the need to use SPFML should notify Human Resources ~~department~~ Department as soon as possible.
b) Submit the ~~Supplemental Paid Family and Medical Leave~~SPFML Request Form to Human Resources.
c) SPFML will not be approved until verification has been received from the State that the employee has applied for PFML. If the employee has received any SPFML payments from the City and their State PFML is denied, the employee will be required to repay the City for those payments received.

N. Spousal Military Deployment Leave under Washington State Law

Applies to: All employees.

An employee who works an average of ~~twenty~~ 20 or more hours a week and who is a spouse of a military service member may take up to ~~fifteen~~ 15 days of paid or unpaid job-protected leave while the military service members is on leave from deployment, or before and up to deployment, during times of military conflict declared by the President or Congress. An employee must provide Human Resources with notice of their intent to take leave within five business days of receiving official notice of leave from deployment or of an impending call to duty. If applicable, this leave will run concurrent with FMLA~~-~~.

O. Medical Leave of Absence (non FMLA)

Applies to: Regular and limited term employees.

In addition to or in lieu of family leave, an unpaid leave of absence of up to six (6) months may be granted in the case of an employee's disability when approved by the City Manager and when the leave will not adversely impact City operations. The request must be supported by a physician's certificate of necessity and reasonable expectation of a timely return to duty. Prior to application for a non-FMLA medical leave of absence, an employee's accrued sick leave, vacation leave, compensatory time, management leave and personal days must be exhausted.

P. Leave of Absence Without Pay

Applies to: Regular and limited term employees.

Leave without pay is a temporary nonpaid status and absence from duty that occurs when an employee doesn't have enough, or does not qualify to use, paid time off for the absence. All paid leave banks must be exhausted prior to authorizing unpaid leave except when the reason for the leave does not qualify for paid sick leave or the leave is otherwise covered by Leave for Active Duty Military Service.

Leave without pay for an illness not covered by FMLA requires the Department Director approval. If such an absence exceeds three consecutive work days, the absence requires notification to the Human Resources Director and approval by the City Manager.

The City Manager may approve leave without pay for other personal reasons not covered by family leave, such as parenting or caring for an ill relative; other reasons in the best interest of the City and not solely for the employee's personal gain or profit. To request a leave of absence without pay for personal reasons, the employee shall submit a written request to the Department Director that states the reason for and the proposed length of the leave. If the Department Director approves of the leave, the Director will forward the request to the City Manager for consideration and provide a copy to the Human Resources Director. If the leave is approved, the employee and City Manager will enter into an agreement detailing the terms and conditions of the leave and a copy will be filed with Human Resources and payroll.

Q. Continuation of Benefits

Applies to: Regular and limited term employees.

Employees on any paid leave shall continue to receive all benefits including the accrual of vacation, sick leave, holiday pay, pension, and all insurance benefits. Employees in unpaid status shall not be entitled to and shall not accrue any of the benefits of the City, except as provided under family leave, FMLA.

R. Bereavement Leave

Applies to: Regular and limited term employees.

Employees may be granted up to three (3) days of paid leave per occa~~s~~sion to make arrangements for or to attend the funeral of, or memorial service for~~,~~ a member of their immediate family. If more than three days leave is necessary, earned vacation, sick leave, personal days, management leave or compensatory time may also be used. The amount of time provided for bereavement leave will be based on the employee's regular daily work schedule~~;,~~ if working eight (8) hours, they would receive ~~8~~ eight hours of bereavement leave. If working an alternative schedule, they receive the number of hours they normally work on those days.

If while on approved vacation an employee has a death in their immediate family requiring the employee to engage in activities typically covered by bereavement leave, the employee may make a written request to the City Manager to convert the bereavement leave connected time from vacation leave to bereavement leave.

The City Manager shall consider the facts involved and shall approve or deny the request.

Regular and limited term part-time employees will receive bereavement leave prorated based on the ratio of their normally scheduled work week to a forty-hour week.

S. Court and Jury Duty Leave

Applies to: Regular and limited term employees

Employees called to jury duty are strongly encouraged to fulfill their legal and civic responsibility. A regular or limited term employee will be granted leave at their regular rate of pay. Days during the period of summons when reporting to the court is not required are not covered by this leave.

During the regular work shift, an employee must report to work when not required to be in court. If the court pays the employee for the jury service, that payment must be turned in to the City. An employee is permitted to retain any mileage reimbursement received from the court. The amount of time provided for jury duty will be based on the employee's regular daily work schedule, if working eight (8) hours, they would receive ~~8~~ eight hours of jury duty leave. If working an alternative schedule, they receive the number of hours they normally work on those days.

An employee must inform their supervisor as soon as a summons is received, and on a daily basis as to court schedule.

Employees who have been subpoenaed for a job-related matter shall be compensated as for any other working time.

T. Military Leave

Applies to: ~~Regular and limited term employees~~All ~~E~~employees.

An employee may take up to twenty-one workdays per year for required military duty, trainings or drills if the employee is a member of the Washington National Guard, the Army, Navy, Air Force, Coast Guard or Marine Corps Reserves of the United States. This leave is in addition to regular vacation leave. For purposes of this section, "year" shall mean from October 1 to September 30.

An employee will continue to receive their normal pay, based on their established work schedule, during such active duty training, provided a written copy of the orders is submitted to the supervisor prior to leave and a written copy of the release is submitted upon return.

U. Leave for Certain Volunteer Emergency Services Personnel

Applies to: Regular and limited term employees

An employee may take necessary time to respond to call to an emergency service operation as unpaid firefighters, reserve peace officers, or C~~c~~ivil A~~a~~ir P~~p~~atrol members. Participation in trainings or other non-emergency activities are excluded from the provisions of this article.

Eligible employees may use~~d~~ their accrued leave to stay in a paid status.

V. Victims of Domestic Violence Leave

Applies to: All employees

Employees who are victims of domestic violence, sexual assault, or stalking may take reasonable unpaid leave from work to take care of legal or law enforcement needs or to get medical treatment, social services assistance, or mental health counseling. Employees who are qualifying family members of a domestic violence victim are also eligible for leave under this policy.

Regular employees may use paid sick, vacation, Supplemental Paid Family and Medical Leave, or other accrued paid time off while on leave.

Employees must give as much advance notice of the need for leave under this policy as is possible. Leave requests must be supported with one or more of the following:

- A police report indicating the employee or employee's family member was a victim.
- A court order providing protection to the victim.
- Documentation from a healthcare provider, advocate, clergy, or attorney.
- An employee's written statement that the employee or employee's family member is a victim and needs assistance.

For purposes of this section only, family member means child, spouse, parent, parent-in-law, grandparent or person the employee is dating. The City may request verification of family relationship.

VII. STANDARDS OF EMPLOYEE CONDUCT

The City expects all employees to strive for excellence, to exhibit the City Values in their work, to accomplish organizational and individual performance goals and to provide superior customer service.

A. Personal Appearance and Demeanor

Employees are expected to dress in attire appropriate to their job tasks and to behave in a professional, businesslike manner at all times.

Employees failing to adhere to City standards with respect to appearance and demeanor are subject to disciplinary action, up to and including termination.

B. Absenteeism and Tardiness

Employees are expected to report for work promptly and maintain good attendance. The supervisor must be advised of absence or late arrival prior to the beginning of the shift. Absenteeism or tardiness that is unexcused may be grounds for disciplinary action, up to and including termination.

C. Solicitations and Distribution of Literature

In the interest of maintaining a proper business environment and preventing interference with work and inconvenience to others, employees may not physically distribute literature, email, or post materials, sell merchandise, solicit financial contributions or otherwise solicit for any cause during working hours. Employees who are not on working time (for example on lunchtime or break) may not solicit

employees who are on working time. An employee (including any employee with management responsibility) shall not directly solicit any employee they supervise or otherwise exercise some element of control over. All employees shall recognize that any employee has the right to say "no" to any solicitation.

E-mail shall not be used for solicitation of any type.

Employees may utilize such things as an employee newsletter or the employee lunch room bulletin board if approved by the City Manager's Office for personal messages of this nature. Violation of this policy may be grounds for disciplinary action, up to and including termination.

Non-employees are prohibited from distributing material or soliciting employees on City premises at any time.

D. <u>Drug-Free Workplace</u>

1. It is the policy of the City to maintain a drug-free workplace. Actions in violation of this policy are inconsistent with the behavior expected of employees, subject all employees and visitors to our facilities to unacceptable safety risks and undermine the City's ability to operate effectively and efficiently.

2. The unlawful manufacture, distribution, dispensation, possession, sale, or use of a controlled substance, alcohol or other intoxicant in the workplace or while engaged in City business on or off the premises or in a City vehicle is strictly prohibited. Such conduct is also prohibited to the extent that, in the opinion of the City, it impairs an employee's ability to perform on the job or threatens the reputation or integrity of the City. Therefore:

   a) When employees are on the job, they are expected to be physically free from any impairment or substance that could contribute to an injury, property damage, or interfere with productivity. An employee shall not consume any alcohol during lunch or any other break occurring prior to the end of that employee's work day. Workday in this context includes any evening meeting or other similar activity on behalf of the City. Employees are to be free of illegal drugs or potentially impairing levels of legal substances. In short, all City employees are expected to be fit for duty, as defined in this handbook.
   b) Use or possession of prescription or non-prescription medication is not prohibited when taken in accord with prescription or standard dosage recommendations. However, employees shall notify their supervisors when they are taking over-the-counter or prescription drugs that could prevent the employee from performing their job safely and effectively. The employee and supervisor shall work together to determine the employee's fitness for duty or to establish a light duty assignment if available and appropriate. If no agreement is reached, the fitness for duty determination shall be made by the Department Director, after consulting Human Resources.
   c) An employee convicted of a controlled substance-related violation must inform the City within five days of such conviction.
   d) Employees who violate any aspect of this policy may be subject to disciplinary action up to and including termination. The City may require

employees who violate this policy to successfully complete a drug abuse rehabilitation program as a condition of continued employment.

e) Employees may be required to submit to alcohol, drug or controlled substance testing when: an employee's work performance causes reasonable suspicion that the employee is impaired due to current intoxication, drug or controlled substance use; testing is required prior to appointment to a position; as a result of a job related accident when reasonable cause exists or if required by the Department of Transportation; or in cases where employment has been conditioned, in a return to work agreement, upon remaining alcohol, drug or controlled substance free following treatment. Refusal to submit to testing when requested may result in immediate disciplinary action up to and including termination. Testing information shall be confidential unless used in an employer action with regard to the employee.

f) Employees who voluntarily enter treatment programs for drug or alcohol addiction shall not be subject to discrimination or retaliation. Such occurrences will be regarded as medical conditions with regard to City provided benefits and rights. However, the City may condition continued employment on the employee's successful completion of treatment or counseling programs and future avoidance of alcohol, drugs or other controlled substances. The City has an employee assistance referral center to assist employees in dealing with personal problems. Details are available from the Human Resources Department.

3. In addition to previous sections. candidates applying for positions which require a valid Commercial Driver's License (CDL) will be subject to passing a pre-employment drug screening. All City employees in positions requiring a CDL must comply with the City's Drug and Alcohol Policy and Procedures Manual.

E. Safety

The City is committed to providing a safe and healthful working environment. The City makes every effort to comply with applicable federal and state occupational health and safety laws and to develop the best feasible operations, procedures, technologies and programs conducive to such an environment. Safety policy is contained in the Safety and Accident Prevention Policy and departmental Safety Manuals.

F. Weapons

No employee is authorized to carry a weapon, concealed or not, on City premises, in City vehicles, or while representing the City. An employee carrying a weapon in violation of this policy is subject to disciplinary action, up to and including termination.

G. Workplace Violence

It is the policy of the City to have zero tolerance of any acts or threats of violence by any employee in or about City facilities or elsewhere at any time. The City will not condone any acts or threats of violence against employees, customers or visitors in or about City premises at any time or while they are engaged in business with or on behalf of the City off City premises.

To ensure City objectives are attained, the City is committed to the following:

1. To provide a safe and healthful work environment, in accordance with the City safety policy.
2. To take prompt remedial action up to and including immediate termination against any employee who engages in any threatening behavior or acts of violence or who uses any obscene, abusive or threatening language or gestures.
3. To take appropriate action when dealing with customers or other visitors to City facilities who engage in such behavior. Such action may include notifying the police or other law enforcement personnel and prosecuting violators of this policy to the maximum extent of the law.
4. To prohibit employees from bringing unauthorized firearms or other weapons onto City premises.

In furtherance of this policy, employees have a duty to warn their supervisor, managers or Human Resources of any suspicious workplace activity or situations or incidents that they observe or that they are aware of that involve themselves or other employees, customers or visitors and that appear problematic. This includes, for example, threats or acts of violence, aggressive behavior, offensive acts, threatening or offensive comments or remarks and the like. Employee reports made pursuant to this policy will be held in confidence to the maximum possible extent. The City will not condone any form of retaliation against any employee for making a report under this policy.

Violation of this policy may be grounds for disciplinary action, up to and including termination.

H. <u>Tobacco and Vaping Free Workplace</u>

In order to maintain a safe and comfortable working environment and to ensure compliance with applicable laws, use of all tobacco products, including smoking and smokeless tobacco, and vapor products is prohibited at all City work locations and property, and in City owned vehicles. Smoking and vaping is prohibited within 25 feet of all building entrances, windows that open and ventilation intakes. Violation of this policy may be grounds for disciplinary action, up to and including termination.

I. <u>General Conduct</u>

Employees are expected to conduct themselves in an appropriate, professional manner. Examples of behavior that are inappropriate include, but are not limited to:

1. Insubordination
2. Theft or other criminal activity;
3. General dishonesty including falsifying employment or other City records;
4. Failing to maintain confidentiality of City information;
5. Unwillingness or inability to maintain an acceptable level of work performance.

Violation of this policy may be grounds for disciplinary action, up to and including termination.

J. Searches of Property

Employees should be aware that all offices, desks, files, computers, City issued cell phones, lockers and vehicles are the property of City and are issued for the use of employees only during their employment with the City. It may be necessary to conduct searches of employee personal property in City facilities or vehicles. In addition, the City reserves the right to search any employee's office, desk, files, locker or any other area or article on City premises. Searches may be conducted at any time without advance notice. Searches must be conducted by and authorized by the City Manager. Where reasonable, the search will be conducted by more than one person.

Employees may not use a personal lock on City property or lockers, unless authorized and only if a copy of the key or combination is retained by the City.

Violation of this policy may be grounds for disciplinary action, up to and including termination.

K. Corrective Action Procedure

1. Progressive Discipline

In taking disciplinary action, managers and supervisors may use a variety of measures. Where appropriate, managers and supervisors will follow a program of progressive discipline designed to give the employee the opportunity to correct behavior before it becomes a serious problem. Supervisors and managers also have the responsibility to provide behaviorally-specific feedback, either orally or in writing as appropriate, to employees to enable them to make improvements in their performance or correct the behavior that was a problem.

~~Please note that a~~Any or all ~~of~~ the steps outlined below, or other appropriate measures may be utilized, depending upon individual circumstances and the nature of the offense. Serious discipline, including immediate termination may occur even on the first offense, in some circumstances, depending on the severity of the situation.

The degree of corrective action depends on the severity of the situation. It is the responsibility of the supervisor to objectively evaluate the circumstances and facts involved and to consult with the Human Resources Director before beginning such action.

The City may use administrative leave with pay while conducting an investigation into an alleged wrongdoing. This leave may be used when it is necessary to remove the employee from the work place pending the outcome of the investigation.

The following are examples of a pattern of progressive discipline

a) Step One: Verbal Warning

This step is used for relatively minor offenses and problems. The supervisor verbally discusses the concerns with the employee and lets the employee

know the nature of the problem. Written documentation of the verbal warning shall be placed in the employee's personnel file.

b) Step Two: Written Warning
This step is used for a repeated offense where the discipline in Step 1 has failed to correct the problem or behavior, or for more serious problems that initially require stronger action. Under this step, a written warning is given to the employee and put in the employee's personnel file documenting the problem.

c) Step Three: Suspension
This step is used for repeated offenses where Steps 1 and 2 have failed to correct the problem or behavior, or for more serious problems that initially require stronger corrective action than the above steps. An employee is sent home without pay for a specified period of time. For an exempt employee, unpaid suspensions shall be in increments of workweeks. An exempt employee may also be given a period of time off with pay to make a personal decision as to whether to change behavior and continue employment with the City. Prior to a decision to suspend an employee, a pre-disciplinary hearing must be held.

d) Step Four: Termination
This step is to be used for instances where an employee has failed to correct their behavior after previous discipline or if there is a serious violation of City standards of conduct where immediate termination is warranted. Prior to a decision to terminate an employee, a pre-disciplinary hearing must be held.

Other examples of disciplinary methods that may be used include withholding a scheduled pay increase, pay reduction and demotion; these also require a pre-disciplinary hearing before the decision is made.

2. Pre-Disciplinary Hearing.
This section does not apply to at will employees or to employees who have not completed their initial orientation period.

When considering discipline that would deprive an employee of pay, such as a step three suspension or step four termination, the City will conduct a pre-disciplinary hearing. The hearing serves as a check against a mistaken decision and as an opportunity for an employee to furnish reasons why they should not be disciplined before the decision is finalized.

a) Notice to the Employee
The employee shall be provided with a notice of the pre-disciplinary hearing.

The notice shall include an explanation of the charges on which the potential discipline is based, and the time and date for the hearing.

b) At the Hearing
The hearing will be presided over by the Department Director or a designated representative. The hearings are intended to be informal. The employee will be given an opportunity to explain why the serious discipline should not be taken. The employee may bring one person to the hearing as

a representative. If the employee fails or refuses to appear, the Department Director shall determine the discipline without the employee's input.

c) After the Hearing

After the hearing, the Department Director will consider the information provided and will consult with the Human Resources Director. As soon as possible, the director will issue the decision. A longer review period may be required in more complex situations, and the employee will be so informed.

L. Complaint Resolution Procedure

1. Resolving Conflict Informally

It is natural to have misunderstandings and conflict in organizations. The purpose of this procedure is to provide a method for the resolution of such matters in a positive and constructive manner and to give employees a means of airing complaints regarding their employment. Employees and supervisors are encouraged to resolve the causes of conflict or disputes between themselves informally whenever possible.

2. Resolving Conflict Formally

When informal resolution fails, an employee may file a complaint in a more formal manner following the procedure outlined below. No retaliation, disciplinary action or discrimination shall occur because of the filing of a bona fide complaint under this procedure. The procedure should not, however, be construed as preventing, limiting, or delaying the City from taking disciplinary action against any employee up to and including termination where disciplinary action is deemed appropriate.

An employee who has been involuntarily separated from employment with the City has the right to participate in this process pursuant to the terms outlined below. Any complaint by a terminated employee must begin with step 3.

a) Complaint Definition

A complaint is a written allegation by an employee or former employee who has been involuntarily terminated that they have not been treated according to the personnel policies, or other rules or regulations.

b) 30 Days to Initiate a Complaint

Complaints must be initiated within 30 days of the alleged act and a copy of the complaint provided to Human Resources.

c) Step 1 Present Complaint to Supervisor

An employee should present the complaint to the supervisor and request time to meet and discuss the complaint. In consultation with Human Resources, the supervisor shall consider the complaint and all relevant information and respond to the employee in a timely manner.

d) Step 2 if Needed

If the problem is not resolved at Step 1, the employee shall next request a meeting with the Department Director. In consultation with Human Resources, the Department Director will conduct an investigation and review the matter with appropriate persons. The Department Director shall

respond to the employee within 10 working days, unless the response will take longer, in which case the director will keep the employee informed when the response will be available.

e) Step 3 Final Step if Needed

If the problem is not resolved at Step 2 and the employee wishes to pursue the complaint, they shall request a meeting with the City Manager. The City Manager shall meet with the employee. The City Manager shall also conduct an investigation or otherwise consider information relevant to the complaint.

The City Manager shall issue a decision within 15 working days unless more time is needed, in which case the City Manager shall keep the employee informed of when the response will be available. The City Manager's decision shall be final and binding on the parties.

VIII. SEPARATION FROM EMPLOYMENT

A. Resignation

The City expects a resigning employee to give written notice to their supervisor at least two calendar weeks in advance of the final working day. Unless approved by the City Manager, an employee may not use of vacation, management or personal leave immediately prior to their separation from employment for the purpose of extending health benefit coverage into another month.

B. Unauthorized Three~~3 -~~Day Absence

Unauthorized absence from work for a period of three consecutive days will be considered as a voluntary resignation, unless the employee can provide a reasonable explanation to the Department Director.

C. Separation Procedures

The Human Resources Department will verify an employee's separation date and notify payroll. A final paycheck will be issued to the employee on the next regular payday after completion of the following: exit interview, return of City keys, car, ID card, credit cards, bus pass, tools and equipment, uniforms, printed materials, and any other property or resources which had been made available to the employee. In addition, Human Resources will resolve the status of retirement plans, insurance conversions, and deferred compensation programs, and will conduct an exit interview.

D. Reduction in Force, Layoff and Recall

The City retains the sole and exclusive right to decide whether a reduction in force or layoff is necessary and to select the operational unit(s) in which layoffs will occur. This shall include, but not be limited to, circumstances where there are changes in duties, a reorganization or change in operational structure position(s) or service(s) are abolished, there is a lack of work, shortage of funding or for other legitimate business reasons.

1. **Notice**
   When a layoff is anticipated, employees whose jobs are affected will be notified in advance and will be provided an opportunity to meet with the Department Director prior to implementation of the layoff. The purpose of this meeting is to give the affected employee an opportunity to ask questions and to better understand the business reason why management selected that position for layoff. The employee may also offer additional information for consideration prior to a final decision being made and before the layoff is implemented.

2. **Order of Layoff**
   Layoffs are determined by classification on an organization-wide-basis.

   Extra help employees performing similar work will be terminated prior to regular employees being laid off.

   Regular employees will be retained based on their ability to perform work needed to meet program and organizational needs.

   Where there is no demonstrable difference in ability to perform, employees with longer service will be retained.

3. **Alternatives to Layoff**
   The City retains the right to mitigate the need for layoffs by transferring employees who would otherwise be impacted by layoffs to equivalent available vacant positions. Additional options such as part-time work schedules, job sharing, voluntary demotions and voluntary time and/or pay reductions, or furloughs may also be explored, at the discretion of the City Manager.

4. **Layoff Support**
   Regular full-time and regular part-time employees are eligible for Layoff Support. Once the employee has been notified of the future layoff, the employee shall be eligible for:

   a) Job search assistance, tailored to the particular circumstances and authorized by the City Manager.
   b) Limited time off for interviewing, subject to the approval of the Department Director.

5. **Severance**
   Regular full-time and regular part-time employees are eligible for severance. Extra-help and limited term employees are not eligible for severance. After the layoff takes effect, the employee shall be eligible to receive a severance package based on their budgeted FTE consisting of the following:

Years of Service	Severance Package
1 – 4 years	2 weeks salary + 10% sick leave
5 – 9 years	4 weeks salary + 10% sick leave
10 – 14 years	6 weeks salary + 10% sick leave
15 – 19 years	8 weeks salary + 10% sick leave
20+ years	10 weeks salary + 10% sick leave

If the employee leaves employment at the City prior to the layoff date, the employee is not eligible for the severance package.

6. Rehire List

Any regular employee who is laid off shall be placed on a City rehire list for a period of one year from the date of layoff. An employee shall not be placed on the rehire list if the employee leaves employment at the City prior to the layoff date. The City will honor an employee's written request to not be placed on or to be removed from the list.

An employee on the Rehire List shall be deemed eligible for an open regular position when:

- The employee meets the minimum qualifications listed on the classification specification based on the information contained in the employee's personnel file; and
- The position is in a salary range equal to or lower than the salary range of the position the employee was in on the date of layoff.

When hiring for any vacancy, the Department Director shall first consult Human Resources to determine if any employee on the rehire list is eligible for the vacancy. If there is an eligible employee on the rehire list, the employee shall be offered the position. In the case of more than one eligible employee on the rehire list, the position shall first be offered to the employee with the longest term of service with the City.

The employee has seven calendar days from the time the offer is sent to accept the offer; failure to do so will be considered a refusal.

An employee accepting a demotion to a position in a lower salary range shall remain on the list for the remainder of the year (based on the original layoff date).

An employee shall be removed from the list upon rehire by the City, a third refusal of a City job offer or the expiration of one year, whichever comes first.

If a department has a need to hire extra help while the City has any employees on the Rehire List, the Department Director shall first contact Human Resources before taking any other steps to hire the extra help. The extra help opportunity shall first be offered to any employees on the rehire list meeting the minimum requirements (in order of service with the City – longest first). Only if all eligible employees on the Rehire List refuse the extra help opportunity may the department proceed to outside hire. Neither acceptance nor refusal of an extra help opportunity shall affect an employee's status on the Rehire List.

E. <u>Furlough (Temporary Reduction in Hours)</u>

A furlough is a temporary reduction of work hours due to a lack of work, shortage of funding, or for other business reasons. The City retains the sole and exclusive right to decide whether a temporary reduction in force is necessary and to select the operational unit(s) and positions for which furloughs will occur. During a furlough, the employment relationship remains intact and the individual who is furloughed continues to be an employee of the organization and will resume their

regular position duties at the conclusion of the furlough. During a furlough, the employee is in an unpaid leave of absence status. A furlough differs from a layoff in that with a layoff, the employment relationship is severed. An employee who is laid off is no longer employed with the organization; they are separated from employment and considered terminated.

Increments of Furlough: Furloughs may occur in increments of a work day, a partial work week or full workweek, or months.

FLSA Exempt Status Change: FLSA exempt (salaried) employees may have their FLSA status temporarily changed to non-exempt (hourly) status during a partial workweek furlough.

Restriction to Work: During a furlough an employee is prohibited from performing work of any kind.

Notice: When a furlough is anticipated, employees whose jobs are affected will be notified in advance to allow time to make any necessary personal financial arrangements and to minimize the impact due to the anticipated loss of income.

1. **Impact of Furlough on Work Schedule and Pay**
   Furloughs are considered a leave without pay. Time while furloughed will not count toward the calculation of overtime.

   Overtime is not to be used as a method for making up time and earnings lost due to a furlough.

   Employees may not substitute paid leave for mandatory furlough days. However, if an employee is absent on the scheduled furlough day(s) due to a Worker's Comp injury, alternative furlough day(s) will be arranged.

   If an employee is on a furlough day and is requested to return to work, they will be paid according to the applicable City policy and an alternative furlough day(s) will be scheduled.

2. **Impact on Benefits During a Furlough**
   While on a furlough an employee does not earn sick or vacation leave accruals for any period of unpaid time.

   All leave accruals earned prior to a furlough will be retained and will be available for use upon return from furlough.

   An employee's anniversary date will be adjusted for any furloughs greater than three (3) consecutive months.

   Health insurance benefits and premiums paid by the City remain intact and uninterrupted during a furlough of three (3) or less consecutive months. Employees will be required to self-pay or reimburse the City for their portion of any benefit premium that would otherwise be deducted from their regular paycheck.

   For furloughs greater than three consecutive months in length, the employee will have the option to continue health benefits through COBRA.

3. **Furlough Support**
   Regular full time and regular part time employees who are subject to a furlough may be eligible for additional support services including:

   - Access to the Employee Assistance Program while on furlough.
   - Unemployment compensation and worker retraining services.

4. **Employees on Protected Leave**
   An employee who is on protected leave (e.g., family medical leave) may also be furloughed; however, under no circumstances may an employee be furloughed *because* they are on protected leave.

5. **Appeal Process**
   Unless otherwise provided for under City policies, a collective bargaining agreement, or the law, reductions in force and furloughs are not subject to the grievance process nor subject to appeal.

6. **Unemployment Compensation**
   Eligibility for unemployment compensation is subject to evaluation and determination by the Washington State Employment Security Department. Employees are directed to contact the Washington State Employment Security Department to determine eligibility in the event of a reduction in work hours due to furlough.

7. **Shared Work Program**
   The City of Shoreline participates in the Shared Work program, administered by the Washington State Employment Security Department. This program provides eligible employees an opportunity to receive unemployment benefits when their regular work hours are reduced due to a furlough.

8. **Return to Work Following a Furlough**
   At the completion of the furlough period employees will be returned to the same position they held prior to the furlough except when it is determined by the City Manager that further action is needed or if a reduction in force and layoff process is initiated.

IX. CLOSING STATEMENT

We are pleased that you have chosen to be part of our Shoreline team, if you have any questions about the information contained in this handbook, please ask your supervisor or visit Human Resources.

X. APPENDIX A - CODE OF ETHICS

The purpose of the City of Shoreline Code of Ethics is to strengthen the quality of government through ethical principles which shall govern the conduct of the City's elected and appointed officials, and employees, who shall:

1. Be dedicated to the concepts of effective and democratic local government.

   Guidelines:

   Democratic Leadership: Officials and staff shall honor and respect the principles and spirit of representative democracy and set a positive example of good citizenship by scrupulously observing the letter and spirit of laws, rules and regulations.

2. Affirm the dignity and worth of the services rendered by government and maintain a deep sense of social responsibility as a trusted public servant.

3. Be dedicated to the highest ideals of honor and integrity in all public and personal relationships.

   Guidelines:

   Public Confidence: Officials and staff shall conduct themselves so as to maintain public confidence in city government and in the performance of the public trust.

   Impression of Influence. Officials and staff shall conduct their official and personal affairs in such a manner as to give the clear impression that they cannot be improperly influenced in the performance of their official duties.

4. Recognize that the chief function of local government at all times is to serve the best interests of all the people.

   Guidelines

   Public Interest**:** Officials and staff shall treat their office as a public trust, only using the power and resources of public office to advance public interests, and not to attain personal benefit or pursue any other private interest incompatible with the public good.

5. Keep the community informed on municipal affairs; encourage communication between the citizens and all municipal officers; emphasize friendly and courteous service to the public; and seek to improve the quality and image of public service.

   Guidelines

   Accountability: Officials and staff shall assure that government is conducted openly, efficiently, equitably and honorably in a manner that permits the citizenry to make informed judgments and hold city officials accountable.

   Respectability: Officials and staff shall safeguard public confidence in the integrity of city government by being honest, fair, caring and respectful and by avoiding conduct creating the appearance of impropriety or which is otherwise unbefitting a public official.

6. Seek no favor; believe that personal benefit or profit secured by confidential information or by misuse of public time is dishonest.

   Guidelines

   Business Interests: Officials and staff shall have no beneficial interest in any contract which may be made by, through or under their supervision, or for the benefit of their office, or accept directly or indirectly, any compensation, gratuity or reward in connection with such contract unless allowed under State law.

   Private Employment: Officials and staff shall not engage in, solicit, negotiate for, or promise to accept private employment or render services for private interests or conduct a private business when such employment, service or business creates a conflict with or impairs the proper discharge of their official duties.

   Confidential Information: Officials and staff shall not disclose to others, or use to further their personal interest, confidential information acquired by them in the course of their official duties.

   Gifts: Officials and employees shall not directly or indirectly solicit any gift or accept or receive any gift whether it be money, services, loan, travel, entertainment, hospitality, promise, or any other form - under the following circumstances: (a) it could be reasonably inferred or expected that the gift was intended to influence the performance of official duties; or (b) the gift was intended to serve as a reward for any official action on the official's or employee's part.

   Investments in Conflict with Official Duties: Officials and employees shall not invest or hold any investment, directly or indirectly, in any financial business, commercial or other private transaction that creates a conflict with their official duties.

   Personal Relationships: Personal relationships shall be disclosed in any instance where there could be the appearance of a conflict of interest.

   Business Relationships: Officials and staff shall not use staff time, equipment, or facilities for marketing or soliciting for private business activities.

   Reference Checking: Reference checking and responding to agency requests are a normal function of municipal business and is not prohibited if it does not adversely affect the operation of the City.

7. Conduct business of the city in a manner which is not only fair in fact, but also in appearance.

   Guidelines

   Personal Relationships: In quasi-judicial proceedings elected officials shall abide by the directives of RCW 42.36 which requires full disclosure of contacts by proponents and opponents of land use projects which are before the City Council. Boards and Commissions are also subject to these fairness rules when they conduct quasi-judicial hearings.

   Not knowingly violate any Washington statutes, City ordinance or regulation in the course of performing their duties.

XI. CITY OF SHORELINE EMPLOYEE HANDBOOK ACKNOWLEDGMENT

I understand that the information contained in the Employee Handbook represents guidelines only and that the City reserves the right to modify, amend or terminate these policies at any time.

I understand that these policies are not a contract of employment, express or implied, or a guarantee of employment for any specific duration between me and the City and I should not view it as such.

I acknowledge receipt of these policies and have read and understand their contents.

Employee's Signature _____ Date _____

Printed Name _____

Article	Section	Article Number and Subject	Comments
Various	Various	Minor corrections/clarification - not material changes	
Article III	**III. DEFINITIONS**		
	Definitions	**Fit For Duty** - Expanded definition to provide greater clarity about what it means to be "fit for duty". **Flex Time** - Added a definition to describe what flex time meants. **Remote Work** - Added new defintion of Remote Work	Added and expanded definitions.
Article IV	**IV. EMPLOYMENT POLICIES**		
	Recruitment and Selection	"Hiring managers may use an existing applicant pool from a recruitment that occurred no more than six (6) months prior to identify and interview candidates to fill a vacant position in a same job classification	Added language to provide more flexibility to hiring manager so that they can utilze recent candidate pool from previous recruitments.
Article V	**GENERAL WORKING CONDITIONS AND PERSONNEL ADMINISTRATION**		
A.	Working Hours	~~An employee, with approval of the supervisor, may~~ On occasion an employee may request to flex their time and adjust ~~flex/shift~~ their regular work schedule to facilitate dental, doctor and similar appointments that fall within their workday. ~~Flexing a schedule~~ Approval of flex time will be based on specific need or circumstance and is not intended to occur on a regular basis. Any change to an employee's schedule must be approved by their supervisor.	Provides clarity that an employee may flex their work schedule, with supervisor approval, to accommodate personal needs
B.	Breaks Lunch and Rest Breaks	…In addition, employees are entitled to a paid fifteen-minute rest break…	Increased break time from 10 - 15 minutes to be consistent with CBA
C.	Overtime	...Overtime shall be paid for in increments of fifteen (15) minutes. Employees who have been authorized to flex their work schedule do not incur overtime for the hours worked beyond their normally scheduled shift on the approved flex days(s)...	Added language to provide clarity and consistency with CBA. Current handbook does not contain reference to what increments of time overtime is recorded

Article	Section	Article Number and Subject	Comments
D.	Standby	...The Employee must remain Fit for Duty for the entire period of their standby duty.	Additional language added to be consistent with CBA and to clarify expectation of employee when they are on standby
E.	Callback	...When work to resolve an issue occurs remotely, such as by phone or email without physically arriving to the work site, the minimum increment of compensation is fifteen (15) minutes at a rate of time and one-half.	Additional language added to be consistent with CBA. Accounts for possiblity of resolving issues remotely and compensation that will be paid in these situations
G.2	Twelve Hour Shift - Shift Differential	In recognition of the inconvenience of having to work unusual hours with very little notice and under conditions that are generally difficult due to weather or other uncomfortable conditions, employees assigned to the declared 12-hour shift shall receive an additional $3 per hour shift differential for all hours worked ~~beyond their normal assigned shift.~~ Employees assigned to the night shift will receive a night shift premium of three dollars ($3.00) per hour in addition to the shift differential received for hours worked on a declared 12-hour shift. For purposes of this section, night shift constitutes a 12-hour shift beginning on or after 9 p.m.	Adding provisions from the CBA so that we are consistent in our language and application
G.2.4.	Alternative Night Shift Premium	Employees scheduled to work a shift beginning on or after 9 p.m. or before an employee's regularly scheduled shift outside of the 12-hour shift declaration shall receive a night shift premium of three dollars ($3.00) per hour for the duration of the shift. This work could include street sweeping, road repairs, or any other authorized work. Employees who are receiving Callback are not eligible for Alternative Night Shift Premium.	Provides compensation for situations where an employee is required to perform work outside of their designated 12 hour shift.

Article	Section	Article Number and Subject	Comments
H.	Remote Work	Regular on-going Remote Work requires an agreement between the employee and the supervisor. Remote Workers must comply with all of the terms and conditions outlined in the City's Remote Work policy and Agreement established. A Remote Work agreement may Regular on-going Remote Work requires an agreement between the employee and the supervisor. Remote Workers must comply with all of the terms and conditions outlined in the City's Remote Work policy and Agreement established. A Remote Work agreement may be modified or revoked by management, with notice to the Remote Worker, at any time.	Adding reference to new Remote Work policy
I.3.	Inclement Weather and Natural Disaster	In the event that the City Manager advises employees not to report to work or to leave early due to inclement weather, natural disaster, or other event that results in the unplanned closure of a City facility, such time off will be paid time off and not charged to accrued vacation leave or compensatory time	Provides for additional situations that may result in the closure of a City facility
L.	Employee Education, Training and Development	Employee Education, Training and Development It is the intent of the City to provide education and training opportunities to employees so that they can increase their job related skills and maximize performance. Regular employees may request reimbursement for and/or seek payment of registration and tuition fees associated with educational courses and training directly related to the employee's job function or professional development goals	Consolidated and simplified the language

Article	Section	Article Number and Subject	Comments
L.1	Academic Courses	Academic Courses: Employees may request reimbursement for or payment of registration fees and tuition fees when taking courses from an accredited vocational school, college or university. Courses must be reasonably related to the employee's current job function or must be in alignment with the employee's professional development goals, as documented in the employee's Professional Development Plan. Tuition reimbursement is limited to six credit hours per semester or nine credit hours per quarter, and must be approved in advance by the supervisor. Courses are not to interfere with the employee's work schedule and must be taken on the employee's own time. Reimbursement is contingent upon departmental budget and funding resources, and achieving a passing grade.	
L.2.	Non-Academic Courses, Conferences & Training	Non-Academic Courses, Conferences & Training Employees may request reimbursement for or payment of registration fees for training, workshops, or conferences that, in management's opinion, is related to the employee's job duties and will enhance their job skills. Funding is limited and subject to Department Director approval and budgetary resources. Employees who have received educational funding support from the City, but fail to attend the workshop/conference, or do not complete the training, may be asked to reimburse the City for any costs incurred.	Added language to show support for employee learning and development.

Article	Section	Article Number and Subject	Comments
M.3.	Pregnancy Accommodation & Accommodations after Birth of Child	Employees who have health conditions related to pregnancy can request workplace accommodation recommended by their physician in form of leave, schedule adjustment, workplace or working conditions adjustments. Accommodation requests related to more frequent breaks or limitations for lifting object over 17 pounds do not require medical documentation. Eligible employees may request a reasonable amount of time during the work shift to express breast milk for a nursing child within one year after the child's birth.	Updated language to remain current with description provided in leave law
VI	**BENEFITS**		
E.	Vacation Accrual Table	Addition of two (2) vacation days after achieving 20 years of service with the City.	Employees can now earn up to 25 days of vacation per year after completing 20 years of service with the City
G.	Observed Holidays	Addition of Juneteenth (June 19) as an official holiday for the City	Adds an 11th holiday that is recognized by the City
H.4.	Other Accrued Leave as an Extension of Sick Leave	Earned leave may be used in place of and as an extension of sick leave when an employee has exhausted their own sick leave accruals and needs additional time off work due to illness, injury, or disability.	Codifies practice of allowing employees to use other earned leave accruals after exhausting all of sick leave.
J.	Donated Leave	Upon an employee's request, a Department Director, after consulting with Human Resources, may recommend that the City Manager allow a regular employee to receive donated sick leave from another regular employee. The City Manager may approve the donated leave if they find that the employee meets all of the following criteria.	Allows an employee to make a request for donated leave to their Department Director

Article	Section	Article Number and Subject	Comments
J.2.	Donation	An employee may donate up to 25 hours annually of their sick leave and vacation balance. An employee is not eligible to donate sick leave hours unless a balance of 80 hours will be maintained. ~~An employee may also choose to donate accrued vacation leave~~...	Caps donated leave at 25 hours of either sick leave and/or vacation.
K.	Paid Family and Medical Leave	Updated name of Supplemental Paid Family Leave	

Council Meeting Date: August 16, 2021 **Agenda Item:** 7(e)

CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Authorizing the City Manager to execute a 99-year ground lease with Catholic Housing Services for city-owned property located at 198th and Aurora Avenue N and to join in a Section 42 Extended Use Agreement for low-income tax credits so as to provide affordable housing with supportive services
DEPARTMENT:	City Manager's Office
PRESENTED BY:	Nathan Daum, Economic Development Manager
ACTION:	____ Ordinance ____ Resolution __X_ Motion ____ Public Hearing ____ Discussion

PROBLEM/ISSUE STATEMENT:

In 2017, the City entered into a partnership with King County to develop a request for proposals for affordable housing on the City-owned property located at N 198th St and Aurora Ave N, the majority of which is surplus property from the Aurora Corridor Project. In 2020, City Council formally recognized Catholic Housing Services of Western Washington (CHS) as the owner-operator for the project, authorizing the City Manager to award a lease option to CHS. The next step in the process is for the City and CHS to enter into the 99-year ground lease as outlined in the lease option which will enable the project to move forward into the construction phase. In order for the developer to secure permits and financing, City Council approval is needed to authorize the City Manager to execute the long-term ground lease and a Section 42 Extended Use Agreement.

RESOURCE/FINANCIAL IMPACT:

Tax Parcel #222730-0025 was purchased for $1,043,200 and Tax Parcel #222730-0030 was purchased for $1,043,200, for a total of $2,086,400. These two properties were purchased using federal grant money for the Aurora Corridor Project in 2012. Tax Parcel #222730-0036, purchased for $225,000 in 2015, was acquired to create a more buildable assemblage when the City was approached by the owners with a compelling offer. Staff estimates that the current total market value of the three parcels is at least $2.0 million. The proposed 99-year lease provides the property for the purposes of affordable housing at a rate of one dollar ($1.00) per year.

RECOMMENDATION

Staff recommends that the City Council authorize the City Manager to execute a 99-year ground lease for three (3) parcels located at N 198th St and Aurora Ave N to Catholic Housing Services of Western Washington (CHS) for the purposes of developing and operating affordable housing and supportive services, execute Section

42 Extended Use Agreement in order to secure low-income tax credits, and take the necessary steps to complete the transition to CHS use of the site.

Approved By: City Manager ***DT*** City Attorney ***MK***

BACKGROUND

The City owns three parcels of property (Tax Parcels #222730-0025, #222730-0030, and #222730-0036), with a total area of 34,360 square feet at the northeast corner of Aurora Ave N and N 198th St. A map that includes the parcel numbers is included as Attachment A. Two parcels were bought as part of the Aurora Corridor Project. A third was acquired to create a more buildable assemblage when the City was approached by the owners with a compelling offer. The three parcels together are known as the 198th Property.

Once the Aurora Corridor Project was complete, the City determined it would no longer need these parcels for transportation purposes. During the August 8, 2016, City Council meeting, Council discussed what to do with the 198th Property, including leasing the property to a third party. Council directed staff to investigate using the property for affordable housing. More information about this discussion can be found here: Use and Surplus of Real Property.

During the March 6, 2017 City Council meeting, Council discussed a massing study to determine the potential of the site as well as a King County Department of Community and Human Services Development Concept. King County also presented on the potential Request for Proposal (RFP) process to select an affordable housing developer and onsite service provider. More information about this discussion can be found here: Discussion of Affordable Housing Options for 198th Property.

King County subsequently conducted the RFP process and chose Community Psychiatric Clinic (CPC) to develop and manage the apartment building with Catholic Housing Services of Western Washington (CHS). City Council was briefed on what was now called the 198th Affordable Housing Project at the September 24, 2018, City Council dinner meeting. This included meeting and hearing from representatives of both CPC and CHS. The memo for this discussion can be found here: Dinner Meeting with Development Partners for the 198th Affordable Housing Project.

During the January 14, 2019, City Council meeting, Council authorized the City Manager to provide an option to lease the property in order to allow the project owner, at the time CPC, to move into the financing phase. The staff report for this decision can be found at the following link: Authorizing the City Manager to Award an Option to Lease the City Owned 198th Property to Community Psychiatric Clinic for Affordable Housing and Supportive Services.

Following this Council action in 2019, CPC merged into another nonprofit behavioral healthcare entity, Sound, and was no longer available to serve as project owner. CHS then stepped into the leadership role as both developer and owner-operator of the housing with supportive services planned for the City-owned property at 198th. This change in project leadership required redirecting capital funding from CPC to CHS. On June 15, 2020, Council authorized the City Manager to award an option to lease the property to CHS, providing CHS with the evidence of site-control necessary to secure those funds. The staff report for this decision can be found at the following link: Authorizing the City Manager to Award an Option to Lease the City Owned 198th

Property to Catholic Housing Services of Western Washington for Affordable Housing and Supportive Services.

DISCUSSION

Since the lease option, staff has been working with CHS to prepare a ground lease (Attachment B) acceptable to both parties. To adequately fund the project, CHS is planning to secure low-income tax credits it is eligible for under Section 42 of the Internal Revenue Code. As owner of the property, the City needs to be a party to an Extended Use Agreement (Attachment C). If City Council authorizes the execution of these documents, the project will be able to secure required financing, permits, and anticipates starting construction Fall 2021 with completion by Winter 2023.

Ground Lease Terms

The proposed ground lease agreement (Attachment B) sets a lease rate of one dollar ($1.00) per year over a term of 99-years as previously directed by City Council.

The ground lease generally provides for the following:

- Identifies CHS as the sole responsible party for any costs, taxes, or other obligations related to the property;
- Ensures insurance and indemnity to protect the City;
- Ensures the City retains some basic rights, such as the ability to grant easements or liens on the property if needed;
- Specifies the purpose and intent of the lease as affordable housing with supportive services, with the affordability level set at no more than 80% of Area Median Income (AMI).

While the ground lease sets the affordability level at 80%, due to requirements associated with the sources of financing for this project, CHS anticipates exceeding this affordability term, providing 50 of the 100 housing units at rents affordable to households making no more than 30% of AMI, and the remaining 50 units to those making no more than 50% AMI.

Housing Finance Commission Agreement

In addition to the ground lease, the City, as property owner, will need to join with CHS in an Extended Use Agreement (Attachment C) with the Washington State Housing Finance Commission (HFC). This Agreement ensures that CHS can secure low-income tax credits thru Section 42 of the Tax Reform Act of 1985.

The low-income housing tax credit is a dollar-for-dollar tax credit for affordable housing. All properties allocated tax credits must have a recorded Extended Use Agreement. This agreement is for 30 years. The City is shown as the owner of the property and Section 7.4 sets forth City's obligations. Essentially, the City has no liability under the Agreement unless the lease on the Project terminates and the City has succeeded in CHS's interest in the Project. In addition, additional protection is shown in that the Agreement is enforceable against the City only to the extent of its interest in the Project and shall not be enforceable against, subject to execution on, or be a lien on, any other assets of the City. Thus, the City's participation serves to ensure that the covenant can

be recorded on the City property so CHS can receive the tax credits. Otherwise, the City has little to no responsibility/liability.

Next Steps
If Council authorizes the City Manager to execute the ground lease and Extended Use Agreement, CHS will have the necessary agreements in place to secure the permits and financing needed to build the project. If Council rejects the lease, CHS will be ineligible for permits and financing.

COUNCIL GOAL(S) ADDRESSED

This project was initiated in response to the 2018-2020 City Council Goals, specifically: "Goal 1: Strengthen Shoreline's economic climate and opportunities" which stated in Action Step #5:

> "Encourage affordable housing development in Shoreline, including continued promotion of the Property Tax Exemption program, *partnership with King County in the development of affordable housing on the City's property at Aurora Avenue and N 198th Street*, and identify opportunities for integration of affordable housing at the future community and aquatic center facility."

RESOURCE/FINANCIAL IMPACT:

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RECOMMENDATION

Staff recommends that the City Council authorize the City Manager to execute a 99-year ground lease for three (3) parcels located at N 198th St and Aurora Ave N to Catholic Housing Services of Western Washington (CHS) for the purposes of developing and operating affordable housing and supportive services, execute Section 42 Extended Use Agreement in order to secure low-income tax credits, and take the necessary steps to complete the transition to CHS use of the site.

ATTACHMENTS

Attachment A: Parcel map of 198th Property
Attachment B: Proposed Lease Agreement
Attachment C: Extended Use Agreement

Attachment A

November 15, 2018

1:480

0 0.005 0.01 0.02 mi

0 0.0075 0.015 0.03 km

City Boundary - outline

Site Address

Mailable

Location

Street

Outside Shoreline

Interstate

Principal Arterial

Minor Arterial

Collector Arterial

Local Primary

Local Secondary

Tax Parcel

City of Shoreline GIS

GROUND LEASE AGREEMENT

THE CITY OF SHORELINE,
a Washington municipal corporation

and

CHS SHORELINE LLC,
a Washington limited liability company

SHORELINE MODULAR
PERMANENT SUPPORTIVE HOUSING PROJECT

GROUND LEASE AGREEMENT

This Ground Lease Agreement (this "Lease") is dated as of _____, 2021, by and between THE CITY OF SHORELINE, a Washington municipal corporation ("Lessor" or "City") and CHS SHORELINE LLC, a Washington limited liability company ("Lessee").

Recitals

Lessor is the legal owner of approximately 0.753 acres of real property situated at 19806 Aurora Avenue in the City of Shoreline, King County, Washington, 98133, and legally described in **Exhibit A** attached to this Lease (the "Property").

Lessor acquired the Property as part of the Aurora Corridor Capital Improvement project which received federal transportation funding; the terms and conditions of such federal funding included restrictions on the transfer of the Property for non-public purposes.

Lessee intends to develop the Property as a mixed use structure (the "Building") known as Shoreline Modular Permanent Supportive Housing containing: i) a basement level parking garage consisting of 52 parking stalls (the "Garage"); ii) approximately 5,800 square feet of ground floor area commercial space (the "Commercial Space"); and iii) 100 units of affordable housing and support service space (the "Housing Project" and together with the Garage and Commercial Space, collectively the "Project"). A Site Plan of the Project is attached to this Lease as **Exhibit B**.

Lessor has determined that the Project, specifically the Housing Project, is a public use consistent with the terms and conditions of the federal funding restrictions.

Lessor shall have no responsibility for, and Lessee shall pay all costs associated with, Lessee's development and operation of the Project.

Lessee has or will obtain an allocation of federal low-income housing tax credits for residential rental property in accordance with Section 42 of the Internal Revenue Code of 1986, as amended (the "Code"), for the provision of long-term low-income housing. The Lessor and Lessee will enter into a Regulatory Agreement (Extended Use Agreement) (the "Extended Use Agreement") with the Washington State Housing Finance Commission.

It is Lessor's and Lessee's intent that Lessee shall be treated as the owner of the Project for federal income tax purposes; that at all times during the term of this Lease, Lessee alone shall be entitled to all of the federal tax attributes of ownership of the Project, including, without limitation, the right to claim depreciation or cost recovery deductions and the right to claim all tax credits including, without limitation, the low-income housing tax credit described in Section 42 of the Code; and that Lessee shall have the right to amortize capital costs and to claim any other federal tax benefits attributable to the Project.

Lessor wishes to lease the Property to Lessee, and Lessee wishes to lease the Property from Lessor, under the terms and conditions set forth below.

Certain capitalized terms used herein have the meanings set forth in **Exhibit C** attached to this Lease, which shall be incorporated fully into the terms of this Lease.

Agreement

NOW, THEREFORE, in consideration of the covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Grant. Lessor leases to Lessee, and Lessee leases from Lessor, the Property upon the terms and conditions contained in this Lease.

2. Rights and Obligations. Throughout the Term, except as expressly stated elsewhere in this Lease, Lessee shall own the Project and Lessee shall have the following rights and obligations:

(a) unconditional obligation to bear the economic risk of depreciation and diminution in value of the Project to obsolescence or exhausting, and shall bear the risk of loss if the Property and/or the Project is destroyed or damaged;

(b) unconditional right to receive all economic benefits associated with the Project (i.e. appreciation/increase in value), including the right to retain all of the net proceeds from any sale or refinancing of the Project and Lessee's leasehold interest in the Property;

(c) unconditional obligation to construct the Project;

(d) unconditional and exclusive right to the possession and control of the Project;

(e) unconditional obligation to maintain insurance coverage on, and such reserves with respect to, the Project as may be required by the members of Lessee and/or any mortgage lenders with respect to the Project which coverage shall include the mortgage lenders as additional insured;

(f) unconditional obligation to pay all taxes levied on, and assessments made with respect to, the Project and the Property, as well as the right to challenge such taxes and assessments and receive refunds;

(g) unconditional and exclusive right to receive rental and any other income or profits from the Project;

(h) unconditional obligation to pay for all of the capital investment in the Project;

(i) unconditional obligation to pay for all maintenance and operating costs in connection with the Project;

(j) unconditional and exclusive right to include all income earned from the operation of the Project and claim all deductions and credits generated with respect to the Project on its annual federal, and if any state and local, tax returns;

(k) unconditional right to develop the Project and to operate and manage the Project in accordance with this Lease and any and all documents not inconsistent with this Lease executed in connection with the financing, development, operation and management of the Project, as such documents may be amended from time to time (the "Project Documents");

(l) subject to written approval by the City, to enter into easement agreements and to grant any and all .easements in conjunction with the development and operation of and the Project, provided, that Lessor shall have an absolute right to enter into easement agreements related to utilities including but not limited to electric power, telephone, cable television, natural gas, water and sewer services, and drainage so long as such easements do not interfere with operation of the Project; and

(m) unconditional and exclusive right to sublease individual dwelling units in the Project or sublease the Commercial Space, in whole or in part.

In addition, Lessor shall not be entitled to receive any proceeds of any of the loans made to Lessee for the Project or otherwise have any rights, title, interests or benefits from, of or to such loans.

Except for the Permitted Encumbrances, including any lien rights for unpaid taxes and assessments, and easement agreements subject to Lessor approval as identified in Section 2(l) of this Lease, Lessor shall have no power, right or authority to encumber, lien or to grant rights on, in or to the Property.

3. Use. Lessee shall use the Housing Project primarily for the purpose of providing Affordable Housing for Qualified Tenants. The Garage and Commercial Space may be used for any lawful use. Any change in the use must be approved by the City, with such approval not unreasonably withheld unless, in the City's sole opinion, the use is not a public use under the terms of the federal funds utilized by the City to purchase the Property. Lessee shall notify the City in writing at least one hundred eighty (180) days prior to the date Lessee desires the use to change.

4. Term. This Lease shall be in effect from the date of mutual and complete execution of this Lease ("Effective Date") for a 99-year term through _____, 2121, unless earlier terminated as herein provided or as otherwise provided by law.

5. Rent.

5.1 Base Rent. Lessee shall pay to Lessor, at 17500 Midvale Ave N, Shoreline, WA 98133: Attn: Accounts Receivable, or at such other address as Lessor shall specify from time to time, rent in the amount of One Dollar ($1.00) per year, which rent shall be prepaid as of the date hereof. Subsequent rent is payable by Lessee on each anniversary of the Effective Date of this Lease. Lessee reserves the right to prepay the entire Term or portions thereof, but no acceptance of prepayment shall affect the right of Lessor to terminate this Lease pursuant to other provisions contained herein in this Lease.

6. "As-Is"; Improvements.

6.1 Lessee accepts the Property "as is" for Lessee's intended use and assumes the risk of any detects in the condition of the Property and acknowledges that the City makes no warranties or representations, expressed or implied, as to condition, suitability, zoning, restrictions, or usability, except as specifically noted herein, for Lessee's intended use of the Property. Lessee agrees that the City shall have no liability or obligation as a result of any defect or condition of the Property, including without limitation latent defects, to perform any maintenance, repair, or work of any kind except as expressly provided in this Lease.

6.2 Lessee shall develop the Property consistent with the Site Plan and all permits required by jurisdictions having authority, including but not limited to the City of Shoreline and State of Washington Department of Labor and Industries, except as approved by Lessor and Investor Member, and in compliance with all applicable laws and regulations. Construction of the improvements shall commence no later than December 31, 2021, subject to extraordinary events or circumstances beyond Lessor or Lessee's control such war, strike, riot crime, epidemic, or extreme weather events.

6.3 Lessee shall be solely responsible for any utility upgrades necessary to provide services to the Project and for the authorized use, including new connections to water or sewer systems.

6.4 Lessee shall have the exclusive right to deduct, claim, retain and enjoy any and all rental income appreciation, gain, depreciation, amortization, and tax credits for federal tax purposes relating to the improvements, substitution therefor, fixtures therein and other property relating thereto.

7. Repairs and Maintenance. Lessor shall have no responsibility whatsoever for any maintenance, repairs and replacements, whether structural or nonstructural, ordinary or extraordinary, necessary to maintain the Project or the Property. Lessee shall be fully responsible for construction, maintenance, repair and replacement of the Project and upkeep of the Property; will permit no waste, damage, or injury to the Project or the Property; and will maintains the Project and the Property in good condition and repair at all times.

8. Services. Lessee shall make arrangements for the provision to the Project of all utilities. Lessee shall directly pay for all utilities supplied to the Project, unless such utilities are billed to the Project, or any subtenants.

9. Taxes. Lessee shall pay all real estate taxes and assessments levied or assessed directly against the Project and Property, and all other governmental taxes and assessment related to the Project or the Property including without limitation income and business and occupation taxes, local improvement assessments, fire district or school district levies, and sewer capacity charges. Lessee may at its sole cost and expense, and in its own name, dispute and contest any taxes or assessments charged against the Project or Property.

As authorized by Chapter 82.29A RCW, Chapter 3.25 SMC imposes a leasehold excise tax on the act or privilege of occupying or using publicly owned real property. SMC 3.25.030 adopts the exemptions set forth in RCW 82.29A.130 and .135. RCW 82.29A.130(8) exempts leasehold

interests for which annual taxable rent is less than two hundred fifty dollars ($250.00) per year. HOWEVER, if during the term of this Lease Chapter 82.29A RCW is amended so as to impose a leasehold excise tax on Lessee's use of the Property, then Lessee shall be responsible for such tax.

10. Indemnification.

10.1 By Lessee. During the Term, Lessee agrees to indemnify Lessor, its officers, officials, employees and volunteers and hold Lessor, its members, officers, officials, employees and volunteers harmless from all claims, actions, causes of action, judgments, liabilities, expenses, costs and reasonable attorneys' fees and all limitations, restraints, penalties or obligations pertaining to Lessor or its officers, officials, employees and volunteers arising or alleged to arise out of one or more of the following: a) any failure of Lessee's warranties hereunder to be true, complete and accurate in all material respects; or (b) to the maximum permitted by applicable law, any act, omissions, or neglect in connection with Lessee's (including Lessee's employees, agents, officers, licensees, invitees or other occupants of the Project) actions on or about the Property and/or related to the Project, except where such is a result of the negligence or willful misconduct of Lessor or its officers, officials, employees and volunteers. This paragraph shall survive the termination of this Lease for a period of thirty-six months.

10.2 By Lessor. During the Term, Lessor agrees to indemnify Lessee and its members, officers, employees and agents for and hold Lessee and its members, officers, employees and agents harmless from all claims, actions, causes of action, judgments, liabilities, expenses, costs and reasonable attorneys' fees and all limitations, restraints, penalties or obligations pertaining to Lessee or its members, officers, employees and agents arising or alleged to arise out of one or more of the following: a) any failure of Lessor's warranties hereunder to be true, complete and accurate in all material respects; or (b) to the maximum permitted by applicable law, any act, omissions, or neglect in connection with Lessor's or Lessor's officers, officials, employees and volunteers negligence or willful misconduct on or about the Property. This paragraph shall survive the termination of this Lease for a period of thirty-six months.

10.3 Waiver of Subrogation. Lessee and Lessor hereby release and discharge each other from all claims, losses, and liabilities arising from or caused by any hazard covered by property insurance on or in connection with the Property. This release shall apply only to the extent that such claim, loss or liability is covered by insurance.

11. Insurance; Damage, Destruction

11.1 During the Term, Lessee shall, at its own expense, procure and maintain insurance against claims for injuries to persons or damage to property which may arise from or in connection with Lessee's operation of the Project and use of the Property. The City reserves the right to require higher levels of insurance based on market changes or risk assessments during the Term. Insurance is to be placed with insurers with a current A.M. Best rating of not less than A: VII. Lessee shall obtain the following types of insurance:

(a) Commercial General Liability Insurance covering premises, operations, independent contractors' liability and damages for personal injury, property damage,

and sexual misconduct coverage, with a limit of no less than $2,000,000 each occurrence and $2,000,000 general aggregate.

(b) During the term of construction of the Project, Builder's Risk Insurance - Physical Damage Insurance that include the perils of "All Risk", but not including Earthquake and Flood coverage, for the full replacement value of the Project. Lessee shall be responsible for any deductibles and any amounts of losses not covered due to coinsurance provisions.

(c) Commencing no later than the date of termination of any builder's risk coverage obtained by Lessee, Property Insurance covering the full value of Lessee's Improvements and personal property with no co-insurance provisions.

(d) The City shall be named as additional insured on Lessee's Commercial General Liability insurance policy. Lessee's Commercial General Liability insurance policy or policies are to contain or be endorsed to contain that they shall be primary insurance as respect the City. Any insurance, self-insurance, or self-insured pool coverage maintained by the City shall be excess of the Lessee's insurance and shall not contribute with it. If Lessee maintains higher insurance limits than the minimums shown above, the City shall be insured for the full available limits of Commercial General and Excess or Umbrella liability maintained by Lessee, irrespective of whether such limits maintained by Lessee are greater than those required by this Lease or whether any certificate of insurance furnished to the City evidences limits of liability lower than those maintained by Lessee.

11.2 Lessee shall furnish the City with original certificates and a copy of any amendatory endorsements, including but not necessarily limited to the additional insured endorsement, evidencing the insurance requirements of the Lessee pursuant to this Lease. Lessee shall provide the City with written notice of any policy cancellation no later than five (5) business days of Lessee's receipt of such notice.

11.3 Failure on the part of Lessee to maintain the insurance as required herein shall constitute a material breach of the Lease, upon which the City may, after giving five (5) business days' notice to Lessee to correct the breach, terminate the Lease or, at the City's sole discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid by the Lessee to the City on demand.

11.4 Lessee's maintenance of insurance as required by this Lease shall not be construed to limit the liability of Lessee to the coverage provided by such insurance, or otherwise limit the City's recourse to any remedy available at law or in equity.

12. Successors. All covenants, agreements, terms and conditions contained in this Lease shall apply to and be binding upon Lessor and Lessee and their respective permitted successors and/or assigns.

13. Labor and Material Liens. Lessee shall pay, when due (or bond over), all claims for labor or materials furnished or alleged to have been furnished to or for Lessee at or for use in the Project or Property, which claims are or may be secured by mechanics' or materialmen's liens against the Project or Property or an interest therein. If Lessee, in good faith, contests the validity

of any lien, claim, or demand, Lessee shall, at its sole expense, defend itself and Lessor and shall satisfy any adverse judgment before its enforcement against Lessor or the Project or Property.

14. Representations and Warranties.

14.1 Representations and Warranties of Lessor. As of the date hereof, Lessor hereby represents and warrants as follows:

(a) Lessor is a Washington municipal corporation, duly organized under Title 35A RCW and validly existing under and pursuant to the constitution and laws of the State, and has full power and authority under the constitution and laws of the State to enter into the transactions contemplated on its part by this Lease, and to carry out its obligations hereunder. Lessor has duly authorized the execution and delivery of this Lease and the performance of its obligations under this Lease. This Lease constitutes a valid and legally binding obligation of Lessor, enforceable in accordance with its terms, except as may be limited by laws relating to bankruptcy, insolvency, reorganization or moratorium or other similar laws affecting creditors' rights, and equitable principles.

(b) Neither Lessor's execution and delivery of this Lease, Lessor's consummation of the transactions contemplated on its part hereby, nor Lessor's fulfillment of or compliance with the terms and conditions or provisions of this Lease conflicts in any material respect with or results in the breach of any of the terms, conditions or provisions of any constitutional provision or statute of the State or of any agreement, instrument, judgment, order or decree to which Lessor is now a party or by which it is bound, or constitutes a default under any of the foregoing, or results in the creation or imposition of any lien, charge or encumbrance of any nature upon any property or assets of Lessor prohibited under the terms of any instrument or agreement.

(c) There is no litigation pending or, to the best of Lessor's knowledge, threatened against Lessor in connection with Lessor's execution, delivery or performance of its obligations under this Lease, or the organization, powers or authority of Lessor, or the right of the officers of Lessor to hold their respective offices.

(d) Lessor holds fee simple title to the Property, and there are no liens or encumbrances against Property other than Permitted Encumbrances.

(e) Lessor has obtained required consent, approval, authorization or order of its governmental body for the execution and delivery of this Lease or the fulfillment of and compliance with the provisions hereof.

14.2 Representations and Warranties of Lessee. As of the date hereof, Lessee hereby represents and warrants as follows:

(a) Lessee (1) is a limited liability company duly organized and validly existing under the laws of the State, (2) is qualified, licensed, and authorized to conduct affairs in the State; (3) has full power and authority to lease the Property and operate the Project, to carry on its business as now conducted and to enter into and perform its obligations under this Lease; and (4) has duly authorized the execution and delivery of this Lease. This Lease constitutes a valid and legally binding obligation of Lessee, enforceable in accordance with its terms, except as may be limited by laws relating to bankruptcy, insolvency, reorganization or moratorium or other similar laws affecting creditors' rights, and equitable principles.

(b) Neither Lessee's execution and delivery of this Lease and Lessee's consummation of the transactions contemplated hereby, nor Lessee's fulfillment of or compliance with the provisions of this Lease conflicts with or violates in any material respect, or will result in a material breach of any of the terms, conditions or provisions of any agreement, instrument, statute, governmental rule or regulation, court order, judgment or decree to which Lessee is now a party or by which it or any of its property is bound, or constitutes a material default under any of the foregoing which has not been waived or consented to in writing by the appropriate party or parties, or results in the creation or imposition of any lien, charge, security interest or encumbrance of any nature whatsoever upon any of the property or assets of Lessee prohibited under the terms of any such restriction, agreement, instrument, statute, governmental rule or regulation, court order, judgment, or decree. Lessee will not execute any other agreement with provisions contradictory to, or in opposition to, the provisions hereof.

(c) There is no litigation pending or, to the best of Lessee's knowledge, threatened against Lessee affecting its ability to develop the Project or the performance of its obligations hereunder.

(d) No consent, approval, authorization or order of any governmental body is required to be obtained by Lessee for the execution and delivery of this Lease, the fulfillment of and compliance with the provisions hereof, or the development of the Project, except such as have already been obtained or will be obtained in a timely manner.

(e) All tax returns (federal, and state and local if any) required to be filed by or on behalf of Lessee have been filed, and all taxes, if any, shown thereon to be due, including interest and penalties, except such, if any, as are being actively contested by Lessee, have been paid or adequate reserves have been made for the payment thereof.

15. <u>Subordination; Permitted Encumbrances</u>. Lessor and Lessee acknowledge that this Lease shall be subject to the Extended Use Agreement and upon execution of the Extended Use Agreement, the Extended Use Agreement shall be incorporated herein by reference. Lessee acknowledges that Lessor has or will execute the Extended Use Agreement solely to comply with the requirements of the Code that the covenants contained in the Extended Use Agreement run with the land in order to secure the allocation of low-income housing tax credits for the Project. The Lessor shall have no liability under the Extended Use Agreement unless the Lease has been terminated and the Lessor has succeeded to the Lessee's interest in the Project. So long as the Lease is in effect and the Lessee or a transferee of the Lessee is the lessee, in any action to enforce

the obligations of Lessee to pay any indebtedness or perform any obligations created or arising under the Extended Use Agreement, any judgment or decree shall be enforceable against the Lessor only to the extent of its interest in the Project and shall not be enforceable against, subject to execution on, or be a lien on, any other assets of the Lessor. Lessor shall execute such other documents as the Washington State Housing Finance Commission shall reasonably require to provide evidence of such subordination.

16. Defaults; Remedies.

16.1 Defaults. Each of the following shall constitute an Event of Default hereunder:

(a) Failure by Lessee to make any required rent or any other payment as and when due hereunder, if the failure continues for a period of fifteen (15) business days after written notice from Lessor or failure of Lessee to comply with or perform any other obligation under this Lease for a period of 90 (ninety) days after written notice from Lessor; provided if Lessee's non-monetary default reasonably requires more than ninety (90) days for its cure, Lessee will not be in default if it commences to cure within the ninety (90) day period and thereafter diligently pursues its completion.

(b) Failure by Lessee to comply with the requirements pursuant to this Lease to provide Affordable Housing for Qualified Tenants for a period of ninety (90) days after written notice from Lessor. If the nature of Lessee's default reasonably requires more than ninety (90) days for its cure, Lessee will not be in default if it commences to cure within the ninety (90) day period and thereafter diligently pursues its completion.

(c) Lessee's making any general assignment or arrangement for the benefit of creditors; the filing by or against Lessee of a petition to have it adjudged a bankruptcy or a petition for reorganization or arrangement under any bankruptcy law (unless any petition filed against Lessee is dismissed or stayed within ninety (90) days); the appointment of a trustee or receiver to take possession of substantially all of Lessee's assets at the Project or its interest in this Lease, if possession is not restored to Lessee within ninety (90) days; or the attachment, execution or other judicial seizure of substantially all of Lessee's assets at the Project or its interest in this Lease, if that seizure is not discharged within ninety (90) days.

(d) Notwithstanding any provision of this Lease to the contrary, no Event of Default shall be deemed to have occurred, no rights or remedies of the Lessor shall be exercised, no right of indemnity shall accrue for the benefit of the Lessor nor shall the Lessee be deemed to have waived any obligations of the Lessor or any of its affiliates whether under this Lease or otherwise for any reason prior to the later of the expiration or the Compliance Period or so long as the Investor Member, or an affiliate thereof, is a member of the Lessee.

16.2 Remedies. Upon the occurrence of an Event of Default, Lessor may at any time (subject to the conditions of the Extended Use Agreement and Section 16.2(h) hereof) do any or all of the following:

(a) Subject to the provisions of 16.2(h) below, upon ninety (90) days' written notice to Lessee, Investor Member and each leasehold mortgagee(s) holding a leasehold mortgage encumbering the

Project, and subject to the rights of leasehold mortgagees under Section 20 hereof, Lessor may provide Lessee, the Investor Member and all leasehold mortgagees with a Termination Notice and terminate Lessee's right to possession of the Property and this Lease. Lessor may then re-enter and take possession of and remove all persons or property, and Lessee shall immediately surrender possession of the Property to Lessor. Lessor may recover from Lessee all damages incurred by Lessor resulting from the Event of Default, including but not limited to reasonable attorney's fees and costs.

(b) Maintain Lessee's right to possession, and continue this Lease in force whether or not Lessee has abandoned the Project. Lessor shall be entitled to enforce all of its rights and remedies under this Lease, including the right to recover rent as it becomes due.

(c) Pursue any other remedy available to Lessor under the law.

(d) No remedy conferred upon or reserved to Lessor by this Lease is intended to be exclusive of any other available remedy or remedies, but each and every such remedy shall be cumulative and shall be in addition to every other remedy given under this Lease or now or hereafter existing at law or in equity or by statute, and Lessor shall be free to pursue, at the same time, each and every remedy, at law or in equity, which it may have under this Lease, or otherwise.

(e) In the event Lessor exercises its remedies pursuant to this Section 16.2 (e) and terminates this Lease, Lessee may, within ninety (90) days following such termination reinstitute this Lease for the balance of the term, by paying to Lessor an amount equal to the actual damages incurred by Lessor as a result of such breach and payment of any actual costs or expenses incurred by Lessor, including reasonable attorneys' fees and reimbursements, as a result of such reinstatement of this Lease.

(f) Notwithstanding anything to the contrary contained herein and subject to Section 20.3, Lessor shall not exercise any of its remedies hereunder without having given notice of the Event of Default to the Investor Member and any leasehold mortgagee, simultaneously with the giving of notice under Section 18.2 to Lessee. The Investor Member and each leasehold mortgagee, shall have the same cure period after the giving of a notice as provided to Lessee, plus an additional period of sixty (60) days, provided that if such cure cannot be completed within such period, and the Investor Member or any leasehold mortgagee is diligently pursuing such cure, this period shall be extend for up to an additional sixty (60) days. If the Investor Member or leasehold mortgagee elects to cure the Event of Default (and nothing hereunder binds such party to do so), Lessor agrees to accept such performance as though the same had been done or performed by Lessee.

(g) The Investor Member shall be deemed a third-party beneficiary of the provisions of (i) this Section 16.2 for the sole and exclusive purpose of entitling the Investor Member to exercise its rights to notice and cure, as expressly stated in this Section 16.2, and (ii) the other provisions of this Lease granting rights to the Investor Member for the purpose of entitling the Investor Member to exercise such rights.

(h) Notwithstanding any provision of this Lease to the contrary, Lessor agrees that (i) Lessor will take no action nor deem an Event of Default to have occurred that would effect a termination of this Lease for any reason prior to the later of (x) the expiration of the Compliance Period or (y)

so long as the Investor Member, or an affiliate thereof, is a member in the Lessee. Notwithstanding the foregoing, Lessor may use its remedies (except termination) to specifically enforce the Lessee's obligation to comply with Section 3 (Use) and Section (12) Insurance and this Lease shall not be terminated without the prior written consent of the Investor Member and any leasehold mortgagee.

16.3 Default by Lessor. Lessor is not in default unless it fails to perform obligations required of it within a reasonable time and not later than sixty (60) days after delivery of written notice by Lessee to Lessor specifying Lessor's failures to perform its obligations. If Lessor's obligation reasonably requires more than sixty (60) days for performance or cure, Lessor is not in default if it commences performance or cure within the sixty (60)-day period and thereafter diligently pursues its completion not to exceed ninety (90) days. In the event of default by Lessor, Lessee may pursue all remedies available to it at law or in equity.

16.4 No Personal Liability. Notwithstanding any other provision herein, neither Lessee nor any of its members, nor any other party shall have any personal liability for payment of any obligations hereunder.

17. Use Restrictions. Subject to the terms and conditions of Section 3, Lessee hereby agrees that the Project is to be owned, managed, and operated pursuant to the uses identified in Section 3 above.

18. General Provisions.

18.1 Severability. The invalidity of any provision of this Lease as determined by a court of competent jurisdiction will not affect the validity of any other provision.

18.2 Time of Essence. Time is of the essence of this Lease.

18.3 Notices. Any notice given under this Lease shall be in writing and may be given by personal delivery or by certified mail, postage prepaid, or by air courier, and shall be effective when received. Notices personally delivered are considered received upon delivery. Mailed notices are considered received five days after deposit in the mail (absent strikes or disruption in service). Either party may by notice under this section change its address for notice purposes. Copies of all notices given to Lessor shall be concurrently transmitted to any person designated in writing by Lessor. Any Notice required by the provisions of this Lease to be given to Lessor or Lessee shall be addressed as follows:

(a) To the Lessor:

City of Shoreline
17500 Midvale AVE N
Shoreline, WA 98133-4905
(206) 801-2700
Attn: City Manager

(b) Lessee:

CHS Shoreline LLC
c/o Catholic Housing Services
100 23rd Avenue South
Seattle, WA 98144
ChrisJ@ccsww.org
Attn: Agency Director

With a copy to:

Kantor Taylor
1200 Fifth Avenue, Suite 1910
Seattle, WA 98101
Andrea Y. Sato
asato@katnortaylor.com

(c) To the Investor Member:

c/o Raymond James Tax Credit Funds, Inc.
880 Carillon Parkway
St. Petersburg, Florida 33716
Attention: Steven J. Kropf, President

With a copy to:

Nixon Peabody LLP
Exchange Place
53 State Street
Boston, MA 02109
Attn: Nathan A. Bernard

18.4 Waiver. Waiver by Lessor of the breach of any provision of this Lease is not a waiver of any subsequent breach by Lessee of the same or any other provision. Lessor's consent to or approval of any act does not make Lessor's consent to or approval of any subsequent act unnecessary. Acceptance of rent by Lessor is not a waiver of any preceding breach of any provision of this Lease other than Lessee's failure to pay the rent so accepted.

18.5 Covenants and Conditions. Each provision of this Lease performable by Lessor or Lessee is both a covenant and a condition.

18.6 Authority. Each individual executing this Lease on behalf of the respective entities represents and warrants that he or she is duly authorized to execute and deliver this Lease on behalf of such entity, and that this Lease is binding upon that entity in accordance with its terms.

18.7 Attorneys' Fees. In any action to enforce or interpret this Lease the prevailing party is entitled to recover reasonable costs and attorneys' fees from the losing party.

18.8 Quiet Possession. Upon paying the rent and observing and performing all of its covenants and conditions, Lessee shall have quiet possession of the Project for the entire term subject to all of the provisions of this Lease.

18.9 Relationship of Parties. Nothing herein shall be construed so as to create a partnership, joint venture, or agency relationship between the parties, it being acknowledged that the Lessor and Lessee are parties to other agreements and those other agreements are in full force and effect.

18.10 Intention of the Parties. It is the intention of the parties hereto that pursuant to the terms of this Lease, the payments described in Section 5 shall constitute acquisition payments for the Property and that the full burdens and benefits associated with the Project, except those pertaining to ownership for state law purposes, shall pass to Lessee.

18.11 Consent. Consent or approval of parties whenever required under this Lease shall not be unreasonably withheld or delayed, unless otherwise specifically provided by the terms of this Lease.

18.12 Governing Law and Venue. The validity of this Lease, the interpretation of the rights and duties of the parties hereunder and the construction of the terms hereof shall be governed in accordance with the internal laws of the State. Venue in the event of any dispute shall be in King County, Washington.

18.13 Memorandum of Lease. The parties hereto agree to the recording of a Memorandum of Lease in the form of **Exhibit D** hereto. Lessor is a public agency subject to Washington's Public Records Act, chapter 42.56 RCW, and all records produced by Lessor in connection with this Lease may be deemed a public record as defined in the Public Records Act, and if Lessor receives a public records request, unless a statute exempts disclosure or a court order precluding disclosure has been issued, Lessor must disclose the record to the requestor.

18.14 Estoppel Certificates. Upon the written request of the Investor Member, any leasehold mortgagee holding a leasehold mortgage encumbering the Project or the other party to this Lease, Lessor or Lessee, as applicable, shall, within ten (10) days of receipt of such written request, provide an estoppel certificate addressing such matters as the requesting party may request in its discretion.

18.15 No Merger. During the Compliance Period and at any time that any leasehold mortgagee is holding a leasehold mortgage encumbering the Project, there shall be no merger of the leasehold estate created by this Lease and the fee estate of Lessor merely because both estates have been acquired or become vested in the same person or entity, unless the Investor Member and each such leasehold mortgagee otherwise consents in writing.

18.16 Right of Entry. Lessor shall have the right to enter upon the Property during regular business hours to inspect the Property, Project and other improvements subject to all applicable landlord/tenant laws. The City shall not perform any inspection in such a manner so as to unreasonably interfere with Lessee's construction or business operations and shall provide reasonable notice prior to such entry. Any entry upon the Property during construction of the Project shall be subject to all jobsite rules and regulations imposed by Lessee's general contractor.

18.17 Force Majeure. Neither Party shall be liable to the other or deemed in breach or default for any failure or delay in performance under this Lease during the time and to the extent its performance is prevented by reasons of Force Majeure. For the purposes of this Lease, Force Majeure means an occurrence that is beyond the reasonable control of and without fault or negligence of the party claiming force majeure and which, by exercise of due diligence of such party, could not have been prevented or overcome. Force Majeure shall include natural disasters, including fire, flood, earthquake, windstorm, avalanche, mudslide, and other similar events; acts of war or civil unrest when an emergency has been declared by appropriate governmental officials; acts of civil or military authority; freight embargoes; epidemics; quarantine restrictions; labor strikes; boycotts; terrorist acts; riots; insurrections; explosions; and nuclear accidents. A party claiming suspension or termination of its obligations due to force majeure shall give the other party prompt written notice, but no more than two (2) working days after the event, of the impediment and its effect on the ability to perform; failure to provide such notice shall preclude recovery under this provision.

18.18 Nondiscrimination. In hiring or employment made possible or resulting from this Lease, there shall be no unlawful discrimination against any employee or applicant for employment because of sex, age (except minimum age and retirement provisions), race, color, creed, national origin, citizenship or immigration status (except if authorized by federal or state law, regulation, or government contract), marital status, sexual orientation, honorably discharged veteran or military status, the presence of any sensory, mental, or physical handicap or the use of a trained dog guide or service animal by a person with a disability, unless based upon a bona fide occupational qualification. This requirement shall apply to but not be limited to the following: employment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. No person shall be denied or subjected to discrimination in receipt or the benefit of any services or activities made possible by or resulting from this Lease on the grounds of sex, race, color, creed, national origin, age (except minimum age and retirement provisions), citizenship or immigration status (except if authorized by federal or state law, regulation, or government contract), marital status, sexual orientation, honorably discharged veteran or military status, the presence of any sensory, mental or physical handicap, or the use of a trained dog guide or service animal by a person with a disability, If, at an time during the Term of this Agreement federal, state, or local laws are amended to include additional classes for which discrimination is unlawful, this provision shall be deemed to have been amended without the need for an amendment..

19. <u>Amendments</u>. Except for as provided in Subsection 18.18 Nondiscrimination, the provisions hereof shall not be amended, revised or terminated except by an instrument in writing duly executed by Lessor and Lessee (or its successors in title). No amendments shall become effective without the prior written consent of Investor Member, which consent shall not be unreasonably withheld. If appropriate, the parties shall record an amendment to the Memorandum of Lease incorporating the changes to this Lease effected by the amendment.

20. <u>Leasehold Mortgage Provisions</u>.

20.1 Leasehold Mortgages Authorized. Lessee may mortgage or otherwise encumber Lessee's leasehold estate under one or more leasehold mortgages. Notwithstanding anything to the contrary contained in this Lease, no consent or approval of Lessor shall be required

for any transfer of the Project or any portion thereof to a leasehold mortgagee, its successors or assigns or any designee thereof pursuant to a foreclosure under its leasehold mortgage encumbering the Project, whether by judicial or non-judicial proceeding or any power of sale contained therein, or any assignment or conveyance in lieu of foreclosure.

20.2 Notice of Leasehold Mortgage. If Lessee shall mortgage Lessee's leasehold estate, Lessee shall provide Lessor with notice of such leasehold mortgage together with a true copy of such leasehold mortgage and the name and address of the leasehold mortgagee. Lessor hereby acknowledges that it has received notice in satisfaction of the requirements of this paragraph that Lessee has granted or shall grant a lien on all of its interest in the Project pursuant to a leasehold mortgage to Umpqua Bank, the City of Shoreline, the State of Washington Department of Commerce and King County.

20.3 Consent of Leasehold Mortgagee Required. Notwithstanding anything contained in this Lease to the contrary, Lessor shall standstill and not exercise any of its remedies under this Lease other than to specifically enforce the Lessee's obligation to comply with Section 3 (Use) and Section (11) Insurance hereof. In no event will the Lease be terminated without the prior written consent of all leasehold mortgagees.

20.4 Default Notice. Lessor, upon providing Lessee any notice of (i) an Event of Default under this Lease, (ii) termination of this Lease, or (iii) failure of Lessee to exercise any renewal option or purchase option prior to the expiration date thereof, shall, at the same time provide a copy of such notice to any leasehold mortgagee. After such notice has been given to a leasehold mortgagee, such leasehold mortgagee shall have the same period, after the giving of such notice upon it, for remedying any Event of Default or causing the same to be remedied, as is given Lessee after the giving of such notice to Lessee, plus in each instance, the additional periods of time specified herein to remedy, commence remedying, or cause to be remedied the Events of Default specified in any such notice. Lessor shall accept such performance by or at the instigation of such leasehold mortgagee as if the same had been done by Lessee. Lessee authorizes each leasehold mortgagee to make any such action at such leasehold mortgagee's option and does hereby authorize entry upon the Project by the leasehold mortgagee for such purpose.

20.5 Procedure on Default. If Lessor shall elect to terminate this Lease by reason of any Event of Default of Lessee and subject to the consent of leasehold mortgagees pursuant to Section 20.3, the specified date for the termination of this Lease as fixed by Lessor in its Termination Notice shall be extended for a period of six (6) months, provided that such leasehold mortgagee shall, during such six (6)-month period:

> Pay or cause to be paid the rent, additional payments and other monetary obligations of Lessee under this Lease as the same become due, and continue its good faith efforts to perform all of Lessee's other obligations under this Lease, excepting (A) obligations of Lessee to satisfy or otherwise discharge any lien, charge, or encumbrance against Lessee's interest in this Lease junior in priority to the lien of mortgage held by such leasehold mortgagee and (B) past monetary obligations then in default and not reasonably susceptible of being cured by such leasehold mortgagee; and (C) if not enjoined or stayed, take steps to acquire or sell Lessee's interest in this Lease by foreclosure of the leasehold mortgage

or other appropriate means and prosecute the same to completion with reasonable diligence.

If at the end of such six (6)-month period such leasehold mortgagee is complying with this Section, this Lease shall not then terminate; and the time for completion by such leasehold mortgagee of proceedings pursuant to this Section shall continue so long as such leasehold mortgagee proceeds to complete steps to acquire or sell Lessee's interest in this Lease by foreclosure of the leasehold mortgage or by other appropriate means with reasonable diligence and continuity. Following completion of steps to acquire or sell Lessee's interest in this Lease, the new Lessee shall promptly cure any remaining Events of Default. Nothing in this Section however, shall be construed to extend this Lease beyond the original term hereof, nor to require a leasehold mortgagee to continue such foreclosure proceedings after the default has been cured. If the default shall be cured and the leasehold mortgagee shall discontinue such foreclosure proceedings, this Lease shall continue in full force and effect as if Lessee had not defaulted under this Lease.

If a leasehold mortgagee is complying with this Section and if Lessee has failed to discharge any lien, charge or encumbrance against Lessee's interest in this Lease which is junior in priority to the lien of the leasehold mortgage held by such leasehold mortgagee and which Lessee is obligated to satisfy and discharge by reason of the terms of this Lease, then upon the acquisition of Lessee's estate herein by such leasehold mortgagee or its designee or any other purchaser at a foreclosure sale or otherwise this Lease shall continue in full force and effect as if Lessee had not defaulted under this Lease.

20.6 Condemnation, Casualty and Insurance Proceeds. Notwithstanding any language to the contrary in this Lease, Lessor and Lessee agree that, in the event of a condemnation or casualty that does not result in the termination of the Lease, the Lease shall continue in effect as to the remainder of the Project, and the award or net proceeds from the condemnation or the proceeds of insurance in connection with a casualty will be allocated to Lessor and Lessee in accordance with the terms of this Lease, provided, however, that all such proceeds payable to Lessee or to which Lessee is otherwise entitled shall be paid to the leasehold mortgagee with the senior-most leasehold mortgage encumbering the Project and applied in accordance with the requirements of such leasehold mortgage or the other loan documents governing the obligations secured thereby.

20.7 New Lease. In the event this Lease is terminated for any reason prior to the end of the contemplated term thereof, whether as a result of a Lessee default or in connection with a voluntary or involuntary bankruptcy action by or against Lessee, Lessor shall promptly give each leasehold mortgagee holding a leasehold mortgage encumbering the Project written notice of such termination and shall enter into a new lease ("New Lease") with any such leasehold mortgagee or its nominee covering the Project, provided that such leasehold mortgagee requests such New Lease by written notice to Lessor within ninety (90) days after such leasehold mortgagee's receipt of written notice by Lessor of termination of this Lease. The New Lease shall be for the remainder of the original term of this Lease, effective at the date of such termination, and shall be made on substantially the same terms and at the same rental rates contained in the terminated Lease with Lessee. In connection with a New Lease, Lessor shall assign to such leasehold mortgagee or its nominee, as applicable, all of Lessor's interest in all existing subleases of all or any part of the Project and all attornments given by the sublessees. Lessor shall not terminate or agree to

terminate any sublease or enter into any new lease or sublease for all or any portion of the Project without each leasehold mortgagee's prior written consent, unless each leasehold mortgagee fails to timely deliver a request for a New Lease under this Section. Lessor shall allow to the leasehold mortgagee as Lessee under the New Lease a credit against rent and other amounts due under the New Lease equal to the net income derived by Lessor from the Project during the period from the date of termination of this Lease until the date of execution of the New Lease under this Section. If more than one leasehold mortgagee makes written requests upon Lessor for a New Lease in accordance with this Section, the New Lease shall be entered into pursuant to the request of the leasehold mortgagee whose leasehold mortgage is in the senior-most lien position and thereupon the written requests for a New Lease from any leasehold mortgagee holding a leasehold mortgage junior in lien position shall be deemed to be void and of no force or effect.

20.8 Limitation of Leasehold Mortgagee Liability. No leasehold mortgagee under any leasehold mortgage encumbering the Project or any third party nominee or designee thereof shall be liable to Lessor as an assignee of this Lease unless and until such leasehold mortgagee or such third party, as applicable, acquires all rights of Lessee under this Lease through foreclosure, a conveyance or assignment in lieu of foreclosure, or as a result of some other action or remedy provided by law or under the rights given such leasehold mortgagee under its leasehold mortgage if the leasehold mortgagee exercises these rights in writing; provided, however, that such leasehold mortgagee or third party shall only be subject to the covenants of this Lease and liable thereunder for obligations arising or accruing during the period beginning at the time such leasehold mortgagee or third party acquires the Lessee's title to the Project and ending upon such leasehold mortgagee's or third party's subsequent transfer of title to the Project to a subsequent purchaser, which such leasehold mortgagee or third party shall be entitled to do without the consent or approval of Lessor. This Section shall also apply to the rights of a leasehold mortgagee in connection with the entry into a New Lease under Section 20.7 above and to the appointment of a receiver on behalf of such leasehold mortgagee. Notwithstanding any terms of this Lease to the contrary, any indemnities or other covenants or liabilities of Lessee with respect to environmental conditions or hazardous materials matters shall not bind or apply to any leasehold mortgagee or any affiliate, assignee or subsequent owner of the Lessee's estate in the Project at any time, except as stated in Section 21.6.

20.9 Two or More Leasehold Mortgagees. In the event two (2) or more leasehold mortgagees holding leasehold mortgages encumbering the Project each exercise their rights under this Lease in connection with their respective leasehold mortgage loans and/or leasehold mortgages and there is a conflict that renders it impossible to comply with all requests of all such leasehold mortgagees, the leasehold mortgagee whose leasehold mortgage would have the senior-most priority in the event of a foreclosure shall prevail.

20.10 Third Party Beneficiary. Each leasehold mortgagee holding a leasehold mortgage encumbering the Project is and shall be a third party beneficiary of the rights and benefits granted to leasehold mortgagees under this Lease, including, without limitation, under this Section 20, and shall have the right to exercise such rights and benefits directly against Lessor and/or Lessee, as applicable.

21. End of Term, At the end of the Term, by expiration, termination or otherwise, Lessee shall turn over the Property and the Project in good condition and repair, reasonable wear

and tear excepted, and from and after the end of the Term, by expiration, termination or otherwise, neither the Lessee nor any person or entity claiming by, through or under the Lessee shall have any further rights, title and/or interest in or to the Property or the Project.

[Remainder of page left intentionally blank; Signatures begin on following page]

IN WITNESS WHEREOF, the parties have executed this Lease the date set forth above.

LESSOR:

CITY OF SHORELINE

_____
Debbie Tarry, City Manager

STATE OF WASHINGTON | ss.

COUNTY OF KING

I certify that I know or have satisfactory evidence that Debbie Tarry is the person who appeared before me and acknowledged that said person signed this instrument, on oath stated that said person was authorized to execute the instrument and acknowledged it as the City Manager of the CITY OF SHORELINE, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this _____ day of _____, 2021.

_____
(Signature of Notary)

_____
(Legibly Print or Stamp Name of Notary)

Notary public in and for the State of Washington, residing at _____

My appointment expires _____

IN WITNESS WHEREOF, the parties have executed this Lease the date set forth above.

LESSEE:

CHS SHORELINE LLC,
a Washington limited liability company

By: CHS Shoreline Manager LLC
Its: Managing Member

By: Archdiocesan Housing Authority
Its: Manager

By: _____
Name: Chris Jowell
Title: Vice President _____

STATE OF WASHINGTON
ss.
COUNTY OF KING

I certify that I know or have satisfactory evidence that Chris Jowell is the person who appeared before me and acknowledged that said person signed this instrument, on oath stated that said person was authorized to execute the instrument and acknowledged it as the Vice President of Archdiocesan Housing Authority, manager of CHS Shoreline Manager LLC, managing member of CHS SHORELINE LLC of a Washington limited liability company**,** to be the free and voluntary act of such nonprofit corporation on behalf of such company on behalf of such company for the uses and purposes mentioned in the instrument.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this _____ day of _____, 2021.

_____
(Signature of Notary)

_____
(Legibly Print or Stamp Name of Notary)
Notary public in and for the State of Washington, residing at _____
My appointment expires _____

EXHIBIT A

REAL PROPERTY DESCRIPTION

The Land referred to herein below is situated in the County of King, State of Washington, and is described as follows:

[Lots 5 and 6 and the South 150 feet of Lot 7, Echo Lake Park, according to the plat thereof recorded in Volume 23 of Plats, page 8, in King County, Washington.

EXCEPTING THEREFROM those portions lying within the boundaries of Aurora Avenue N and N 198th Street]

EXHIBT B

DEFINITIONS

"Affordable Housing" means housing for which a household does not pay more than thirty percent (30%) of its annual income on all costs related to housing, including rent and utilities, as determined in accordance with Section 42 of the Code.

"Code" means the Internal Revenue Code of 1986, as amended, together with corresponding and applicable provisions of the Internal Revenue Code of 1954, as amended, together with corresponding and applicable final, temporary or proposed regulations and revenue rulings issued or amended with respect thereto by the Treasury Department or Internal Revenue Service of the United States. All references herein to sections, paragraphs or other subdivisions of the Code or the regulations promulgated thereunder shall be deemed to be references to correlative provisions of any successor code or regulations promulgated thereunder.

"Compliance Period" shall have such meaning as defined thereto in Section 42 of the Code.

"Condemnation Award" means the total condemnation proceeds actually paid by the condemnor as a result of the condemnation of all or any part of the Project, less the actual costs and expenses, including attorneys' fees, incurred by Lessee and/or Lessor in obtaining such award.

"Extended Use Agreement" means the Regulatory Agreement (Extended Use Agreement) to be executed and recorded in favor of relating to the allocation of Low-Income Housing Tax Credits with respect to the Housing Project.

"Lease" means this Lease Agreement, which is dated [_____ 2021], between Lessor and Lessee.

"Insurance Proceeds" means the total proceeds of casualty insurance actually paid or payable in respect of insurance on all or any part of the Project, less the actual costs and expenses, including attorneys' fees, incurred by Lessee and/or Lessor in collecting such proceeds.

"Investor Member" means a limited partnership or limited liability company which is controlled, directly or indirectly by Raymond James Tax Credit Fund, Inc. and its successors and assigns.

"Low-Income Housing Tax Credits" means the federal tax credits available to the Project under Internal Revenue Code Section 42.

"Permitted Encumbrances" means, as of any particular time, the liens and encumbrances as set forth in the title policy issued on or about the date of this Lease for Lessee and other encumbrances necessary for the development of the Project reasonably approved by Lessor, and the refinancing of any senior debt which was a Permitted Encumbrance at the time this Lease was executed upon their maturity provided that such refinanced debt shall not exceed the principal balance of the loan being refinanced; and all other liens and encumbrances allowed pursuant to this Lease or approved in writing by or in favor of Lessor, including specifically those identified in the Priority and Subordination Agreement.

"Priority and Subordination and Agreement" means the Priority and Subordination Acknowledgement Agreement relating to the priority among various liens and encumbrances against the Property.

"Project" has the meaning set forth in the Recitals.

"Property" means the real property legally described in Exhibit A to this Lease.

"Qualified Tenants" means individuals and families whose annual income is between zero percent (0%) and eighty percent (80%) of Area Median Income at initial occupancy. Such calculation shall be adjusted for family size and shall be performed in a manner consistent with determinations made pursuant to the United States Housing Act of 1937, as amended, and its implementing regulations. Such Qualified Tenant shall be deemed qualified if they meet the requirements of the Use Covenants.

"State" means the State of Washington.

"Termination Notice" means the notice given by Lessor to any leasehold mortgagee and Investor Member, following the expiration of the period of time given Lessee to cure a default, of Lessor's intent to terminate this Lease.

"Use Covenants" has the meaning set forth in Section 3.

EXHIBT C

SITE PLAN

EXHIBT D

FORM OF MEMORANDUM OF LEASE

RECORDED AT THE REQUEST OF
AND AFTER RECORDING RETURN TO:

Catholic Housing Services
100 23rd Avenue South
Seattle, WA 98144

MEMORANDUM OF LEASE

Lessor:	City of Shoreline, a Washington municipal corporation
Lessee:	CHS Shoreline LLC, a Washington limited liability company
Legal Description:	See Exhibit A
Assessor's Tax Parcel ID#:	222730-0025-08 222730-0030-01 222730-0036-05

MEMORANDUM OF LEASE

This Memorandum of Lease (this "Memorandum") is dated [_____, 2021], by and between City of Shoreline, a Washington municipal corporation ("Lessor"), and CHS Shoreline LLC, a Washington limited liability company ("Lessee").

1. Lease Agreement. Pursuant to a Ground Lease Agreement (the "Lease") dated [_____, 2021], Lessor has leased to Lessee and Lessee has leased from Lessor the property located in King County and described on **Exhibit A** attached hereto (hereinafter referred to as the "Property").

2. Term. The term of the Lease commenced on [_____, 2021], and ends on [_____, 2120], subject to earlier termination as described therein.

3. Purpose of Memorandum. This Memorandum is prepared for the purpose of recordation to give notice of the Lease. This Memorandum shall not constitute an amendment or modification of the Lease and in the event of any conflict between the terms of this memorandum and the Lease, the terms of the Lease shall control.

[Remainder of page left intentionally blank; Signatures begin on following page]

IN WITNESS WHEREOF, the parties have executed this Memorandum as of the date set forth above.

LESSOR:

CITY OF SHORELINE

_____
Debbie Tarry, City Manager

STATE OF WASHINGTON	ss.
COUNTY OF KING	

I certify that I know or have satisfactory evidence that Debbie Tarry is the person who appeared before me and acknowledged that said person signed this instrument, on oath stated that said person was authorized to execute the instrument and acknowledged it as the City Manager of the CITY OF SHORELINE, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this _____ day of _____, 2021.

_____
(Signature of Notary)

_____
(Legibly Print or Stamp Name of Notary)
Notary public in and for the State of Washington, residing at _____
My appointment expires _____

IN WITNESS WHEREOF, the parties have executed this Memorandum as of the date set forth above.

LESSEE:

CHS SHORELINE LLC,
a Washington limited liability company

By: CHS Shoreline Manager LLC
Its: Managing Member

By: Archdiocesan Housing Authority
Its: Manager

By: _____
Name: Chris Jowell
Title: Vice President

STATE OF WASHINGTON	ss.
COUNTY OF KING	

I certify that I know or have satisfactory evidence that Chris Jowell is the person who appeared before me and acknowledged that said person signed this instrument, on oath stated that said person was authorized to execute the instrument and acknowledged it as the Vice President of Archdiocesan Housing Authority, manager of CHS Shoreline Manager LLC, managing member of CHS SHORELINE LLC of a Washington limited liability company**,** to be the free and voluntary act of such nonprofit corporation on behalf of such company on behalf of such company for the uses and purposes mentioned in the instrument.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this _____ day of _____, 2021.

_____
(Signature of Notary)

_____
(Legibly Print or Stamp Name of Notary)
Notary public in and for the State of Washington, residing at _____
My appointment expires _____

EXHIBIT A
Legal Description

The Land referred to herein below is situated in the County of King, State of Washington, and is described as follows:

Lots 5 and 6 and the South 150 feet of Lot 7, Echo Lake Park, according to the plat thereof recorded in Volume 23 of Plats, page 8, in King County, Washington.

EXCEPTING THEREFROM those portions lying within the boundaries of Aurora Avenue N and N 198th Street

After recording Return To:
Washington State Housing Finance Commission
Multifamily Housing & Community Facilities Division
1000 Second Avenue, Suite 2700
Seattle, Washington 98104-1046
Attn: Yasna Osses

Document Title: Regulatory Agreement (Extended Use Agreement)

Grantor(s): CHS Shoreline LLC (Owner)
City of Shoreline (Lessor)

Grantee: Washington State Housing Finance Commission

Legal Description (abbreviated form): _____

_____

Additional legal description in Exhibit "A" of document.

Assessor's Property Tax Parcel Account Number(s): _____

_____

REGULATORY AGREEMENT
(EXTENDED USE AGREEMENT)

Among

WASHINGTON STATE HOUSING FINANCE COMMISSION

City of Shoreline

And

CHS Shoreline LLC

Dated as of _____

WASHINGTON STATE HOUSING FINANCE COMMISSION
LOW-INCOME HOUSING TAX CREDIT PROGRAM

(CHS Shoreline Project)
TC or OID NUMBER (As Applicable) 21-68

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REGULATORY AGREEMENT
(EXTENDED USE AGREEMENT)

Washington State Housing Finance Commission

CHS Shoreline Project
TC or OID Number (As Applicable) 21-68

THIS REGULATORY AGREEMENT (EXTENDED USE AGREEMENT) ("Agreement"), dated as of _____ is between the WASHINGTON STATE HOUSING FINANCE COMMISSION, a public body corporate and politic (the "Commission"), City of Shoreline ("Lessor") and CHS Shoreline LLC, a Washington limited liability company (the "Owner").

RECITALS

A. The Commission is the housing credit agency authorized to allocate the federal low-income housing tax credit (the "Credit") for residential rental property located in Washington, in accordance with Section 42 of the Code;

B. The Owner submitted an Application dated 1/23/2019, requesting that the Commission issue a Credit Reservation and/or Allocation to the Project;

C. The Owner and the Commission entered into a Credit Reservation and Carryover Allocation Contract (RAC), whereby the Commission agreed to issue an Allocation to the Project (as described in Section 1 below, provided, that a Credit Reservation and Carryover Allocation Contract (RAC) may not have been entered into for a Qualified Tax-Exempt Bond-Financed Project);

D. The Owner will acquire, develop, and/or rehabilitate a residential rental property commonly known as CHS Shoreline (the "Project") located on the property or properties legally described in Exhibit "A" (the "Land"); and

E. The Lessor is the owner of the Land and the Owner is the lessee of such Land; and

F. The Lessor will execute this Regulatory Agreement in order to meet the requirements of the Code that this Regulatory Agreement be an enforceable covenant against the land; and

G. As a condition of having an effective Allocation of Credit, the Owner must enter into this Agreement with the Commission.

AGREEMENT

Based on the foregoing recitals, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Owner and Lessor hereby agree to the terms and conditions of this Agreement, and agree that the Owner, the Project and the Land shall be subject to the covenants, conditions, restrictions and terms set forth below in this Agreement, which and are expressly intended to touch and concern, run with and bind the Project and the Land, and which shall inure to the benefit of the Commission, its successors and assigns and be binding upon the Owner, Lessor, and all other Bound Parties.

SECTION 1. DEFINITIONS

1.1 Capitalized Terms. For purposes of this Agreement terms shall have the meanings set forth in Exhibit "C". If a capitalized term is not defined in Exhibit "C" it shall have the meaning set forth in the applicable *Policies* in effect as of the effective date of the Credit Reservation and Carryover Allocation Contract (RAC) for the Project or, if the Project is a Qualified Tax-Exempt Bond-Financed Project with no Credit Reservation and Carryover Allocation Contract (RAC), the *Policies* in effect as of the date the Owner submitted the Application to the Commission.

1.2 Credit Reservation and Carryover Allocation Contract (RAC) and Bond Projects. This Agreement contains references to a Credit Reservation Contract and Carryover Allocation Contract (RAC). These agreements may not have been executed in connection with a Qualified Tax-Exempt Bond-Financed Project unless the Project receives an Allocation of Credit subject to Section 42(h)(1) of the Code (i.e., Credit allocated pursuant to the competitive allocation process). If the Project is a Qualified Tax-Exempt Bond-Financed Project that did not receive a competitive Allocation of Credit, references in this Agreement to the Credit Reservation and Carryover Allocation Contract (RAC) shall be inapplicable and the provisions in this Agreement referencing those contracts shall be read and interpreted in a manner consistent therewith.

SECTION 2. LIMITATION ON CREDIT ALLOCATION

The actual amount of Credit finally allocated to any Qualified Building in the Project will be reflected on an IRS Form 8609 issued with respect to such Building. Prior to issuing a Form 8609, the Commission has made or will make a determination as to the amount of Credit necessary for the financial feasibility and viability of the Project. Further, as part of the Commission's Credit determination for a Project, the Commission has reviewed or will review the reasonableness of the development and operating expenses associated with the Project as well as the market need and demand. The Commission may require that the Owner submit documentation to substantiate that any or all of a Project's costs are reasonable and appropriate. The Commission reserves the right, in its sole judgment and discretion, to limit or exclude any development or operating expense included in the Total

Project Costs or proforma for a project as part of the Commission's financial feasibility review and Credit determination for the Project. Further, the determination of the amount of Credit finally allocated to a Building is also subject to the Program Limits in the *Policies*.

SECTION 3. OWNER'S REPRESENTATIONS AND WARRANTIES

The Owner represents and warrants to the Commission as follows as of the date of this Agreement:

3.1 Noncompliance. There is no Noncompliance with respect to the Project, nor has any event occurred that, with the passage of time or giving of notice or both, would constitute a Noncompliance.

3.2 Feasibility and Viability. The amount of the Credit Reservation and/or Allocation is necessary for the financial feasibility and viability of the Project throughout the Credit Period as a Qualified Low-Income Housing Project.

3.3 Notification of First Position. The Owner has notified in writing all lenders, financing sources and holders of Prior Liens that as a condition of obtaining Credit, this Agreement must be recorded in first position, prior to any monetary liens, or each lender or holder must subordinate its liens and security interest(s) in the Project to the interests of the Commission under this Agreement in a form acceptable to the Commission.

3.4 No Project Changes. There have been no changes in the Project that would alter, amend or make untrue any of the representations or agreements made in the other project documents, except as set forth in amendments thereto executed by the Commission.

3.5 True and Complete Certification. Each Certification submitted with the Application and the Credit Reservation and Carryover Allocation Contract (RAC), and each representation and warranty made therein, is true, complete and accurate as of the date of this Agreement.

3.6 Fee Limitations. The Owner has and shall continue to comply with the limits established by the Commission pertaining to the amount of Developer Fee and Consultant Fees as set forth in the *Policies*. The Owner has made all disclosures required by the Commission with respect to the Owner, each developer, each general partner, each party to a joint venture, and/or any Manager, as the case may be, being a Related Party, having an identity of interest, being affiliated with, or controlled by or in control of other members of the Development Team and Management Team as more fully described in the *Policies*.

3.7 Compliance with *Policies*. The Owner and/or the Project, as applicable, is in compliance with the Program Limits in the *Policies*.

3.8 Exhibit "B" Project Information. The Project information included in Exhibit "B" is true and accurate.

SECTION 4. OWNER'S COVENANTS

4.1 Qualification for Credit. The Owner shall cause each Building in the Project for which a BIN is assigned to qualify for the Credit.

4.2 Compliance with Program Documents and Exhibit "B". The Owner and each Building in the Project shall comply with all representations and agreements made in the Program Documents with respect to each Building in the Project unless the Owner submits a written request to approve a modification or change and such request is approved in writing by the Commission. Specifically, but without limitation, the Owner and each Building in the Project for which a BIN is assigned is subject to and shall comply with the Credit Set-Aside Category, Additional Low-Income Housing Use Period, Project Compliance Period, Minimum Low-Income Housing Set-Aside, and, if any, the Additional Low-Income Housing Commitment, Housing for Large Households Commitment, Housing for Persons with Disabilities Commitment, Elderly Housing Commitment , Housing for the Homeless Commitment, Farmworker Housing Commitment, and the requirements for preservation of federally assisted low-income housing (if applicable), as set forth in Exhibit "B". Except as otherwise set forth in this Agreement, the terms and conditions of each of the commitments, restrictions and covenants set forth in Exhibit "B" shall be as set forth in the *Policies* as they exist on the date the Application was filed with the Commission.

Owner expects to obtain rent, operating and/or service subsidies ("Subsidies") for those units set aside as Housing for Homeless ("Homeless Units"), as set forth in Exhibit "B" hereto. If such Subsidies become unavailable or are reduced, and if sufficient compatible subsidies are not available so that units set aside as Homeless Units can be operated as such and still allow the Project to remain in compliance with coverage standards then in effect, Owner shall give written notice of that fact to the Commission. Owner's notice to the Commission shall include an estimate of the number of units that need to be rented to households other than Homeless Households as a result of insufficient Subsidies, and the backup detail showing the basis for the estimate. Upon the Commission's reasonable and timely confirmation of Owner's estimate, the Owner thereafter may rent one or more of the Homeless Units, as they become available through vacancies, to households that do not meet the eligibility criteria set forth in the Commission's policies regarding Housing for Homeless ("Homeless Households"), to the extent necessary so that Owner can operate the Property consistent with applicable coverage standards.

For purposes of this subsection, a "compatible subsidy" is one that (a) is provided on terms consistent with the operation of the Property in compliance with this Regulatory Agreement, with all other recorded covenants and loan documents entered into by Owner for the Property

and (b) will not reduce or impair the use of low-income housing tax credits claimed for the Project.

For purposes of this subsection, a "coverage standard" is a financial covenant based on the operating cash flow of the Owner from the Property that is applicable either (a) pursuant to the limited partnership agreement of Owner, under which the Investor then remains a limited partner; or (b) pursuant to an agreement made by Owner for a loan for the Property.

If, at any time, when any Homeless Units are being rented to other than Homeless Households pursuant to the foregoing, in the sole discretion of the Commission, either (a) it becomes possible to rent any of such Housing Units as Homeless Units without breach of coverage standards because of improvements in results of operations or the inapplicability of coverage standards formerly in effect; or (b) new or increased compatible subsidies are available that would permit one or more Housing Units that are not then rented as Homeless Units to again be rented as such, while allowing Owner to operate the Property consistent with applicable coverage standards; then Owner shall promptly, and in any event no later than 30 days after a written request from the Commission, apply for such subsidies for the Property, and Owner shall diligently pursue such subsidies. Owner shall enter into and perform any contracts required to obtain and maintain such subsidies, and if such subsidies are obtained, shall thereafter increase the number of Housing Units that are rented to Homeless Households when made available through vacancy, to the maximum extent consistent with operating in conformity with then applicable coverage standards.

4.3 Additional Low-Income Housing Use Period. The Owner acknowledges that, except as expressly set forth herein, this Agreement shall remain in full force and effect during the Additional Low-Income Housing Use Period. The Owner waives any right to terminate this Agreement with respect to any Building in the Project for the duration of the Additional Low-Income Housing Use Period as may otherwise be available pursuant to Section 42(h)(6)(E)(i)(II) of the Code.

4.4 Number of Housing Units. If this Agreement terminates with respect to any Building in accordance with the terms set forth herein, the minimum number of Housing Units in the Project shall be reduced by the number of Housing Units in such Building at the time of such termination. Notwithstanding the foregoing, all of the provisions of this Agreement shall remain in full force and effect throughout the term of this Agreement with respect to each Building in the Project unless terminated in conformance with this Agreement.

4.5 Credit Set-Aside Commitment. The Commitment to comply with the requirements of this Agreement and the *Policies* for the selected Credit Set-Aside Category identified in Exhibit "B" is binding upon the Owner and all successors in interest regardless of whether the Project received a Credit Reservation and/or Allocation under the selected Credit Set-

Aside Category or the balance of the Annual Authority remaining after the Credit Set-Asides.

4.6 Rental of Units to Maintain Low-Income Commitment(s). The Owner shall rent all Housing Units necessary to maintain the Applicable Fraction of Housing Units devoted to low-income housing only to Residents who are Income eligible for the Low-Income Housing Commitment(s) at the time of their initial occupancy of the Housing Unit. For the Additional Low-Income Housing Commitment, the Owner shall rent all Housing Units necessary to comply with the Additional Low-Income Housing Commitment only to Residents who are Income eligible for the applicable Additional Low-Income Housing Commitment at the time of their initial occupancy of the Housing Unit. This requirement(s) applies to all Housing Units necessary to comply with the Applicable Fraction and, if applicable, the Additional Low-Income Housing Commitment for the initial occupancy and each subsequent vacancy throughout the duration of the Project Compliance Period. The Owner must keep the applicable Housing Units within a building vacant until a Resident is selected who is Income eligible for the Low-Income Housing Set-Aside and/or the Additional Low-Income Housing Commitment, as appropriate.

4.7 Multiple Commitments. If the Project is subject to the Elderly Housing Commitment and the Project is also subject to one or more additional Housing Commitments for Priority Populations, the same Housing Units may be used for more than one Housing Commitment for Priority Populations, so long as the actual Resident is eligible for more than one.

If one hundred percent (100%) of the Housing Units in the Project are subject to the Housing Commitments for Priority Populations, the same Housing Units may be used for more than one Housing Commitment for Priority Populations, so long as the actual Resident is eligible for more than one.

If less than seventy five percent (75%) of the Housing Units in the Project are set aside for Housing for the Homeless and the Project is subject to the Housing Commitment for Persons with Disabilities and/or for Large Households, the same Housing Units shall not be used for more than one Housing Commitment for Priority Populations, regardless of whether a Resident is eligible for more than one. A minimum of twenty percent (20%) of all Housing Units in the Project must be used for each additional Housing Commitment for Priority Populations selected.

4.8 Marketing Units Subject to Certain Commitments. If the Project is subject to a Housing Commitment for Priority Populations or the Farmworker Housing Commitment, when the Project is Placed-In-Service and ready for initial occupancy each Housing Unit subject to such commitment must first be rented to and occupied by a Resident who qualifies for the commitment (for example, in the case of the Farmworker Housing Commitment, by a Farmworker household). If the Housing Unit is subsequently vacated,

the Owner shall undertake good faith efforts to actively market any vacant Housing Units that are necessary to comply with the Housing Commitment(s) for Priority Populations or the Farmworker Housing Commitment to the appropriate group(s) for a minimum of thirty (30) days. The Owner shall not rent any of the Housing Units necessary to comply with the Housing Commitment(s) for Priority Populations or the Farmworker Housing Commitment to anyone who is not eligible for the appropriate Housing Commitment(s) for Priority Populations or the Farmworker Housing Commitment during this thirty (30) day period. In the event the Owner is unable to secure a Resident who is eligible for the appropriate Housing Commitment(s) for Priority Populations or the Farmworker Housing Commitment after thirty (30) days of active marketing, it may rent the Housing Unit to another prospective Resident. The Owner's right to rent a Housing Unit subject to a Housing Commitment for Priority Populations or Farmworker Housing Commitment to a nonqualifying resident following the thirty (30) day recruitment period shall be applicable only to Housing Units that were initially occupied by qualifying Residents.

The recruitment provision applies to all Housing Units included in the Housing Commitment(s) for Priority Populations and the Farmworker Housing Commitment, including both Low-Income Housing Units and Market Rate Housing Units, if applicable. The minimum thirty (30) day recruitment period begins on the first full day that (1) a Housing Unit is vacant and ready for occupancy, and (2) the Owner actively commences to market the Housing Unit.

If the Owner rents a Housing Unit included in the Housing Commitment(s) for Priority Populations to a household who is not eligible for the appropriate Housing Commitment(s) for Priority Populations after the thirty (30) day period, when a comparably sized or larger Housing Unit becomes vacant the Owner must again undertake the good faith efforts to actively market such Housing Unit(s) as described above in this Section 4.8 and shall not rent such Housing Unit(s) for a minimum of thirty (30) days to anyone who is not eligible for the appropriate Housing Commitment(s) for Priority Populations. If the Owner rents a Housing Unit included in the Farmworker Housing Commitment to an ineligible household after the thirty (30) day period, any and all Housing Units that subsequently become vacant, including the Housing Unit rented to the ineligible household, must be rented to a Resident who is eligible for the Farmworker Housing Commitment (subject to the thirty day marketing requirement set forth in the preceding Section).

The thirty (30) day marketing requirements for the Housing Commitment(s) for Priority Populations and the Farmworker Housing Commitment set forth in this Section 4.8 apply to all Housing Units (following initial occupancy by a qualified Resident) which are necessary to comply with the Housing Commitment(s) for Priority Populations and the Farmworker Housing Commitment throughout the Project Compliance Period.

Notwithstanding anything herein to the contrary, for the Elderly Housing Commitment, no Housing Unit may be rented to any person if the result is that the Project would no longer be

an Elderly Housing Project. Also, notwithstanding anything herein to the contrary, for the Housing for the Homeless Commitment, any vacancies in the Commitment must be filled by a Resident who meets the eligibility criteria for that Commitment.

4.9 Selection Criteria for Residents. When selecting Residents for occupancy in Low-Income Housing Units or Housing Units subject to a Housing Commitment(s) for Priority Populations or the Farmworker Housing Commitment, the Owner shall not apply selection criteria to a prospective Resident that are more burdensome than the selection criteria applied to any other Resident or prospective Resident; and the Owner shall take into consideration the rental history of such prospective Resident as evidence of the ability to pay the applicable rent, if: (i) the rental history is of a term of at least one year; and (ii) the history shows that the Resident has paid at least the same percentage of his or her income for rent during that period as s/he will be required to pay for the rent of the Housing Unit for which the Resident is applying.

4.10 No Geographic Segregation. The Low-Income Housing Units and any Housing Units subject to a Housing Commitment(s) for Priority Populations shall not be geographically segregated from other Housing Units in the Project. In addition, the Low-Income Housing Units and Housing Units in a Housing Commitment(s) for Priority Populations shall be substantially the same size as other Housing Units with the same number of bedrooms.

4.11 Unit Configuration. The configuration of Housing Units (e.g. studios, one-bedrooms, two-bedrooms, etc.) used for the Low-Income Housing Units and the Housing Commitments for the Elderly, Persons with Disabilities and the Homeless shall be proportional to the configuration of the Total Housing Units in the Project unless the Owner obtains the prior written approval of the Commission to a different configuration.

4.12 Quality of Unit Construction. Subject to such exceptions as may be permitted by the *Policies* and the Tax Credit Laws, all Low-Income Housing Units and any Housing Units subject to a Housing Commitment(s) for Priority Populations shall be of the same quality construction as all other Housing Units, and shall be equipped and maintained in the same manner as all other Housing Units, with the exception of any additional amenities provided to meet the needs of Resident(s) with Disabilities.

4.13 Notification and Advertising of Unit Availability. The Owner shall at least annually notify, (1) the relevant public housing authority, (2) at least two community agencies in the area of the Project, and (3) the general public of the availability of Low-Income Housing Units and any Housing Units subject to a Housing Commitment for Priority Populations or the Farmworker Housing Commitment. Where no public housing authority exists, notice shall be given to an agency authorized to act in lieu of a public housing authority, if any. Notification to the general public shall be by advertisement(s) of

general circulation in the area of the Project and the advertisement(s) shall conform to the Fair Housing Act, as amended, and state and local law.

4.14 Limitation on Up-Front Rental Charges. The Owner agrees to:

(i) limit up-front charges and fees for Residents of all Low-Income Housing Units and all Housing Units subject to a Housing Commitment(s) for Priority Populations to:

(a) the first month's Gross Rent;

(b) a reasonable damage or security deposit no greater than the maximum applicable monthly Gross Rent, plus any reasonable pet deposit; and

(c) a reasonable credit check fee; and

(ii) not charge any other up-front charges or fees, for example, the last month's rent (except as noted below), application fees, and cleaning deposits or fees.

If the household is unable to pay the up-front deposits described in Section 4.14(i)(b), the Owner shall charge no more than 50% of such deposits up-front and then provide a payment plan for the remaining amount over at least a five-month period.

In addition to the above charges and fees, the Owner may collect the last month's Gross Rent in advance only if the payment thereof is made on at least a six (6) month prorated basis beginning on the second month or later (e.g. one-sixth of the last month's Gross Rent due each month from the second month through the seventh month).

4.15 Compliance with Laws. The Owner shall at all times comply with all other federal, state and local laws, rules and regulations now or hereafter applicable to the Owner, the Project or any Building, including but not limited to (i) Tax Credit Laws; (ii) federal housing policy governing nondiscrimination and accessibility, as determined under the Americans with Disabilities Act, the Fair Housing Act, as amended, Architectural Barriers Act of 1968, Housing and Community Development Act of 1974, Civil Rights Act of 1964, Civil Rights Act of 1968, and Age Discrimination Act of 1975; (iii) to the extent applicable, the Housing and Urban Development Act of 1968, the Uniform Relocation and Real Property Acquisition Act of 1970, and the Stewart B. McKinney Homeless Assistance Act; (iv) the State Environmental Policy Act, State Workers Compensation Industrial Insurance Act, Washington Fair Housing Laws, and the Washington State Landlord/Tenant Act; (v) if the Project includes "Federally Assisted Housing" as defined in RCW 59.28.020 (as it may be subsequently amended or renumbered), the written notice requirements specified in RCW 59.28.020 at least twelve (12) months prior to the expiration of the federal rental assistance contract or prepayment of the federal mortgage

or loan; and (vi) all state and local health, safety and building codes and standards. All Units shall at all times be suitable for occupancy and habitable.

4.16 Compliance with Environmental Laws. In the case of a Project which would be considered to be a Federal Action, Federally Subsidized, financed with Federal Funding or require federal approval or a permit, as those terms are defined and interpreted under federal environmental laws (including but not limited to: the National Environmental Policy Act of 1969, the Clean Water Act, the Clean Air Act, the National Historic Preservation Act, the Lead Based Paint Poisoning Prevention Act, and/or the Flood Disaster Protection Act of 1973), the Owner shall at all times comply with any and all applicable federal environmental laws.

4.17 Compliance with Labor Laws. In the case of a Project which receives Federal Funding, the Owner shall at all times comply with any and all applicable federal labor laws, including but not limited to: the Davis Bacon Act; Copeland Anti-Kickback Act; Contract Work Hours and Safety Standards; Hatch Act; and the Conflict of Interest Provisions set forth in 24 CFR 570.611.

4.18 Notification of Adverse Events. The Owner agrees to notify the Commission in writing within five (5) business days of first acquiring knowledge of any of the following:

(1) A default, that is not timely cured, in payment of any indebtedness incurred in connection with the development of any multifamily housing project or any other real estate development by a Covered Party or any declared default by a Covered Party of any loan incurred in connection with the development of any multifamily housing project, or a default or an alleged default by a Covered Party on any other financial obligation with an outstanding balance which exceeds $100,000;

(2) A material default, or alleged material default, that is not timely cured, by a Covered Party of the Tax Credit Laws or any other applicable laws, rules or regulations regarding any Credit project in Washington or any other jurisdiction;

(3) The application for or consent to an appointment of a receiver or trustee (a) for a Covered Party or, (b) over any portion of the property of a Covered Party; an assignment by a Covered Party for the benefit of creditors; the seizure of any part of the assets of a Covered Party by a judgment creditor; an admission in writing by a Covered Party of its inability to pay its debts as they become due; the insolvency of a Covered Party; or a petition being filed by any Covered Party pursuant to any of the provisions of the United States Bankruptcy Code, as amended;

(4) A petition being filed against any Covered Party pursuant to any of the provisions of the United States Bankruptcy Code, as amended, or an attachment or sequestration of any property of any Covered Party where the same is not discharged

or bonded within ninety (90) days (items (3) and (4) collectively being referred to as the "Bankruptcy" of a Covered Party);

(5) That a representation or disclosure made to the Commission or to any other Credit allocating agency by any Covered Party is materially false or misleading on the date when such representation or disclosure was made, whether or not that representation or disclosure appears in this Agreement, or that a Covered Party failed to provide any information that makes any such representation or disclosure materially false or misleading;

(6) The filing of an action, in which a Covered Party is a defendant, to foreclose upon a real estate lien (or retake possession under a ground lease) or the transfer by a Covered Party of an interest in real estate by a deed in lieu of foreclosure or similar instrument;

(7) A material adverse change in the condition (financial or otherwise), operations, business, or properties of any Covered Party or the Project;

(8) A pending or threatened lawsuit or claim against a Covered Party which could have a material adverse impact, financial or otherwise, on the operations, business or properties of a Covered Party or the Project; or

(9) The filing of legal action against, or commencement of an examination, or a formal investigation by any governmental authority into, any Covered Party for fraud, theft, misappropriation of funds, false certifications, financial improprieties, or similar wrongdoing, including but not limited to an action alleging securities fraud in connection with a low-income housing tax credit program or an action, examination or investigation in which the government authority is seeking or may seek criminal penalties.

4.19 Government Approvals and Permits. The Owner shall obtain and maintain all necessary state and local licenses, approvals and permits required for the Project or any Building and develop and operate the Project.

4.20 Nondiscrimination. The Owner shall not discriminate in making available Housing Units in the Project for occupancy on the basis of race, creed, color, sex, national origin, religion, familial status, age or disability; provided that the Owner may take such actions as may be necessary to qualify for or to maintain its qualification for the exemption that relates to housing for older persons under the Fair Housing Act, as amended, and 24 CFR Part 100, Subpart E. The Owner shall not discriminate against any Resident or prospective Resident based on his or her sources of income, including but not limited to Section 8 or other public assistance, provided such sources of income are not in contravention of any federal, state or local law; specifically, and without limitation, the Owner shall not refuse

to rent a Low-Income Unit to a holder of a voucher or certificate of eligibility under Section 8 of the United States Housing Act of 1937 (because of the status of the prospective tenant as such a holder).

4.21 Tenant Lease Rider. The Owner shall include a rider (the "Lease Rider") in each Resident lease or rental agreement and provide a copy to such Resident in substantially the form set forth in Exhibit "F." Each Resident must receive a copy of the Lease Rider prior to his or her execution of a lease or rental agreement. The Lease Rider must be signed and dated by a Resident signifying receipt of such Lease Rider and a copy of the signed Lease Rider and the lease or rental agreement to which it is attached must be provided to the Resident promptly following execution thereof. The Owner shall provide the Commission with the master form of lease or rental agreement (together with amendments thereto) and shall maintain all executed leases and rental agreements, with the attached Lease Riders on file for inspection by the Commission.

4.22 Restrictions During Three-Year Period. Throughout the Three-Year Period applicable to a Building, the Owner shall comply with the terms, conditions, obligations, restrictions, prohibitions, covenants, representations and warranties set forth in this Agreement, the Credit Reservation and Carryover Allocation Contract (RAC), and the Tax Credit Laws, including but not limited to Section 42(h)(6)(E)(ii). The Owner acknowledges that the Commission's requirements with respect to the Three-Year Period are more stringent than those under Section 42 of the Code.

4.23 No Eviction/Nonrenewal Other than for "Good Cause"; Tenant's Right to Enforce Good Cause and Other Commitments. During the Compliance Period and Extended Use Period, (i) no tenant of a Low-Income Housing Unit may be evicted, and (ii) the owner may not refuse to renew a rental agreement, other than for Good Cause and each rental agreement shall so provide. Further, in addition to any other rights and remedies provided hereunder, any individual who meets the income limitation for a Low-Income Unit (whether a prospective, present or former occupant of the Building) shall have the right to enforce in any State court the requirements of this Section 4.23 and the commitments, restrictions and covenants set forth in Section 4.2 and Exhibit B hereof.

4.24 Eventual Tenant Ownership Commitment. If applicable, at the end of the initial 15-year Compliance Period, the Owner may transfer ownership of units in the Project to tenant ownership; provided that the transfer shall be in accordance with Section 42(i)(7) of the Code and a transfer plan previously approved by the Commission at the time of application for the Credit (the "Transfer Plan"). The purchase price for each unit at time of sale shall be affordable to households with incomes meeting Credit eligibility requirements. To be eligible, the buyer must have had a Credit qualifying income at the time of initial occupancy or time of purchase.

The Commission agrees to take all necessary actions, at Owner's expense, to provide for the partial or full release of this Agreement and the acquisition of unit(s) by eligible tenants.

The Owner shall provide the Commission not less frequently than once every five years, commencing on the fifth anniversary of the date of this Agreement, and upon written request from the Commission, a report describing its progress towards compliance with the Transfer Plan, including, but not limited to, an accounting of balances in any tenant homeownership reserve accounts, number of homeownership counseling sessions held with tenants and number of budget and financial training sessions held.

The Owner agrees that, if it is unable to sell the unit(s) to eligible tenant(s) for any reason at the end of the Project Compliance Period: (a) this Agreement shall remain in full force and effect during the Additional Low-Income Use Period and (b) it shall waive its rights under Section 42(h)(6)(E)(i)(II) and 42(h)(6)(F) to terminate this Agreement if the Commission does not present a Qualified Contract in accordance with Section 10.2 hereof.

4.25 Data Collection. To the extent required of the Commission by federal law, the Owner shall assist the Commission with meeting federal reporting requirements by collecting and submitting information to the Commission annually concerning the race, ethnicity, family composition, age, income, use of rental assistance under section 8(o) of the United States Housing Act of 1937 or other similar assistance, disability status, and monthly rental payments of all low-income households.

SECTION 5. COMPLIANCE MONITORING AND REPORTING REQUIREMENTS

The Owner shall comply with the compliance monitoring, record keeping, certification, reporting and other requirements described in this Section 5, the Qualified Allocation Plan, WAC 262-01-130(16), the *Policies*, the *Low-Income Housing Tax Credit Compliance Manual*, and the Tax Credit Laws, as the same may be amended. Without limiting the generality of the foregoing, the Owner shall:

5.1 Compliance Monitoring Fee. Pay to the Commission a nonrefundable Annual Compliance Monitoring Fee described in the latest revision of the *Policies*. The Commission shall have the right to increase the Annual Compliance Monitoring Fee and the Owner agrees to pay the increased Annual Compliance Monitoring Fee throughout the remainder of the Project Compliance Period.

For Qualified Tax-Exempt Bond-Financed Projects in which the bonds are not issued by the Commission, the Owner shall pay the Annual Compliance Monitoring Fee annually throughout the Project Compliance Period in the amount described above.

Any amounts not paid to the Commission in accordance with this Agreement shall bear interest at the rate of 1.5% per month accruing from the due date until paid.

5.2 Provide Requested Information. Timely provide all information and documentation reasonably requested by the Commission, its representatives or designees throughout the Project Compliance Period, including, without limitation, all Certifications or other documentation as to the compliance of each Building in the Project with the terms of this Agreement, the Qualified Allocation Plan, WAC 262-01-130(16), the *Policies*, the *Low-Income Housing Tax Credit Compliance Manual*, Tax Credit Laws, and other requirements of the Commission, IRS, state, federal or local authorities.

5.3 Access to Project. Throughout the term of this Agreement, grant the Commission and its representatives access to the Project and to each Building and structure for on-site review and inspection, including but not limited to, such review and inspection as may be required by the Tax Credit Laws and the Qualified Allocation Plan. The rights of the Commission hereunder shall include, without limitation, the right to interview Residents of the Project, to inspect Housing Units, to review Resident applications and financial information in the possession of the Owner (or its agents), and to review information, including without limitation the Owner's books and records relating to the Project, upon a minimum of three (3) days advance notice.

5.4 Workshop Attendance. Attend, together with its property management representative, a tax credit compliance training workshop given by the Commission or its authorized designee prior to commencement of initial rent-up activities for the Project.

5.5 Copies of IRS Filings. Provide to the Commission, true, complete, and fully executed copies of: (i) IRS Form 8609 and attached Schedule A (together with any other attachments) for each Building for the first Year of the Credit Period and for each Year of the Credit Period thereafter; (ii) IRS Form 8586 (together with all attachments) for each Building for the first Year of the Credit Period and for each Year of the Credit Period thereafter; and (iii) each and every other form or document that is required, pursuant to Tax Credit Laws, to be filed by the Owner with the IRS in connection with the Project or any Building in the Project throughout the Project Compliance Period. The copies described above must be filed with the Commission no later than the earlier of the date they are actually filed with the IRS or the date they are legally due to be filed, including extensions, with the IRS.

5.6 Copies of IRS Notices. Throughout the Project Compliance Period, provide to the Commission true and complete copies of any and all notices, correspondence or other documents received by the Owner or its agent from the IRS with regard to the Project, including but not limited to notices, correspondence or other documents responding to or relating to IRS Form 8609, IRS Form 8586 and IRS Form 8823. The copies described in

the immediately preceding sentence must be filed with the Commission no later than fifteen (15) days after being received by the Owner.

5.7 Maintenance and Retention of Records; Health, Safety and Building Code Violations. Keep records for the Project (and, as noted, for each Building) that show for each Year throughout the term of this Agreement the information specified on Exhibit "D." The Owner shall retain the records described in Exhibit "D": (i) for at least six (6) years after the due date (with extensions) for filing the federal income tax return for that year; and, (ii) with respect to any year for which an income tax return is not filed or does not reflect the Credit for the Project, for at least six (6) years after the end of that year; provided, however, that the records for the first year of the Credit Period as defined under Section 42(f)(1) of the Code must be retained for at least six (6) years beyond the due date (with extensions) for filing the federal income tax return for the last year of the Compliance Period as defined under Section 42(i)(1) of the Code with respect to a Building in the Project. In addition, the Owner shall retain, for the duration of this Agreement, the original health, safety, or building code violation reports or notices that are issued with respect to the Project by any state or local government unit.

5.8 Required Certification. Throughout the Compliance Period, submit at least annually to the Commission a Certification as to the matters described in Exhibit "E."

SECTION 6. OWNER'S DUE DILIGENCE; DISCLAIMER BY COMMISSION

6.1 Owner's Due Diligence. The Owner acknowledges that it fully understands, and has conducted its own due diligence with respect to, the risks and issues of developing and operating a Project which will most likely constitute a tax shelter, and the terms, conditions and obligations of participating in the Tax Credit Program. The Owner further acknowledges that it has consulted with, and is relying solely upon, its own legal counsel, tax advisors and professionals with respect to this Agreement, the Owner's federal income tax situation, the Owner's participation in the Tax Credit Program, the qualification of the Project or any Building for Credit, the allocation, use and benefits of the Credit, and the commercial feasibility and viability of any Building in the Project. The Owner acknowledges that the Commission has made and makes no representations or warranties whatsoever with regard to any of such matters.

6.2 Responsibility for Credit Loss. The Owner acknowledges and agrees that it is solely responsible for all loss and recapture of Credit with respect to any Building, which loss and recapture shall be determined under Tax Credit Laws as they apply to any Building, the Owner, or any taxpayer, whether due to reduction in the amount of Credit allocated to any Building, noncomplying use of any Building, transfer of the Project or any Building, or termination of any Project Documents.

6.3 Monitoring for Noncompliance. The Commission has adopted procedures set forth in the Qualified Allocation Plan, the *Policies* and the Low-Income Housing Tax Credit Compliance Manual that it or its designee will follow in monitoring for Noncompliance with provisions of the Tax Credit Laws and the Tax Credit Program and in notifying the IRS of such Noncompliance. Such procedures and provisions of the Tax Credit Laws are expressly incorporated herein and shall be binding upon the Owner. The Commission may also make other determinations with respect to Credit, the Project, a Building or the Owner from time to time. Neither the above-described compliance monitoring procedures nor any such determination made by the Commission shall be construed as a representation or warranty by the Commission, nor shall the Commission have liability for any such procedure or determination.

6.4 Conflicting Terms. The Owner acknowledges that it and the Project are subject not only to the Program Documents but also to the *Policies*, the Low-Income Housing Tax Credit Compliance Manual and the Tax Credit Laws. The Owner understands that any particular provision thereof may impose upon the Owner a more restrictive or otherwise more onerous definition, term or condition than is set forth in the other Program Documents, the *Policies*, the Low-Income Housing Tax Credit Compliance Manual or the Tax Credit Laws and the Owner agrees that it shall be bound by and shall comply with the more restrictive or more onerous definition, term or condition as determined by the Commission. The Owner further understands that the *Policies* and the Low-Income Housing Tax Credit Compliance Manual are subject to revision as a consequence of developments in Tax Credit Laws or other applicable laws, and that it is the Owner's obligation to stay informed of, and comply with, all such revisions to the *Policies*.

6.5 Release. The Owner agrees that the Commission and the other Indemnified Parties shall have no liability to the Owner or any other Indemnitor with respect to the Tax Credit Program, or any act, omission or determination by the Commission or any other Indemnified Parties in connection therewith, including without limitation, the Commission's Allocation of the Credit to the Project, the Commission's apportionment of Credit to any Building, the Commission's compliance monitoring, or any Credit loss or recapture.

6.6 No Duty to Tenant. This Agreement is not intended, and shall not be construed, to create a duty or obligation of the Commission to enforce any term or provision of this Agreement or any other Program Document on behalf of, at the request of, or for the benefit of any former, present or prospective Resident. The Commission shall have no direct or indirect obligation to any former, present or prospective Resident for violations by the Owner or any other party of the Agreement, the other Program Documents, Tax Credit Laws, or other applicable laws.

6.7 No Obligation. Except as set forth in Section 10.2, nothing in this Agreement shall impose any duty or obligation on the Commission to take any action, including without

limitation any duty or obligation to find a purchaser for any Building, the Project or any portion thereof or to bring any action enforcing this Agreement. The Commission may exercise its rights under this Agreement in its sole and absolute discretion.

SECTION 7. RECORDATION; PRIORITY; LESSOR'S OBLIGATION

7.1 Recording. This Agreement shall be recorded by the Owner in the office of the county auditor or recorder of each county in which a Building in the Project is located. The Owner shall deliver evidence of each such recording to the Commission within fourteen (14) days following the execution of this Agreement.

7.2 Subordination. If any lien (including any mortgage, deed of trust, construction lien or judgment lien) or other monetary encumbrance now or hereafter exists on the Project that, if foreclosed or enforced, would, in the Commission's opinion, terminate, eliminate, or impair this Agreement (collectively, "Prior Liens"), such Prior Liens must be subordinated to this Agreement pursuant to a recorded subordination agreement in form and substance satisfactory to the Commission, and no final Allocation will be made to any Project or Building unless all Prior Liens are so subordinated. If the Owner is leasing the Land, then for the purposes of this Agreement the owner/lessor of the Land shall be treated as a holder of a Prior Lien.

7.3 Subsequent Encumbrances. Each and every contract, deed, lease (other than leases and rental agreements between the Owner and Residents) or other instrument hereafter executed that encumbers or conveys the Project or any portion thereof or interest therein shall be subordinate to this Agreement and Owner. Owner shall provide the Commission, upon request, evidence that such encumbrance is subordinate to this Agreement.

7.4 Obligations of the Lessor; Enforcement Against the Lessor. The Lessor, as the lessor of the land underlying the Project, has executed this Agreement solely to comply with the requirements of the Code that these covenants run with the land in order to secure the Credit Allocation for the Project. The Lessor shall have no liability under this Agreement unless the lease on the Project has been terminated and the Lessor has succeeded to the Owner's interest in the Project. So long as the lease is in effect and the Owner or a transferee of the Owner is the lessee, in any action to enforce the obligations of Owner to pay any indebtedness or perform any obligations created or arising under this Agreement, any judgment or decree shall be enforceable against the Lessor only to the extent of its interest in the Project and shall not be enforceable against, subject to execution on, or be a lien on, any other assets of the Lessor.

SECTION 8. DEFAULT; REMEDIES

8.1 Noncompliance, Notice and Correction Period. Except as otherwise provided in Section 8.3, the Owner shall notify the Commission and Lessor within five (5) days after the Owner learns of any Noncompliance or has reason to believe any Noncompliance has occurred or is likely to occur. The Owner shall correct any Noncompliance, to the extent

the Noncompliance is curable, within ninety (90) days after the date the Commission gives the Owner written notice of such Noncompliance (or, if earlier, within ninety (90) days after Owner learns of the Noncompliance); provided, however, the Commission may, in its sole discretion, extend the ninety (90) day correction period for up to six (6) months, but only if the Commission determines there is good cause for granting the extension; and provided further, however, in the event of a foreclosure, deed in lieu of foreclosure, or similar event with respect to the Project or the Land, the correction period for the successor for an existing event of Noncompliance shall be no less than ninety (90) days from the earlier of the date the successor obtains control or becomes the owner of the Project. To the extent that the Noncompliance is not corrected within the above-described period including extensions, if any, granted by the Commission, an event of default shall be deemed to occur. Lessor shall be entitled to notice of the event of default and shall have a reasonable opportunity to cure (for the avoidance of doubt, Lessor does not have any obligation to cure an event of default). If Lessor does not exercise its right to cure, and the Commission may exercise its rights and remedies under Section 8. Regardless of whether the Noncompliance is cured as set forth above, the Commission will report to the IRS events of Noncompliance as required by the Tax Credit Program and Tax Credit Laws, which shall be without prejudice to any of the Commission's rights and remedies under Section 8 and the Tax Credit Program. Further, for the purposes hereof, Noncompliance in the form of a representation, warranty or certification that was untrue in any material respect when made, shall, constitute an act of Noncompliance that is not curable.

8.2 Rights and Remedies. If the Owner and Lessor each fail to cure any Noncompliance within the period set forth under Section 8.1, or if the Noncompliance is of a type not subject to cure, then an event of default shall be deemed to have occurred hereunder and under the other Program Documents and the following provisions shall apply:

8.2.1 The Commission shall be entitled to compel specific performance by the Owner of its obligations under this Agreement and/or to exercise any other rights or remedies it may have, at law or in equity, under this Agreement, the other Program Documents, the *Policies*, the Tax Credit Program or Tax Credit Laws or other applicable law, including recovery of monetary damages.

8.2.2 Subject to the provisions of Section 6.6, any individual who meets the income limitation for a Low-Income Housing Unit or a Housing Unit in the Additional Low-Income Housing Commitment, or who meets the requirements for occupying a Housing Unit subject to a Housing Commitment(s) for Priority Population or the Farmworker Housing Commitment (such individual may be a former, present or prospective Resident of the Project), may institute and prosecute any proceeding at law or in equity to abate, prevent or enjoin such Noncompliance or breach, or to recover monetary damages caused thereby.

8.2.3 With respect to any Noncompliance involving the occupancy of a Low Income Housing Unit ("Occupancy Noncompliance"), the Owner, upon demand by the Commission, the Owner shall pay to the Commission an amount equal to all monies received by the Owner with respect to such noncompliant Low-Income Housing Unit from the time that the Owner or its agents knowingly or negligently permitted the Occupancy Noncompliance to occur until the Occupancy Noncompliance is cured. Notwithstanding the foregoing, the provisions of this Section 8.2.3 are not intended, and shall not be construed, to grant to the Commission a current lien on or a security interest in, the rents, issues and profits from the Project.

8.2.4 Subject to the provisions of Section 6.6, any individual who meets the income limitation for a Low-Income Housing Unit or a Housing Unit in the Additional Low-Income Housing Commitment (such individual may be a former or present Resident of the Project) shall be entitled to cause the Owner to pay such individual an amount equal to the difference between the monies received by the Owner from such individual with respect to a Low-Income Housing Unit and the amount which should have been received by the Owner if the rent collected by the Owner for such Unit was in compliance with the provisions of this Agreement.

8.3 Breach of Section 4.18. The failure of the Owner to give timely notice to the Commission as required by Section 4.18 and the Bankruptcy of the Owner shall each constitute an event of default for the purpose of Section 8.2 and provisions of Section 8.1 above allowing the Owner a period to correct Noncompliance shall not apply in those instances. Further, the mere occurrence (even with timely notice) of any of the other events described in items (1) through (9) of Section 4.18 also may constitute an event of default for the purposes of Section 8.2. Specifically, upon the occurrence of an event described in Section 4.18, the Commission shall have the right to demand that the Owner provide to the Commission adequate assurance that (i) the development and operation of the Project will not be materially impaired or potentially harmed and (ii) the Owner is and will be able to fully perform without default all of its obligations under the Program Documents. If the Owner fails to provide such adequate assurance within ten (10) days from the date that the demand for written assurance is given by the Commission, the Commission may, without further notice or opportunity to cure, declare an event of default and exercise its rights and remedies under Section 8.2.

8.4 Debarment. The Owner understands and acknowledges that under certain circumstances the Owner (and other parties related to the Project) may be barred from participating in the Commission's Tax Credit Program, which shall be without prejudice to any of the Commission's rights and remedies under Section 8 and the Tax Credit Program. The debarment rules and procedures are currently set forth in WAC 262-03-040.

SECTION 9. INDEMNIFICATION

9.1 Indemnity and Hold Harmless. The Owner, each general partner of the Owner, each party to the joint venture (if the Owner is a joint venture), and, in the case of a limited liability company, all Managers (the "Indemnitors"), as applicable, shall jointly and severally at all times defend (with counsel reasonably acceptable to the Commission) indemnify and hold harmless and release the Commission, its successors and assigns, including their respective members, officers, employees, agents and attorneys (the "Indemnified Parties"), from and against any and all claims, suits, losses, damages, costs, expenses and liabilities of whatsoever nature or kind (including but not limited to attorneys' fees, litigation and court costs, amounts paid in settlement, amounts paid to discharge judgment(s), and any disallowance of tax benefits) directly or indirectly resulting from, arising out of, or related to: (i) the financing, acquisition, construction and/or rehabilitation, syndication, sale, management or operation of the Project; (ii) any Noncompliance or failure to perform any covenant under this Agreement or any other Program Document (whether or not cured); (iii) any breach of a representation, warranty or covenant in Sections 3 or 4 or in any other Program Document; (iv) any other act or omission (whether or not cured) constituting a default under Section 8; or (v) the enforcement by the Commission, its successors and assigns of the Commission's rights and remedies under this Agreement or any other Program Document.

9.2 Survival. The obligations of the Indemnitors under this Section 9 shall survive any transfer of the Project (whether voluntarily or involuntarily) or termination of this Agreement and any attempted transfer or assignment or termination of any Indemnitor's interest in Owner or the Project; provided, however, the indemnification obligations of an Indemnitor shall not apply with respect to matters first arising after such Indemnitor has disposed of Indemnitor's interest in the Project or the Owner, as applicable, in accordance with the provisions of this Agreement.

9.3 Limited Liability for Subsequent Owner. Except for accrued Annual Compliance Monitoring Fees, no successor in interest to the Owner ("Successor Indemnitor") shall be liable under this Section 9 for: (i) acts or omissions of persons or entities other than the Successor Indemnitor that occurred before the earlier of the date the Successor Indemnitor obtained control or became the owner of the Project; or (ii) events or conditions on or related to the Project or any Building, or defaults under this Agreement or any other Program Document, occurring or existing prior to the earlier of the date such Successor Indemnitor obtained control or became the owner of the Project. Notwithstanding the foregoing, if a Noncompliance or other default exists under this Agreement or any other Program Document that arose before and is continuing after such Successor Indemnitor either obtains control or becomes the owner of the Project (each a "Continuing Default"), then such Continuing Default shall exist under this Agreement and Owner shall be under default under Section 8 only to the extent that the Continuing Default relates to the period commencing on the date the successor Owner obtained control or became the owner of the

Project, in which case, the successor shall have the cure rights, if any, set forth in Section 8. If and so long as the cure of a Continuing Default is prohibited by law (including restrictions on tenant evictions), the successor shall not be in default and shall not be required to cure the Continuing Defaults, but the Commission will nevertheless give the Successor Indemnitor written notice of a Continuing Default and/or report the same to the IRS as provided in Section 8.1.

SECTION 10. TERM OF THIS AGREEMENT

10.1 Term. This Agreement shall be effective with respect to the Project and the Land upon execution of this Agreement and continue in full force and effect throughout the Project Compliance Period, unless sooner terminated with respect to a Building under Sections 10.2 and 10.3 below; provided, however, that the Indemnitor's obligations under Section 9 shall survive expiration or termination of this Agreement.

10.2 Purchase Request. This Agreement may be terminated with respect to a Building in the Project under the following conditions:

10.2.1 Purchase Request. At any time after the close of the latest to end of: (i) the fourteenth (14th) year of the Compliance Period with respect to a Building; or (ii) one Year prior to the end of the Additional Low-Income Housing Use Period with respect to such Building, if any, the Owner may submit to the Commission a written request ("Purchase Request") that the Commission find a person to purchase the Owner's interest in such Building.

10.2.2 Time Period. The Commission shall have one year from its receipt of a Purchase Request to present a proposed Qualified Contract by a person who agrees to purchase such Building and continue to operate the low-income housing portion of such Building as a qualified low-income building (within the meaning of Section 42 of the Code).

10.2.3 Qualified Contract. If the Commission presents a timely proposed Qualified Contract under Section 10.2.2, the Purchase Request shall become irrevocable and the purchase and sale of the Building shall be carried out pursuant to the terms of the Qualified Contract. If, during the one year period and before the Commission presents a Qualified Contract, the Owner withdraws the Purchase Request: (i) the Owner shall fully reimburse the Commission for its costs incurred in attempting to locate a purchaser, including but not limited to the Commission's advertising costs, broker fees and attorneys' fees; and (ii) this Agreement shall not terminate with respect to such Building. However, the Owner shall not be precluded from having Section 10.2 apply to a subsequent request made thereunder with respect to such Building.

10.2.4 Failure to Present Qualified Contract. If the Commission does not present a proposed Qualified Contract for a Building under Section 10.2.2 by the close of the one year period, then the provisions of this Agreement in effect for such Building, excluding Section 9 above, shall terminate at the end of Three-Year Period in effect with respect to such Building and this Agreement, excluding Section 9 above, shall thereafter be applied by excluding such Building from the Project; provided this Agreement shall continue in full force and effect and shall continue to apply to each Building, the Land, and Project not subject to the Owner's Purchase Request.

10.2.5 Multiple Buildings. If the Project consists of more than one Building, then the terms and requirements for the sale of one or more but not every Building in the Project shall be governed by the Tax Credit Laws and other applicable law. Nothing in this Agreement shall be deemed to permit sale of any Building or any interest in a Building, the Land, the Project or any portion thereof in violation of the Tax Credit Laws or other applicable law, including without limitation state and local subdivision and zoning laws, ordinances and regulations.

10.3 Termination Upon Foreclosure.

10.3.1 Foreclosure. In the event title to a Building is transferred during the term of this Agreement by reason of foreclosure or forfeiture under a deed of trust, mortgage or real estate contract, by deed in lieu of foreclosure or by any other similar process, then this Agreement, excluding Section 9 above, shall automatically terminate with respect to such Building and any portion of Land upon which such Building is located (the Building together with any portion of the Land upon which such Building is located (whether owned or leased) are referred to in this Section 10.3.1 as the "transferred property") at the end of the Three-Year Period applicable to such Building. This Agreement shall thereafter be effective as to the Project but excluding the transferred property. In the event a successor in title by reason of the foreclosure, forfeiture or deed in lieu of foreclosure desires to qualify for Credit for such Building, if any, such successor in interest shall execute a revised Regulatory Agreement (Extended Use Agreement) with the Commission and shall perform such acts and execute such other and further contracts or agreements required by the Commission; provided, if for any reason a revised Regulatory Agreement (Extended Use Agreement) is not executed, such successor shall remain subject to, and liable as Owner under, the terms of this Agreement for the Three-Year Period.

10.3.2 Scheme to Terminate. Notwithstanding the foregoing, Section 10.3.1 shall not apply and all provisions of this Agreement shall remain in full force and effect with respect to a transferred property if after an acquisition described in such Section, the Owner or a related party (as defined in Sections 42(d)(2)(D)(iii), 267, 707(b) or 1563(a) of the Code) acquires an ownership interest (for federal income

tax purposes) in such transferred property if the Internal Revenue Service or the Commission determines that such acquisition is part of an arrangement with the Owner, a purpose of which is to terminate this Agreement in whole or in part.

10.3.3 Condemnation. In the event of involuntary transfer with respect to a Building arising as a consequence of seizure, requisition or condemnation by a governmental authority, this Agreement, excluding Section 9 above, shall automatically terminate with respect to such Building and any portion of Land seized, requisitioned or condemned by such governmental authority; and this Agreement shall thereafter be applied by excluding such Building and portion of Land from the Project.

SECTION 11. MISCELLANEOUS

11.1 Notices; Counting Days. All notices to be given pursuant to this Agreement shall be in writing and shall be deemed given three (3) calendar days after the date sent by certified or registered mail, return receipt requested, to the parties at the addresses set forth below, or to such other place as a party may from time to time designate in writing:

Owner:	CHS Shoreline LLC
Contact for Legal Notices:	Catholic Housing Services of Western Washington 100 23rd Avenue South Seattle WA 98144-2302 Attn: Timothy May, CFO
With a copy to:	Kantor Taylor PC 1200 Fifth Avenue Suite 1910 Seattle, Washington 98101 Attention: Andrea Sato, Esq.
And to:	c/o Raymond James Tax Credit Funds, Inc. 880 Carillon Parkway St. Petersburg, Florida 33716 Attention: Steven J. Kropf, President
with a copy to:	Nixon Peabody LLP Exchange Place 53 State Street Boston, MA 02109 Attn: Nathan A. Bernard
Commission:	Washington State Housing Finance Commission

1000 Second Avenue Suite 2700
Seattle, Washington 98104-1046
Attn: Executive Director

Except as otherwise set forth herein, "days" as used in this Agreement and all Exhibits hereto shall mean calendar days; provided if the last day of a deadline or other period described herein would otherwise fall on a Saturday, Sunday or Washington State holiday, the last day of such deadline or other period shall extend to the next calendar day that is not a Saturday, Sunday or Washington State holiday; provided, further, if the last day of a deadline or other period is December 31 or any other date that cannot be extended under the law, the deadline or other period shall be the last day prior to the original deadline or other period that is not a Saturday, Sunday or Washington State holiday.

11.2 Amendment. This Agreement may only be amended by a written instrument in recordable form signed by the Commission and the Owner; provided, however, the Owner, all Bound Parties and all Indemnitors acknowledge and agree that certain provisions of the Tax Credit Laws may change or be amended from time to time, and the Commission shall have the right to amend this Agreement, in its sole discretion, to the extent necessary to comply with or be consistent with such changes or amendments. The Owner and all Indemnitors agree that they shall be subject to and bound by such changes and amendments on a prospective basis, and agree to execute an amendment to this Agreement within ten (10) days of the Commission's request to reflect the same, but their signatures shall not be required for such amendment to be effective.

11.3 Cumulative Rights; Waiver. All rights and remedies of the Commission under this Agreement, the other Program Documents, the *Policies*, the Tax Credit Program, the Tax Credit Laws or other applicable laws are cumulative and may be exercised singularly or concurrently, and the exercise or any one or more of such rights or remedies shall not affect or preclude the exercise of any other rights, powers, or remedies which the Commission may have. Any forbearance, failure, or delay by the Commission in exercising any right, power, or remedy shall not be deemed to be a waiver thereof and any single or partial exercise of any right, power, or remedy shall not preclude the further exercise thereof or the exercise of any other right, power, or remedy.

11.4 Partial Invalidity. Each and every term of this Agreement shall be valid and enforceable to the fullest extent possible. If any term or provision of this Agreement or the application thereof to any person, entity or circumstance shall to any extent be invalid or unenforceable, the remainder of this Agreement or the application of such term or provision to persons, entities or circumstances other than those to which it is held invalid or unenforceable, shall not be affected thereby.

11.5 Further Assurances. The Owner agrees to execute, acknowledge, and deliver any and all documents, instruments, and writings, and to perform other acts as are reasonably necessary to carry out the purposes of this Agreement and the other Program Documents.

11.6 Project Transfer or Assignment. Subject only to the specific exceptions set forth in the *Policies*, and for a foreclosure or deed in lieu of foreclosure, each and every Project Transfer or Assignment shall require the prior written consent of the Commission. Specifically, but without limitation, pursuant to Section 42(h)(6)(B)(iii), the Commission shall not consent to any transfer or disposition of any portion of a Building to any person unless all of the Building is transferred to such person, and any such attempted transfer or disposition is hereby prohibited. Notwithstanding the foregoing, the Commission's consent shall not be required, although advance notice and documentation shall be required, for the removal of the managing member or general partner of Owner, as applicable, in accordance with the terms of any operating agreement or partnership agreement, as applicable, and the replacement thereof with the investor member or limited partner, as applicable, or any of its affiliates or such other entity as may be approved by the Commission.

11.7 Cure by Limited Partner. The Owner's limited partner shall have the right, but not the obligation, to cure any events of defaults of the Owner within the same cure periods provided to the Owner. The Commission shall recognize such cures as if provided by the Owner.

SECTION 12. TIME OF THE ESSENCE

Time is of the essence of each of Owner's obligations under this Agreement.

SECTION 13. CAPTIONS

Captions used in this Agreement are used for convenience of the Parties only and shall not be deemed to limit, modify or alter any of the substantive provisions of this Agreement.

SECTION 14. EXHIBITS AND SCHEDULES

All exhibits and schedules to this Agreement are incorporated herein by this reference.

SECTION 15. GOVERNING LAW; EFFECTIVE DATE

This Agreement shall be governed by the laws of the state of Washington. Notwithstanding the date of the Agreement set forth on page one, this Agreement is entered into and shall be effective on the last signature date of the parties hereto.

SECTION 16. VALID EXISTENCE; AUTHORIZATION;
NO CONFLICT WITH OTHER DOCUMENTS

The Owner warrants that it is validly organized and currently authorized to do business in the state of Washington. The Owner, and each party or person executing this Agreement on behalf of the Owner, represents and warrants as follows: (i) that the execution, delivery and performance of this Agreement have been duly authorized and approved by the appropriate governing body of the Owner; and (ii) that this Agreement, upon execution by each signatory of the Owner as set forth below, constitutes a valid and binding agreement of the Owner. The Owner further warrants that the Owner has not executed and shall not execute any other agreement with provisions contradictory to, or in opposition to, the provisions hereof, and that in any event this Agreement is controlling as to the rights and obligations in this Agreement and supersedes any other conflicting requirements.

[Be sure to keep all signatures inside the box to be able to record the document.]

IN WITNESS WHEREOF, the parties have caused this Agreement to be signed by their respective, duly authorized representatives on day and year first written above.

OWNER: CHS Shoreline LLC
By: CHS Shoreline Manager LLC
Its: Managing Member

By: Archdiocesan Housing Authority
Its: Manager

By: _____
Name: Chris Jowell
Title: Vice President

Owner's Federal Taxpayer Identification Number: 84-3750808

LESSOR: CITY OF SHORELINE

_____
Debbie Tarry, City Manager

WASHINGTON STATE HOUSING FINANCE COMMISSION

By _____
Steve Walker, Executive Director

STATE OF WASHINGTON)

) ss.

COUNTY OF KING)

I certify that I know or have satisfactory evidence that Chris Jowell is the person who appeared before me and acknowledged that said person signed this instrument, on oath stated that said person was authorized to execute the instrument and acknowledged it as the Vice President of Archdiocesan Housing Authority, manager of CHS Shoreline Manager LLC, managing member of CHS SHORELINE LLC of a Washington limited liability company**,** to be the free and voluntary act of such nonprofit corporation on behalf of such company on behalf of such company for the uses and purposes mentioned in the instrument.

Dated: _____

_____

Notary Public

Name (print): _____

Residing at: _____

Commission expires: _____

(Use this space for notarial stamp/seal.)

STATE OF WASHINGTON)

) ss.

COUNTY OF KING)

I certify that I know or have satisfactory evidence that Debbie Tarry is the person who appeared before me and acknowledged that said person signed this instrument, on oath stated that said person was authorized to execute the instrument and acknowledged it as the City Manager of the CITY OF SHORELINE, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: _____

_____

Notary Public

Name (print): _____

Residing at: _____

Commission expires: _____

(Use this space for notarial stamp/seal.)

STATE OF WASHINGTON)
) ss.
COUNTY OF KING)

I certify that I know or have satisfactory evidence that Steve Walker is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument as the Executive Director of the Washington State Housing Finance Commission, a body corporate and politic, and acknowledged it to be his free and voluntary act for the uses and purposes mentioned in the instrument.

Dated: _____

_____
Notary Public

Name (print): _____

Residing at: _____

Commission expires: _____

(Use this space for notarial stamp/seal.)

EXHIBIT "A"

TO REGULATORY AGREEMENT (EXTENDED USE AGREEMENT)

LEGAL DESCRIPTION

The Land referred to herein below is situated in the County of King, State of Washington, and is described as follows:
Lots 5 and 6 and the South 150 feet of Lot 7, ECHO LAKE PARK, according to the plat thereof recorded in Volume 23 of Plats, page 8, in King County, Washington.
EXCEPTING THEREFROM those portions lying within the boundaries of Aurora Avenue N and N 198th Street.

EXHIBIT "B"

TO REGULATORY AGREEMENT (EXTENDED USE AGREEMENT)

PROJECT DESCRIPTION:

1.	NAME OF PROJECT:	CHS Shoreline
	TC OR OID NUMBER:	21-68
	OWNER:	CHS Shoreline LLC
	OWNER'S ADDRESS:	100 23rd Ave S Seattle WA 98144
	CONTACT FOR LEGAL NOTICES:	Timothy May, CFO Catholic Housing Services of Western Washington 100 23rd Avenue South Seattle WA 98144-2302
2.	PROJECT AND OWNER COMMITMENTS, RESTRICTIONS, COVENANTS:	
	CREDIT SET-ASIDE CATEGORY:	2021 King County Tax Credit Allocation Pool
	ADDITIONAL LOW-INCOME HOUSING USE PERIOD ELECTED:	22 years
	TOTAL PROJECT COMPLIANCE PERIOD:	37 years
	TOTAL UNITS:	100
	TOTAL COMMON AREA UNITS:	0
	TOTAL MARKET RATE UNITS:	0
	†TOTAL HOUSING UNITS:	100
	*†PROJECT APPLICABLE FRACTION:	100%
	MINIMUM LOW-INCOME HOUSING SET-ASIDE:	40% at 60% AMI
	PERCENT OF AMGI FOR QUALIFIED	

LOW-INCOME HOUSING UNITS:	60%		
†TOTAL HOUSING UNITS IN LOW-INCOME HOUSING COMMITMENT:	100		
	#* OF HOUSING UNITS	% of AMGI	%* OF ALL LIH HOUSING UNITS
†ADDITIONAL LOW-INCOME HOUSING ELECTION:	50	50% AMI	50%
	50	30% AMI	50%

† HOUSING COMMITMENTS FOR PRIORITY POPULATIONS AND FARMWORKER HOUSING PROJECT

FOR HOMELESS	75	75%

The following buildings are of the Tax Credit Type: New Construction without Federal Subsidies

BIN for each Building	Known Street Address as of date of Extended Use Regulatory Agreement	City	# of Qualified Low-Income Housing Units by Building†	# of Common Area Units	# of Market Rate Units by Building
WA-21-00139			100		

* Based on the lesser of the Unit Fraction or Floor Space Fraction.
† Excludes any Common Area Units

****** Owner expects to obtain rent, operating and/or service subsidies ("Subsidies") for those units set aside as Housing for Homeless ("Homeless Units"), as set forth in Exhibit "B" hereto. If such Subsidies become unavailable or are reduced, and if sufficient compatible subsidies are not available so that units set aside as Homeless Units can be operated as such and still allow the Project to remain in compliance with coverage standards then in effect, Owner shall give written notice of that fact to the Commission. Owner's notice to the Commission shall include an estimate of the number of units that need to be rented to households other than Homeless Households as a result of insufficient Subsidies, and the backup detail showing the basis for the estimate. Upon the Commission's reasonable and timely confirmation of Owner's estimate, the Owner thereafter may rent one or more of the Homeless Units, as they become available through vacancies, to households that do not meet the eligibility criteria set forth in the Commission's

policies regarding Housing for Homeless ("Homeless Households"), to the extent necessary so that Owner can operate the Property consistent with applicable coverage standards.

For purposes of this subsection, a "compatible subsidy" is one that (a) is provided on terms consistent with the operation of the Property in compliance with this Regulatory Agreement, with all other recorded covenants and loan documents entered into by Owner for the Property and (b) will not reduce or impair the use of low-income housing tax credits claimed for the Project.

For purposes of this subsection, a "coverage standard" is a financial covenant based on the operating cash flow of the Owner from the Property that is applicable either (a) pursuant to the limited partnership agreement of Owner, under which the Investor then remains a limited partner; or (b) pursuant to an agreement made by Owner for a loan for the Property.

If, at any time, when any Homeless Units are being rented to other than Homeless Households pursuant to the foregoing, in the sole discretion of the Commission, either (a) it becomes possible to rent any of such Housing Units as Homeless Units without breach of coverage standards because of improvements in results of operations or the inapplicability of coverage standards formerly in effect; or (b) new or increased compatible subsidies are available that would permit one or more Housing Units that are not then rented as Homeless Units to again be rented as such, while allowing Owner to operate the Property consistent with applicable coverage standards; then Owner shall promptly, and in any event no later than 30 days after a written request from the Commission, apply for such subsidies for the Property, and Owner shall diligently pursue such subsidies. Owner shall enter into and perform any contracts required to obtain and maintain such subsidies, and if such subsidies are obtained, shall thereafter increase the number of Housing Units that are rented to Homeless Households when made available through vacancy, to the maximum extent consistent with operating in conformity with then applicable coverage standards.

EXHIBIT "C"

TO REGULATORY AGREEMENT (EXTENDED USE AGREEMENT)

DEFINITIONS

1.1 "Additional Low-Income Housing Commitment" means the low income housing commitment or commitments elected by the Owner in addition to the Minimum Low-Income Housing Set Aside as set forth in Exhibit B.

1.2 "Additional Low-Income Housing Use Period" means with respect to a Building, the period set forth in Exhibit B which begins immediately following the end of the Compliance Period.

1.3 "Agreement" means this Regulatory Agreement (Extended Use Agreement) as amended or restated from time to time, which Agreement is intended to meet the definition of a "long-term commitment to low-income housing" as required by Section 42(h)(6) of the Code and the requirements of the Tax Credit Program..

1.4 "Allocation" means, for purposes of this Agreement, the maximum amount of Credit available to the Project as a result of an allocation of Credit by the Commission, which will be apportioned to each Qualified Building at the time such Building is Placed-In-Service. Allocation includes (a) Credit allocated (as that term is used in Section 42 of the Code) by the Commission and subject to Section 42(h)(1) of the Code (i.e., Credit allocated pursuant to the competitive allocation process), and (b) Credit attributable to that portion of Eligible Basis financed with tax-exempt bonds (i.e., Credit which, by virtue of Section 42(h)(4) of the Code, is not allocated pursuant to the competitive allocation process).

1.5 "Annual Compliance Monitoring Fee" means the annual fee imposed by the Commission on the Owner of a Project for monitoring of its compliance with the Code, the Tax Credit Program, the Credit Reservation and Carryover Allocation Contract (RAC) and this Agreement.

1.6 "Applicable Fraction" means the lesser of the Unit Fraction or Floor Space Fraction for a Building or the Project, as the context so requires.

1.7 "Application" means the Tax Credit Program Application and amendments thereto, if any, submitted by the Owner with respect to the Project.

1.8 "Bankruptcy" has the meaning set forth in Section 4.18 of this Agreement.

1.9 "BIN" means the Building Identification Number (i.e., the identifying number assigned to a Building in the Project by the Commission).

1.10 "Bound Party" means any and all current and future owners, developers, lessees (other than Residents), easement holders or licensees of all or any portion of or interest in the Property; and their respective heirs, executors, administrators, legal representatives, devisees, successors and assigns.

1.11 "Building" means Residential Rental Property, as defined under Code Section 168 containing residential Housing Units for which a separate BIN is assigned, located on the Land and included in the Application.

1.12 "Carryover Allocation" means an Allocation pursuant to a Carryover Allocation Contract (RAC) which is made with respect to a Building or Project pursuant to Section 42(h)(1)(E) and/or Section 42(h)(1)(F) of the Code, as the case may be, and in conformance with Treasury Regulation Section 1.42-6.

1.13 "Carryover Allocation Contract" means an agreement entered into between the Owner and the Commission, and amendments thereto, if any, wherein subject to the satisfaction by the Owner of the terms, conditions, obligations and restrictions set forth therein and satisfaction of the requirements under Section 42(h)(1)(E) and/or Section 42(h)(1)(F) of the Code, IRS Treasury Regulation Section 1.42-6 and any other applicable law, the Commission makes a Carryover Allocation to the Project. The Credit Reservation and Carryover Allocation Contract (RAC) is a Carryover Allocation Contract.

1.14 "Certifications" means the representations made under penalties of perjury by (i) the Owner, (ii) each developer, (iii) each general partner, (iv) each party to a joint venture, (v) in the case of a limited liability company, each Manager, and/or (vi) each Resident, as applicable, including but not limited to those representations set forth in the Application and the *Certification Regarding Financial Solvency and Litigation Status*; *Certification on Behalf of Nonprofit Organization*; *Certification on Behalf of Profit-Motivated Individual, Business, Corporation or Partnership*; and *Certification of Ability to Contribute Equity to the Project* to the extent such Certifications apply to the Owner and/or the Project. Certifications also mean any and all representations made under penalties of perjury with respect to the Project at any time from the date of submission of the Application and throughout the Project Compliance Period.

1.15 "Code" means the Internal Revenue Code of 1986, as amended, together with corresponding and applicable temporary, proposed, and final Treasury Regulations, and Revenue Rulings and pronouncements issued or amended regarding it by the U.S. Department of the Treasury or IRS or as interpreted by any court of competent jurisdiction, to the extent applicable to the Project.

1.16 "Commission" means the Washington State Housing Finance Commission and any successor or assignee.

1.17 "Commitment" means a representation or agreement of the Owner contained in the Application which is binding upon the Owner and its successor(s) in interest throughout the Project Compliance Period unless otherwise noted in this Agreement, the applicable *Policies*, the Application or agreements entered into with the Commission in connection with the Tax Credit Program.

1.18 "Common Area Unit" means a Unit in the Project, as identified in this Agreement, that is occupied by resident managers or maintenance personnel, or used for the Project's business offices or security personnel, to the extent such use is reasonably required for the Project. A Common Area Unit is not a Housing Unit and is not included in the Total Housing Units for the Project. A Common Area Unit shall not be includible in either the numerator or the denominator of the Unit Fraction, Floor Space Fraction, or Applicable Fraction. At any time during the Project Compliance Period that a Common Area Unit becomes available as a residential rental Unit, such Unit shall fall within the definition of "Housing Unit" hereunder, and such Unit shall be treated as a Qualified Low-Income Housing Unit to the extent such treatment is necessary to maintain the Applicable Fraction for the Building in which said Unit is located at the percentage required to maintain the Applicable Fraction for the Building. In addition, such Unit shall be treated as a Unit subject to the Additional Low-Income Housing Commitment and any Housing Commitment(s) for Priority Populations to the extent such treatment is necessary to maintain the designated percentage of Housing Units subject to such commitments as set forth herein.

1.19 [Reserved]

1.20 [Reserved]

1.21 "Compliance Period" for a Building means a period of fifteen (15) Years beginning with the first Year in which such Building is Placed-In-Service or, if the Owner makes an election under Section 42(f)(1)(B) of the Code, the succeeding Year. In the case of an Existing Building receiving acquisition Credit, the Compliance Period for such Building shall not begin before the Compliance Period for the rehabilitation expenditures for such Building (which are treated as a separate Building), pursuant to Section 42(f)(5) of the Code.

1.22 "Continuing Default" has the meaning set forth in Section 9.3 of this Agreement.

1.23 "Covered Party" and "Covered Parties" means:

(i) the Owner;
(ii) if the Owner is a partnership, each general partner of the Owner;
(iii) if the Owner is a joint venture, each party to the joint venture;
(iv) if the Owner is a for-profit corporation, any officer, director or majority shareholder of such corporation;
(v) if the Owner is a nonprofit corporation, any officer of such corporation;
(vi) if a for-profit corporation is (a) a general partner of the Owner/partnership, (b) a Manager of the Owner/limited liability company, or (c) a party to a joint venture/Owner, any officer, director or majority shareholder of such corporation;
(vii) if a nonprofit corporation is (a) a general partner of the Owner/partnership, (b) a Manager of the Owner/limited liability company, or (c) a party to a joint venture/Owner, any officer of such corporation;
(viii) if the Owner is a limited liability company, each Manager of the limited liability company;
(ix) any other partnership or limited liability company organized or doing business within the state of Washington in which the Owner or any of the foregoing parties, is a general partner or, in the case of a limited liability company, each Manager; and
(x) the developer for the Project.

The parties identified above are referred to herein collectively as the "Covered Parties" and individually as a "Covered Party."

1.24 "Credit" means the low-income housing tax credit available for federal income tax purposes under Section 42 of the Code for a Qualified Building.

1.25 "Credit Period" for a Building means the period of ten (10) Years beginning with the Year in which the Building is Placed-In-Service for Credit purposes or, if the Owner makes an election under Section 42(f)(1)(B) of the Code, the succeeding Year; but only if the Building is a "qualified low-income building" (within the meaning of Section 42(c)(2) of the Code) as of the close of the first Year of such period. In the case of an Existing Building receiving acquisition Credit, the Credit Period shall not begin before the Credit Period for the rehabilitation expenditures for such Building (which is treated as a separate Building), pursuant to Section 42(f)(5) of the Code.

1.26 "Credit Reservation" means, to the extent applicable, the reservation of a maximum amount of Credit out of the Credit Ceiling to the Project which will be available for Allocation to such Project and apportioned to each Qualified Building upon meeting the requirements of the Tax Credit Program and Section 42 of the Code. A Credit Reservation is generally not granted if the Project is a Qualified Tax-Exempt Bond-Financed Project.

1.27 "Credit Reservation and Carryover Allocation Contract (RAC)" means the agreement entered into between the Owner and the Commission, and amendments thereto, if any, wherein the Commission granted a Credit Reservation to the Project.

1.28 "Disabilities" means a physical or mental impairment which substantially limits one or more of the major life activities of an individual such as preventing the caring of oneself, performing manual tasks, walking, seeing, hearing, speaking, breathing, or learning.

1.29 "Elderly" means persons who are Residents of an Elderly Housing Project.

1.30 "Elderly Housing Project" means a Project that conforms with the Fair Housing Act, as amended, and is operated in compliance with one of the following criteria (as elected by the Owner in the Application) throughout the Project Compliance Period:

(i) A Project in which all Housing Units are intended for and solely occupied by Residents who are sixty two (62) or older;

(ii) A Project in which all Housing Units are intended and operated for occupancy by at least one Resident who is fifty-five (55) or older, and where at least eighty percent (80%) of the Housing Units are in fact occupied by at least one Resident who is fifty five (55) or older; OR

(iii) A Project which is financed, constructed and operated under the RD Section 515 program for the elderly (i.e. where each such Resident is either 62 or older or is a person with a handicap or disability, regardless of age, as such terms are defined in the RD program) or a HUD elderly program.

1.31 "Eventual Tenant Ownership" means at the end of the initial 15-year Compliance Period, the Owner shall transfer ownership of Low-Income Housing Units in the Project to tenant ownership pursuant to a transfer plan approved by the Commission.

1.32 "Extended Low-Income Housing Use Period" for a Building means the period beginning with the first day in the Compliance Period in which such Building is part of a "qualified low-income housing project" (within the meaning of Section 42 of the Code), and ending on the date thirty (30) years thereafter, unless terminated earlier under the provisions of this Agreement.

1.33 "Farmworker" means a household whose Income is derived from farm work in an amount not less than $3,000 per year and which, at the time of initial occupancy of the Housing Unit at the Project, has an Income at or below fifty percent (50%) of the Area Median Gross Income.

1.34 "Farmworker Housing Commitment" means a percentage of the Housing Units in the Project are set aside for occupancy by Residents who are Farmworkers.

1.35 "Floor Space Fraction" means the fraction of a Project devoted to low-income housing, the numerator of which is the total square footage of floor space in all Low-Income Housing Units in the Project, and the denominator of which is the total square footage of floor space in all Housing Units in the Project, whether or not occupied. Where the context requires, the Floor Space Fraction is determined Building by Building.

For Projects which provide Housing Units for a Housing Commitment for Priority Populations, Floor Space Fraction with respect to a Housing Commitment for Priority Populations is the fraction of a Project devoted to the Housing Commitment for Priority Populations, the numerator of which is the total square footage of floor space in all Housing Units in the Housing Commitment(s) for Priority Populations in the Project, and the denominator of which is the total square footage of floor space in all Housing Units in the Project, whether or not occupied.

1.36 "Good Cause" means (1) serious or repeated violation of material terms of the lease as that phrase is applied with respect to federal public housing at 24 C.F.R. Section 966.4(l)(2) or (2) the failure or refusal to vacate the premises when there is a defective condition or damage that is so substantial that it is economically infeasible to remedy the defect with the tenant in possession.

1.37 "Gross Rent" means the rent received for a Low-Income Housing Unit. The Utility Allowance for a Housing Unit must be included in Gross Rent, but Gross Rent excludes:

(i) any payments under Section 8 or any comparable rental assistance program;
(ii) any fees for supportive services (within the meaning of Section 42(g)(2)(B)(iii) of the Code) paid to the Owner (on the basis of the low-income status of the Resident of the Housing Unit) by a governmental assistance program or an organization exempt from federal income tax under Section 501(c)(3) of the Code, if such program or organization provides assistance for rent and the amount of assistance provided for rent is not separable from the amount of assistance provided for supportive services; and
(iii) rental assistance payments to the Owner under RD Section 515 of the Housing Act of 1949.

Gross Rent includes de minimis amounts paid toward purchase of a Housing Unit as described in Section 42(g)(6) of the Code. Gross Rent also includes the amounts imposed on Residents for Required Services even if federal or state law requires that the Services must be offered to Residents by an Owner. The amount of maximum Gross Rent allowed

for a Low-Income Housing Unit is determined annually based upon the Area Median Gross Income determined by HUD. The maximum Gross Rent for any year must be decreased if the Area Median Gross Income for the locality in which the Project is located decreases but such amount will not be reduced below the amount of Gross Rent established pursuant to Revenue Procedure 94-57.

1.38 "Housing Commitment for Priority Populations" means the specified percentage of Housing Units that meets the definition of a Large Household Unit or which are set aside for occupancy by Residents who meet the criteria under the Tax Credit Program for priority populations, as follows: the Elderly, persons with Disabilities and Housing for Homeless.

1.39 "Housing Unit" means a Low-Income Housing Unit and/or Market Rate Housing Unit located in a Building which is available for rent or rented by Residents. A Common Area Unit is not a Housing Unit. "Housing Units" refers to all the Housing Units in the Project, unless the context clearly means all the Housing Units in a Building.

1.40 "Imputed Household Size" means the number of people deemed living in a Housing Unit, determined by the number of bedrooms in the Housing Unit, as follows:

Type of Housing Unit	Imputed Household Size		
Efficiency/Studio (No Separate Bedroom)		1	Person
One Bedroom		1.5	Persons
Two Bedrooms		3	Persons
Three Bedrooms		4.5	Persons
Four Bedrooms		6	Persons
Five Bedrooms		7.5	Persons
Each Additional Bedroom	Add	1.5	Persons

1.41 "Indemnitors" has the meaning set forth in Section 9.1.

1.42 "Indemnified Parties" or "Indemnified Party" has the meaning set forth in Section 9.1 of this Agreement.

1.43 "IRS Form 8609" means the Internal Revenue Service form entitled "*Low-Income Housing Credit Certification*" issued by the Commission with respect to a Qualified Building no later than the end of the calendar year that such Building is Placed-In-Service.

1.44 "Land" means the Land legally described in Exhibit "A".

1.45 "Large Household" means a group of four (4) or more income qualified Residents who are not necessarily related and who live together in a Low-Income Housing Unit containing three (3) or more bedrooms.

1.46 "Large Household Unit" means a Low-Income Housing Unit containing three (3) or more bedrooms which is occupied by four (4) or more income qualified Residents who are not necessarily related.

1.47 "Lease Rider" means the disclosure statement attached as Exhibit "F".

1.48 "Low-Income Housing Commitment" means the specified percentage of Housing Units that are both Rent Restricted and occupied by Residents whose Income is at or below the Minimum Low-Income Housing Set-Aside subject to exception for initially qualifying Residents whose Income increases, as set forth in Sections 42(g)(2)(D), 142(d)(3) and 142(d)(4) of the Code.

1.49 "Low-Income Housing Unit" means a Housing Unit which meets the definition of a Qualified Low-Income Housing Unit. In addition, all Housing Units in the Additional Low-Income Housing Commitment are Low-Income Housing Units. Common Area Units are not included.

1.50 "Manager" means (i) in the case of a manager-managed limited liability company, all persons designated as the limited liability company's manager(s); (ii) in the case of a member-managed liability company, all persons designated as the limited liability company's managing member(s); and (iii) in the case of a limited liability company not described in clauses (i) and (ii), all members of such limited liability company.

1.51 "Minimum Low-Income Housing Set-Aside" means the minimum percent required under Section 42(g) of the Code of Total Housing Units in the Project to be both Rent-Restricted and occupied by Residents whose Income is at or below a certain percentage of Area Median Gross Income (subject to exception for initially qualifying Residents whose Income increases, as set forth in Sections 42(g)(2)(D), 142(d)(3) and 142(d)(4) of the Code).

1.52 "Noncompliance" means a failure to observe or perform any covenant, condition, or term of this Agreement or the Credit Reservation and Carryover Allocation Contract (RAC), or a failure to meet the requirements of the Tax Credit Laws, the *Policies*, or the Tax Credit Program.

1.53 "Owner" means the entity described in Exhibit B and its successor(s) in interest of the Project and also includes any purchaser, grantee, transferee, owner or lessee of all or any portion of the Project, and the heirs, executors, administrators, devisees, successors

and assigns of any purchaser, grantee, transferee, owner or lessee of all or any portion of the Project, and any other person or entity having any right, title, or interest in the Project. Owner does not include an individual who is merely a Resident of the Project. "Owner" also includes any predecessor in interest in the Project which submitted the Application to the Commission or entered into the Credit Reservation and Carryover Allocation Contract (RAC).

1.54 "Placed-In-Service" means:

(i) for a New Building or Existing Building used as Residential Rental Property, the date on which such Building is ready and available for its specifically assigned function as evidenced by a certificate of occupancy or,

(ii) for rehabilitation expenditures that are treated as a separate New Building, the date selected by the owner during the twenty-four (24) month period over which such rehabilitation expenditures are aggregated.

1.55 "*Policies*" means, as appropriate, (1) the *9% Competitive Housing Tax Credit Policies*, the written interpretive and policy statements issued by the Commission pursuant to RCW 34.05.230(1) and relating to the *Qualified Allocation Plan*, WAC 262-01-130, and the Tax Credit Program in effect as of the date the Owner entered into Credit Reservation and Carryover Allocation Contract (RAC) for the Project or, (2) if the Project is a Qualified Tax-Exempt Bond-Financed Project with no Credit Reservation and Carryover Allocation Contract (RAC), the *Bond/Tax Credit Program Policies* in effect as of the date the Owner submitted the Project's Tax Credit Program Application to the Commission.

1.56 "Prior Lien" has the meaning set forth in Section 7.2 of this Agreement.

1.57 "Program" means the Commission's Tax Credit Program for allocating Credit and taking other action related to Projects for which any Owner claims or plans to claim Credit. The Tax Credit Program includes, without limitation, adopting the *Qualified Allocation Plan*, *Policies* and Allocation Criteria, making Credit Reservations and Allocations, assigning BINs, determining the amount of Credit necessary for the financial feasibility of a Project and its viability as a Qualified Low-Income Housing Project throughout the Credit Period (including such determinations made on behalf of another governmental unit), entering into Regulatory Agreements (Extended Use Agreements) for Projects, monitoring Projects, and notifying the IRS of an Owner's, a Building's, or a Project's Noncompliance.

1.58 "Program Documents" means this Agreement, the Application, the Credit Reservation Agreement, and all other related documents and agreements entered into or delivered by Owner with respect to the Project, as amended or restated from time to time.

1.59 "Project" means the Land and one (1) or more Buildings, structures, or other improvements now or hereafter constructed or located upon the Land. If more than one (1) Building is to be part of the Project, each Building must be financed under a common plan and identified in the manner required under Section 42(g) of the Code.

1.60 "Project Compliance Period" means the period beginning with the year that the first Building of the Project is Placed-In-Service and continuing thereafter until the last to end of the following periods for each Building in the Project: (i) the Compliance Period; (ii) the Extended Low-Income Housing Use Period; or (iii) the Additional Low-Income Housing Use Period.

1.61 "Project Transfer or Assignment" means any direct or indirect sale, contribution, assignment, assumption, lease, exchange, or transfer of, or other change in,

(i) an interest in the Land, the Project, or any Building;
(ii) an ownership interest in the entity that is the Owner; or
(iii) the right, title or interest of the Owner in the Application, the Credit Reservation Contract and Carryover Allocation Contract (RAC), this Agreement, or any other agreement in which the Commission and the Owner are parties.

By way of example, a Project Transfer or Assignment includes (but is not limited to):

(i) If a limited partnership is the Owner, any direct or indirect sale or transfer of, or change in, the interest of a partner (including the addition, removal, or withdrawal of a partner);
(ii) If a limited liability company is the Owner, any direct or indirect sale or transfer of, or change in, the interest of a manager, managing member, or member (including the addition, removal or withdrawal of a manager, managing member or member);
(iii) If a joint venture or general partnership is the Owner, any direct or indirect sale or transfer of, or change in, the interest of a party to the joint venture or partner of the general partnership (including the addition, removal or withdrawal of a party or partner); and
(iv) If a corporation is the Owner, any direct or indirect change in the ownership of the corporation, including the issuance, redemption or transfer of stock or shares.

1.62 "Purchase Request" has the meaning set forth in Section 10.2.1 of this Agreement.

1.63 "Qualified Building" means a Building which meets the terms, conditions, obligations and restrictions of the Tax Credit Program, the Credit Reservation and

Carryover Contract (RAC) this Agreement and Section 42 of the Code for an Allocation and the issuance by the Commission of IRS Form 8609.

1.64 "Qualified Contract" means a bona fide contract, determined pursuant to Section 42(h)(6)(F) of the Code, to acquire the portion of a Building which is not Rent-Restricted for fair market value and the portion of the Building which is Rent-Restricted for an amount not less than the Applicable Fraction for the Building of the sum of:

(i) the portion of outstanding indebtedness secured by, or with respect to, the Building which is allocable to such Building;
(ii) the Adjusted Investor Equity in the Building; and
(iii) other capital contributions invested in the Building but not reflected in the amounts described immediately above; *reduced by*
(iv) cash distributed from the Project or available for distribution from the Project, provided that in all cases the purchase price for the Building shall be determined consistent with the requirements of Section 42(h)(6)(F) of the Code.

For purposes of this definition, "Adjusted Investor Equity," as defined in Section 42(h)(6)G) of the Code, means, for any calendar year,

(i) the total amount of cash taxpayers have invested in a Project ("Invested Cash") *increased by*
(ii) the amount equal to the Invested Cash multiplied by the cost of living adjustment for that calendar year,

as determined under Section 1(f)(3) of the Code by substituting the calendar year with or within which the first Year of the Credit Period ends for "calendar year 1987". An amount shall be taken into account as Invested Cash only as far as there was an obligation to invest that amount at the beginning of the Credit Period and as far as that amount is shown in the adjusted basis of the Project.

1.65 "Qualified Low-Income Housing Project" means a Project of Residential Rental Property containing the Minimum Low-Income Housing Set-Aside subject to the exception for initially qualifying Residents whose income increases, as set forth in Sections 42(g)(2)(D), 142(d)(3) and (4) of the Code.

1.66 "Qualified Low-Income Housing Unit" means a Housing Unit that is both Rent-Restricted and occupied by Residents whose Income is at or below the percentage of Area Median Gross Income set forth in Exhibit B, subject to the exception for initially qualifying Residents whose incomes increase, as set forth in Sections 42(g)(2)(D), 142(d)(3) and 142(d)(4) of the Code; provided that:

1.66.1 A Housing Unit shall constitute a Qualified Low-Income Housing Unit only if it is suitable for occupancy taking into account local health, safety and building codes and it is used other than on a transient basis except in the case of Transitional Housing, all as determined under Section 42(i)(3) of the Code);

1.66.2 A Housing Unit in any Building which has four (4) or fewer Units shall not constitute a Qualified Low-Income Housing Unit if any Unit in the Building is occupied by an Owner or a related person (within the meaning of Section 42(i)(3)(C) of the Code) unless such Building is described in Section 42(i)(3)(E) of the Code; and

1.66.3 A Housing Unit shall not be considered to be a Qualified Low-Income Housing Unit if all Residents in the Housing Unit are students (as defined in Section 151(c)(4) of the Code), none of whom file a joint income tax return unless such residents satisfy an exception for students set forth in Section 42(i)(3)(D) of the Code.

1.67 "Qualified Tax-Exempt Bond-Financed Project" means a Project in which a portion of the Eligible Basis of a Building is financed with certain tax-exempt bonds, as described in Section 42(h)(4)(A) and (B) of the Code.

1.68 [Reserved]

1.69 "Rent-Restricted" means that the Gross Rent with respect to a Low-Income Housing Unit does not exceed thirty percent (30%) of the applicable income limitation adjusted by the Imputed Household Size. This income limitation is determined either by (i) the Minimum Low-Income Housing Set-Aside; or (ii) the Additional Low-Income Housing Commitment, as the case may be, for such Low-Income Housing Unit, subject to the exception set forth in Section 42(g)(2)(E) of the Code (relating to certain Housing Units for which federal rental assistance decreases as Resident income increases).

1.70 "Resident" means an individual or group of individuals (other than an Owner) residing in a Low-Income Housing Unit or Market Rate Housing Unit.

1.71 "Rules" means the rules adopted by the Commission governing the Tax Credit Program as codified at Washington Administrative Code 262-01-130.

""1.72 "Successor Indemnitor" has the meaning set forth in Section 9.3.

1.73 "Tax Credit Laws" means Section 42 of the Code and the regulations promulgated thereunder, as the same may be amended from time to time.

1.74 [Reserved]

1.75 "Three-Year Period" for a Building means:

(i) the three years following the date of acquisition of that Building by foreclosure or forfeiture under a deed of trust, mortgage or real estate contract or by deed in lieu of foreclosure; or

(ii) in those circumstances where the Owner has properly and timely submitted to the Commission a Purchase Request, the three-year period commencing upon expiration of the one-year period following the Commission's receipt of the Purchase Request.

Generally, the Commission has one year after receipt of a Purchase Request to present to the Owner a Qualified Contract for the purchase of the Owner's interest in a Building. If the Commission fails to do so, the Regulatory Agreement and all of its restrictions and limitations on the use of the Building will terminate at the end of the three-year period following the one-year period.

1.76 "Total Housing Units" means all Housing Units in the Project, including both Market Rate Housing Units and Low-Income Housing Units. Common Area Units are not included. All percentages of Total Housing Units in the Project are based on the lesser of the Project's Floor Space Fraction (square footage of the Total Housing Units) or Unit Fraction (number of Total Housing Units) unless otherwise specifically noted.

1.77 "Transferee" means the person, organization or entity that is the transferee in connection with a Project Transfer or Assignment.

1.78 "Transferor" means the person, organization or entity that is the transferor in connection with a Project Transfer or Assignment.

1.79 "Unit" means a residential rental Housing Unit located in a Building and also includes a Common Area Unit.

1.80 "Unit Fraction" means the fraction of a Project devoted to low-income housing, the numerator of which is the number of Low-Income Housing Units in the Project, and the denominator of which is the number of all Housing Units in the Project, whether or not occupied. Where the context requires, the Unit Fraction is determined Building by Building.

For Projects which provide Housing Units for a Housing Commitment for Priority Populations, Unit Fraction with respect to each Housing Commitment for Priority Populations is the fraction of the Project devoted to the Commitment for Priority

Populations, the numerator of which is the number of Housing Commitment for Priority Populations Housing Units in the Project, and the denominator of which is the number of all Housing Units in the Project, whether or not occupied.

1.81 "Utility Allowance" means the utility allowance as computed pursuant to a methodology set forth in the Commission's Tax Credit Compliance Procedures Manual.

1.82 "Year" means the taxable year of the Owner.

EXHIBIT "D"

RECORDS REQUIRED TO BE MAINTAINED
PURSUANT TO SECTION 5.7

(i) The total number of Housing Units in each Building (including the number of bedrooms and the size in square feet of each Housing Unit).

(ii) The percentage and number of Housing Units in each Building that are Low-Income Housing Units.

(iii) The percentage and number of Housing Units in the Project that are subject to the Additional Low-Income Housing Commitment requirements.

(iv) The percentage and number of Housing Units in the Project that are subject to each of the Housing Commitment(s) for Priority Populations or the Farmworker Housing Commitment requirements.

(v) The Gross Rent charged for each Low-Income Housing Unit in the Project (including any Utility Allowances).

(vi) The number of Residents in each Low-Income Housing Unit.

(vii) The number of Residents in each Housing Unit subject to a Housing Commitment for Priority Populations related to household size.

(viii) The Low-Income Housing Unit vacancies in each Building and information that shows when, and to whom, the next available Housing Units were rented.

(ix) The vacancies of any Additional Low-Income Housing Commitment in the Project and information that shows when, and to whom, the next available Housing Units were rented.

(x) The vacancies of any Housing Units subject to a Housing Commitment for Priority Populations or the Farmworker Housing Commitment in the Project and information that shows when, and to whom, the next available Housing Units were rented.

(xi) The annual Income Certification of each low-income Resident;

(xii) Documentation to support each low-income Resident's Income Certification.

(xiii) Documentation to support that each Resident who resides in a Housing Unit that is subject to a Housing Commitment for Priority Populations or the Farmworker Housing Commitment meets the Commission's eligibility criteria for such Housing Commitment(s) for Priority Populations or the Farmworker Housing Commitment.

(xiv) The Eligible Basis and Qualified Basis of each Building at the end of the first year of the Credit Period.

(xv) The character and use of the nonresidential portion of each Building included in the Building's Eligible Basis under Section 42(d) of the Code.

(xvi) The date that a Resident initially occupies a Housing Unit and the date that a Resident moves-out of a Housing Unit.

(xvii) Documentation that demonstrates compliance with the marketing requirements for the Housing Commitment(s) for Priority Populations and the Farmworker Housing Commitment as set forth in Sections 4.8 and 4.9 of the Regulatory Agreement.

(xviii) Documentation that demonstrates compliance with the requirements with regard to the limitation or up-front rental charges set forth in Section 4.14 of the Regulatory Agreement.

(xix) Documentation that demonstrates compliance with the annual notification and advertising requirements set forth in Section 4.13 of the Regulatory Agreement.

(xx) Documentation that demonstrates compliance with the Lease Rider requirements as set forth in Section 4.21 of the Regulatory Agreement.

(xxi) If the Owner received Allocation Criteria Points for preservation of federally assisted low-income housing, documentation that demonstrates compliance with that commitment.

(xxii) Compliance with each and every other covenant and obligation of the Owner under this Agreement, the Credit Reservation and Carryover Allocation Contract (RAC) and/or the Tax Credit Program.

*In addition, for the duration of the term of the Regulatory Agreement, the Owner must retain the original health, safety, and building code violation reports or notices that are issued by any state or local government unit.

EXHIBIT "E"

ANNUAL CERTIFICATION REQUIRED
PURSUANT TO SECTION 5.8

The annual certification shall be in a form acceptable to the Commission and shall provide that at all times during the preceding twelve (12) month Certification Period the following was true:

1. The Project met the requirements of:

   (i) the 20-50 test under Section 42(g)(1)(A) of the Code, or the 40-60 test under Section 42(g)(1)(B) of the Code, whichever Minimum Low-Income Housing Commitment test is applicable to the Project; or if applicable to the Project, the 15-40 test under Section 42(g)(4) and Section 142(d)(4)(B) of the Code for "deep rent skewed" projects;
   (ii) If applicable to the Project, any Additional Low-Income Housing Commitment;
   (iii) If applicable to the Project, any Housing Commitment(s) for Priority Populations or the Farmworker Housing Commitment; and
   (iv) If applicable to the Project, requirements for preservation of federally assisted low-income housing.

2. There was no change in the Applicable Fraction of any Building in the Project, or that there was a change, and a description of the change.

3. The Owner has received an initial annual Income Certification for each new low-income household and documentation to support that the Certifications met applicable income set-aside requirements; and any annual re-certifications of income that may be required by the Commission.

4. Each Low-Income Housing Unit in the Project was Rent-Restricted.

5. All Housing Units in the Project were for use by the general public, and no finding of discrimination under the Fair Housing Act occurred with respect to the Project.

6. All Low-Income Housing Units in the Project were used on a nontransient basis (except as otherwise permitted by Section 42 of the Code).

7. Each Building in the Project was suitable for occupancy, taking into account local health, safety, and building codes and Uniform Physical Condition Standards (UPCS) as defined by HUD and the state or local government unit responsible for making local health, safety, or building code inspections did not issue a violation report for any Building or Low-Income Housing Unit in the Project. If a violation report or notice was issued by the governmental unit, the Owner must attach a statement summarizing the violation report or notice or a copy of the violation report or notice to the Certification submitted to the Commission and must state whether the violation has been corrected.

8. There was no change in the Eligible Basis (as defined in Section 42(d) of the Code) of any Building in the Project, or if there was a change, a written explanation of the change.

9. All functionally related and subordinate facilities included in the Eligible Basis under Section 42(d) of the Code of any Building in the Project, such as swimming pools, other recreational facilities, and parking areas, were provided on a comparable basis without a separate fee to all Residents in the Building.

10. If the income of a low-income household increased above the limit allowed in Section 42 (g)(2)(D)(ii), the next available Housing Unit of comparable size or smaller in the building was rented to an income qualified household.

11. If a Housing Unit subject to a Housing Commitment for Priority Populations or the Farmworker Housing Commitment in the Project was vacated, that the Owner complied with the requirements specified in Section 4.8 of the Regulatory Agreement (describing good faith efforts to actively market vacated Housing Units and holding the Housing Units open).

12. The Owner complied with the up-front rental charge limitations described in Section 4.14 of the Regulatory Agreement.

13. The Regulatory Agreement was in effect as an extended low-income housing commitment as described in Section 42(h)(6) of the Code.

14. As required under Section 42(h)(6)(B)(iv) of the Code, the Owner has not refused to lease a Housing Unit in the project to an applicant who holds a voucher or certificate of eligibility under Section 8 of the United States Housing Act of 1937, 42 U.S.C. 1437.

15. Pursuant to IRS Revenue Ruling 2004-82, the Owner has not evicted any residents, or refused to renew any leases, except for good cause.

16. The Project is in compliance with the Fair Housing Accessibility Guidelines as issued in the Federal Register Vol. 56, No. 44, issued March 6, 1991.

17. The Project was a Residential Rental Property in compliance with all applicable federal, state and local housing laws, regulations and policies governing nondiscrimination and accessibility, including but not limited to: the Americans with Disabilities Act; Fair Housing Act, as amended; Architectural Barriers Act of 1968; Housing and Community Development Act of 1974; Civil Rights Act of 1964; Civil Rights Act of 1968; and Age Discrimination Act of 1975 and no Resident or prospective Resident was discriminated against on the basis of race, creed, color, sex, national origin, familial status, religion, marital status, age or disability; provided that the Owner may take such actions as may be necessary to qualify for or to maintain its qualification for the exemption that relates to housing for older persons under the Fair Housing Act, as amended, and 24 CFR Part 100, Subpart E. Furthermore, no Resident or prospective Resident was discriminated against on the basis of that Resident's or prospective Resident's: (i) sources of income, including but not limited to public assistance, provided such sources of income were not in contravention of any federal, state or local law; or (ii) receipt of Section 8 or any comparable rental assistance.

18. There were no changes in the Project that would alter or amend the representations or agreements made in the Program Documents, except as the documents and agreements have been previously amended by the Owner or its predecessor in interest with the written approval of the Commission.

19. The Owner has no actual or constructive knowledge of the occurrence of any event that would require the Owner to notify the Commission pursuant to Section 4.18 of the Regulatory Agreement.

20. When selecting Residents for occupancy in Low-Income Housing Units or Housing Units subject to a Housing Commitment for Priority Populations or the Farmworker Housing Commitment, the Owner did not apply selection criteria to a prospective Resident that was more burdensome than selection criteria applied to any other Resident or prospective Resident.

21. The Low-Income Housing Units and any Housing Units subject to a Housing Commitment for Priority Populations were not at any time geographically segregated from other Housing Units in the Project.

22. Except for the Housing Commitment for Large Households, the configuration of any Housing Units used for the Low-Income Housing Units and any Housing Commitment for Priority Populations were proportional to the

configuration of the Total Housing Units in the Project (unless a different configuration was approved by the Commission in writing) and the Housing Units used for the Low-Income Housing Units and any Housing Commitment(s) for Priority Populations were substantially the same size as other Housing Units with the same number of bedrooms.

23. All Low-Income Housing Units and any Housing Units subject to a Housing Commitment for Priority Populations were of the same quality and construction as all other Housing Units and were equipped and maintained in the same manner as all other Housing Units, with the exception of any additional amenities provided to meet the needs of Resident(s) with Disabilities and subject to the exceptions permitted by the *Policies* and the Tax Credit Laws.

24. The Owner notified the relevant public housing authority and at least two (2) community agencies in the area of the Project of the availability of Low-Income Housing Units and any Housing Units subject to a Housing Commitment for Priority Populations or the Farmworker Housing Commitment or, if no public housing authority existed, notice was given to an agency authorized to act in lieu of a public housing authority.

25. The Owner notified the general public, via advertisements in newspapers of general circulation in the area of the Project, of the availability of Low-Income Housing Units and any Housing Units subject to a Housing Commitment for Priority Populations or the Farmworker Housing Commitment, and such advertisement(s) conformed with the Fair Housing Act, as amended, and state and local law.

26. The Owner provided a copy of the Lease Rider (in substantially the form set forth in Exhibit "F") to each Resident prior to the execution of each lease or rental agreement for the Project and a Lease Rider has been signed and dated by each Resident and is on file with the Owner for inspection by the Commission.

27. The Project has not and does not contain a commercial facility except to the extent previously approved in writing by the Commission.

28. As may be requested by the Commission in the future, any other factual matters that reflect compliance by the Owner and/or the Project with each and every other covenant and obligation under this Agreement, the Credit Reservation and Carryover Allocation Contract (RAC) and/or the Tax Credit Program.

EXHIBIT "F"

Lease Rider for Tax Credit Property
(to be attached to resident leases)

Property Name CHS Shoreline OAR/OID # 21-68

Household Name _____ Unit # _____

Dear Applicant or Existing Resident:

Summary
The owner(s) of this property rents residential units under the federal Low-Income Housing Tax Credit Program (the "program") as administered by the Washington State Housing Finance Commission (the "Commission"). Under the program, the owner(s) can qualify for federal IRS tax credits by renting some or all of the units in the property to low-income households and restricting the rents for those units. In addition the owner *may* have agreed to reserve some of the units in the property for priority populations. (See the priority populations section below.) This rider was prepared to help residents understand the program.

Income and Rent Limits
The Commission gives the owner(s) new income and rent limit tables each year. This property has agreed to reserve some or all of the units for households at or below the 30, 35, 40, 45, 50 or 60% income limits found on these tables. The rent tables show the maximum rent a property can charge for a unit based on a household's income, number of bedrooms in the unit or the number of people in the household. Some properties have more than one income limit. Ask the property representative for specific information.

Annual Recertification
To be eligible for a rent- and income-restricted unit, all income and assets of any household members 18 years and older must be documented and verified. The owner(s) or manager of this property will give you the required forms to declare and verify income and assets from all sources. They *may* also ask you for supporting documentation. The program requires each existing household to recertify or complete a new set of the required forms at least once every 12 months.

Since this program involves IRS tax credits, the Commission and everyone involved with this program is under growing pressure to prevent fraud. Your forms must be prepared carefully, with every question answered. Annually, you will be signing a document under penalty of perjury, saying that the information and verifications submitted are correct. Section 8-subsidized households which do not properly complete their annual recertification process may lose their rental subsidy. Other households which do not properly complete their annual recertification process may be required to vacate their income- and rent-restricted unit.

A property that has more than one income/rent limit *can* switch a household to a higher or lower income/rent limit, based on the household's income at recertification. Ask the property representative for specific information.

Priority Populations
The owner(s) of this property *may* have chosen to reserve some of the program units for households that are priority populations. Units *could* be reserved for households that meet the program definition for large household, disabled, elderly, homeless housing or farmworker. Households or individuals applying for one of these priority population units will be required to verify their eligibility. Ask your property representative for specific information.

Full-time Student Households
A household where each member is a full-time student *may not* qualify for an income- and rent-restricted unit. A household where everyone becomes a full-time student after move-in *may no longer* qualify for an income- and rent-restricted unit. Ask your property representative for specific information.

Property Standards
The property must comply with federal housing policy governing nondiscrimination and accessibility. In making an apartment available, the owner(s) *cannot* discriminate against you because of your race, creed, color, sex, national origin, marital status, age, disability or familial status. Furthermore, the owner(s) *cannot* discriminate against you based on the sources of your income (including Section 8 subsidy), provided the sources of income do not violate any federal, state or local law. Additional state, local laws or ordinances may also apply. When selecting residents, the owner(s) *cannot* apply standards to a potential resident that are more burdensome than standards applied to any other potential or existing resident.

Good Cause Evictions/Nonrenewals
The owner is prohibited from evicting you, and is prohibited from refusing to renew your lease or rental agreement, other than for "good cause". Generally, good cause shall mean the serious or repeated violation of material terms of the lease or a condition that makes your unit uninhabitable. Any termination or non-renewal notice must state the specific factual violations. Under federal law, you have the right to enforce this requirement in state court as a defense to any eviction action brought against you.

By signing below, I indicated I have read and discussed information included in this lease rider. I have been given a copy of this lease rider along with my lease.

_____ _____ ____/____/____
Property Representative Name *(print)* *(signature)* Date

Further questions should be addressed to:_____ Telephone #:_____

_____ _____ ____/____/_____
Resident or Applicant Name *(print)* *(signature)* Date

_____ _____ ____/____/_____
Resident or Applicant Name *(print)* *(signature)* Date

_____ _____ ____/____/_____
Resident or Applicant Name *(print)* *(signature)* Date

Council Meeting Date: August 16, 2021 **Agenda Item:** 7(f)

CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Adoption of Resolution No. 479 – Surplus Vehicles and Equipment for the Public Works Wastewater Utility Division in Accordance with Shoreline Municipal Codes 3.50.030 (B) and 3.50.060
DEPARTMENT:	Administrative Services Department
PRESENTED BY:	Sara Lane, Administrative Services Director Dan Johnson, Parks, Fleet & Facilities Manager
ACTION:	____ Ordinance _X__ Resolution ____ Motion ____ Discussion ____ Public Hearing

PROBLEM/ISSUE STATEMENT:

Staff is requesting City Council approval to surplus three Public Works Wastewater Utility Vehicles and Equipment in accordance with Shoreline Municipal Code 3.50.030 (B) and 3.50.060. SMC 3.50.030(B), which provides for the surplus of personal property valued more than $5,000 by live auction, requires City Council approval for the sale of these surplus assets. SMC 3.50.060 requires that the sale or disposition of surplus and personal property originally acquired for public utility purposes shall be in accordance with the procedures for public notice and hearing in RCW 35.94.040. The RCW requires a public hearing for vehicles/equipment identified for surplus that are valued greater than $50,000. City Council adoption of Resolution No. 479 is required for the surplus.

The vehicles and equipment are identified for surplus because they are no longer of public use for City operations due to work plan changes and their declining condition. Staff intends to surplus the vehicles and equipment at a future date via live auction conducted by James G. Murphy, a private auctioneer under contract with the City.

RESOURCE/FINANCIAL IMPACT:

The estimated cost to sell all the vehicles and equipment identified in this report by live auction is $2,774 based on a value of $27,737. This cost represents the 10% commission retained by the auctioneer. Surplus revenue will be designated to the Wastewater Utility.

RECOMMENDATION

Staff recommends that Council adopt Resolution No. 479 authorizing the surplus of Public Works Wastewater vehicles and equipment estimated at $27,737 in total value in accordance with Shoreline Municipal Code 3.50.030(B) and 3.50.060.

Approved By: City Manager ***DT*** City Attorney ***MK***

BACKGROUND

Staff has identified vehicles and equipment for surplus because they are no longer of public use for City operations due to work plan changes and their declining condition. Shoreline Municipal Codes 3.50.030(B) and SMC 3.50.060 provide for the following:

- SMC 3.50.030(B) provides for the surplus of personal property valued more than $5,000 by live auction and requires City Council approval for the sale of the surplus assets.
- SMC 3.50.060 provides that the sale of personal property originally acquired for public utility purposes shall be in accordance with the procedures for public notice and hearing in RCW 35.94.040. The RCW requires a public hearing for vehicles/equipment identified for surplus that are valued greater than $50,000.

DISCUSSION

Staff intends to sell the vehicles and equipment identified below via live auction conducted by James G. Murphy, the private auctioneer under contract with the City. In comparison to using the Washington State Department of Enterprise Services or trade-ins for disposal services, private auction services provide the following benefits:

- Higher financial returns generated from the advertisement and auction process
- Expedite the removal of fleet surplus items from City property creating additional storage space and parking spaces for City customers and employees
- Faster return of revenue to the Public Works Wastewater Department
- Removal of surplus items from the Washington Cities Insurance Authority

Each of the vehicles and equipment identified for surplus exceeds $5,000 in value but do not exceed the $50,000 limit and therefore does not require a public hearing. These values were based on evaluations from Kelley Blue Book and estimated values from the James G. Murphy auction company.

Veh.	Year	Make	Model	Description	Mileage/ Hours	Est Value
150	2005	Ford	F450	CCTV	26,243/Miles	$10,000
190	2012	Chevrolet	Malibu	Sedan Car	18,959/Miles	$7,737
395	2002	SECA	Rodding	Rodder/Trailer	385.7/Hrs.	$10,000
					Total:	**$27,737**

The following provides a brief description of the vehicles and equipment:

- **Ford F450 CCTV** – This van and equipment was used to perform inspection of sewer line systems. The vehicle was replaced with another Closed-Circuit Television (CCTV) Van in 2020.
- **Chevrolet Malibu Sedan Car** –This vehicle was used by wastewater staff to travel and attend wastewater business meetings. The City's motor pool is available and now used for travel to meetings and other business purposes.
- **SECA Rodder/Trailer** – This machine was used to clean sewer lines throughout the City. Wastewater staff utilize other equipment to perform this service.

City Council adoption of proposed Resolution No. 479 (Attachment A) is required to surplus the vehicles and equipment that are no longer in use for City operations.

RESOURCE/FINANCIAL IMPACT

The estimated cost to sell all the vehicles and equipment identified in this report by live auction is $2,774 based on a value of $27,737. This cost represents the 10% commission retained by the auctioneer. Surplus revenue will be designated to the Wastewater Utility.

RECOMMENDATION

Staff recommends that Council adopt Resolution No. 479 authorizing the surplus of Public Works Wastewater vehicles and equipment estimated at $27,737 in total value in accordance with Shoreline Municipal Code 3.50.030(B) and 3.50.060.

ATTACHMENT(S)

Attachment A – Proposed Resolution No. 479

RESOLUTION NO. 479

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SHORELINE, WASHINGTON, DECLARING A CERTAIN CITY-OWNED EQUIPMENT AND VEHICLE OF THE WASTEWATER UTILITY SURPLUS AND AUTHORIZING ITS SALE AS PROVIDED IN SHORELINE MUNICIPAL CODE, CHAPTER 3.50.

WHEREAS, Chapter 3.50 of the Shoreline Municipal Code addresses the sale and disposal of surplus personal property; and

WHEREAS, SMC 3.50.030 requires City Council approval for the sale of surplus personal property with an individual item value in excess of $5,000; and

WHEREAS, City staff have identified two (2) vehicles and one (1) trailer that are no longer of use for City operations and the sale of these vehicles and equipment would be in the best interest of the City; and

WHEREAS, these vehicles and equipment all have an individual value in excess of $5,000; and

WHEREAS, per SMC 3.50.030, the City Council has determined that this fleet vehicle should be sold by live auction;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SHORELINE, WASHINGTON, HEREBY RESOLVES:

Section 1. Declaration of Surplus Personal Property. The following vehicles and equipment are declared surplus to the needs of the City of Shoreline:

Vehicle	Year	Make	Model	Description
150	2005	Ford	F450	CCTV Van
190	2012	Chevrolet	Malibu	Sedan Car
395	2002	SECA	Rodding	Rodder/Trailer

Section 2. Authorization to Sell and Dispose of Surplus Personal Property. The City Manager or duly authorized agent is hereby authorized to sell and dispose of the Surplus Personal Property identified in Section 1 by Live Auction as provided in SMC 3.50.030(B).

This Resolution shall take effect and be in full force immediately upon passage by the City Council.

ADOPTED BY THE CITY COUNCIL ON AUGUST 16, 2021.

_____
Mayor Will Hall

ATTEST:

_____
Jessica Simulcik Smith, City Clerk

Council Meeting Date: August 16, 2021 **Agenda Item:** 7(g)

CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Authorize the City Manager to Increase Contract Amendment Authority for Architectural and Engineering Design Services Contract with Rolluda Architects, Inc. in the Amount Not to Exceed $75,000 for the Shoreline City Hall, Highland Plaza, Richmond Highlands Recreation Center, and the Shoreline Swimming Pool
DEPARTMENT:	Administrative Services
PRESENTED BY:	Sara Lane, Administrative Services Director Dan Johnson, Parks, Fleet & Facilities Manager
ACTION:	____ Ordinance ____ Resolution _X__ Motion ____ Discussion ____ Public Hearing

PROBLEM/ISSUE STATEMENT:

Staff is requesting City Council approval to authorize the City Manager to increase contract amendment authority for the Architectural and Engineering Design Services Contract in the amount not to exceed $75,000 with Rolluda Architects, Inc. This contract with Rolluda predominately pertains to services at the Shoreline City Hall, Highland Plaza, Richmond Highlands Recreation Center, and the Shoreline Swimming Pool.

The City entered into a contract with Rolluda Architects, Inc on February 4, 2021. The contract amount totaled $91,151. In accordance with Shoreline Municipal Code (SMC) 2.60.040 (D)(1)(c), the City Manager's purchase limits for amendments and change orders shall not exceed $100,000. Two prior contract amendments have been executed for a total contract amount of $182,720. This leaves an insufficient remaining balance of $8,431 for additional contract amendments.

Staff are seeking Council's approval for an additional $75,000 of contractual authority for additional upcoming projects and services. This would include design support for upgrading the electrical service at the Shoreline City Hall for emergency responses for a projected cost of $15,078.

RESOURCE/FINANCIAL IMPACT:

There is sufficient budget funding totaling $75,000 in the 2021/2022 Facilities Budget to complete the additional architectural and engineering design services work.

RECOMMENDATION

Staff recommends that Council increase the City Manager's contract amendment authority with Rolluda Architects, Inc for Architectural and Engineering Design Services Contract in the amount not to exceed $75,000.

Approved By: City Manager ***DT*** City Attorney ***MK***

BACKGROUND

The City entered into a contract with Rolluda Architects, Inc (Rolluda) on February 4, 2021, for architectural and engineering design services for the Shoreline City Hall, Highland Plaza, Richmond Highlands Recreation Center, and the Shoreline Pool Facilities for a total contract amount of $91,151. Rolluda provided the following services with their initial contract:

- **Richmond Highlands Recreation Center Design** – schematic concept design through construction documents and building department permit assistance for work at Richmond Highlands.
- **Shoreline Pool Design** – schematic concept design through construction documents including building department permit assistance and additional scope that includes bidding assistance and project closeout services.

Subsequently, contract amendments totaling $91,569 were executed with Rolluda Architects, Inc for the following services:

- **Westminster House Demolition & Concept Park Sketch** – amendment to provide demolition documentation for permit and construction services. Also, preparation of a concept park sketch after the demolition phase.
- **Highland Plaza Building Demolition Project** – amendment to provide demolition documentation for permit and construction services and a new parking layout.
- **Highland Plaza Building Demolition Project** – amendment to provide additional site development permit and construction documentation services.

The total Rolluda Architects, Inc contract amount to date is $182,720.

DISCUSSION

The additional amendment request totaling $75,000 is needed for upcoming projects and service upgrades. This would include upgrading the electrical service at the Shoreline City Hall in preparation for emergency responses for a projected cost of $15,078. This would bring the total authorized contract amount to $257,720.

In accordance with Shoreline Municipal Code (SMC) 2.60.040 (D)(1)(c), the City Manager's purchase limits for amendments and change orders shall not exceed $100,000. In addition (SMC) 2.60.040 (D)(3) indicates that the "value of all change orders will be aggregated, and when any single amendment or combination of change orders on the same project or purchase exceeds the limit under subsection (D)(1)(c) of this section the change must be approved by the City Council."

RESOURCE/FINANCIAL IMPACT

There is sufficient budget funding totaling $75,000 in the 2021/2022 Facilities Budget to complete the additional architectural and engineering design services work.

RECOMMENDATION

Staff recommends that Council increase the City Manager's contract amendment authority with Rolluda Architects, Inc for Architectural and Engineering Design Services Contract in the amount not to exceed $75,000.

Attachment A – Scope of Work for Amendment 3 to Rolluda Contract
Attachment A – Exhibit A – Scope of Work Proposal

Receiving #9393.03

THIRD AMENDMENT TO CONTRACT FOR SERVICES (ORIGINAL CONTRACT NUMBER: 9393)

Whereas an agreement was entered into by and between the City of Shoreline, Washington, and Rolluda Architects, Inc on February 4, 2021; and said agreement was last amended on July 9, 2021; and

Whereas the parties desire to amend said agreement once again in order to reflect a change of circumstances, to wit: The scope of work is amended to include additional services related to the Shoreline City Hall as shown in Exhibit A-5.

Now, therefore, in consideration of the mutual covenants contained herein, the parties agree as follows:

1. **Existing Agreement Amended:**
   The City and Rolluda Architects, Inc entered into an agreement on February 4, 2021 identified as: .

   The City and Rolluda Architects, Inc have amended this agreement on two (2) occasions with amendments dated March 1, 2021 and July 9, 2021.

   The parties hereby amend the original agreement as amended.

2. **Amendment to Existing Agreement:**
   The agreement is amended in the following respect(s):

   Section 1 Scope of Services is amended to include architectual and engineering design services for mechanical and engineering upgrades at the Shoreline City Hall.

   Section 2 Compensation increased by an amount of $15,078 from $182,720 to $197,798 as shown in Exhibit A-5 (Proposal dated July 15, 2021).

3. **Terms and Conditions of Existing Agreement Remain the Same:**
   The parties agree that, except as specifically provided in this amendment, the terms and conditions of the existing agreement continue in full force and effect.

EXECUTED, this the day of , 20 .

CITY OF SHORELINE	**CONSULTANT**
Name:	Name:
Title:	Title:

rolluda architects
architecture planning interior design

105 South Main Street, Suite 323 · Seattle, Washington 98104 · 206.624.4222 (p) · 206.624.4226 (f)
info@rolludaarchitects.com (e) · www.rolludaarchitects.com (w)

July 15, 2021

Mr. Daniel Johnson
Parks, Fleet and Facilities Manager
City of Shoreline
17500 Midvale Avenue North
Shoreline, WA 98133-4905

Reference: **Architectural & Engineering Design Services, Contract #9393 Exhibit A**
Shoreline City Hall Mechanical & Electrical Upgrades

Dear Dan;

We are pleased to submit this fee proposal for architectural and engineering design services for the Mechanical & Electrical Upgrade project. The project is to provide an initial assessment for proposed upgrades as described in your email dated July 12, 2021.

We propose to provide these services for a time and materials not to exceed fee amount of **$15,078**. We've attached a breakdown of our fee as well as the fee proposals we received from the consultant team. Please review and let me know if you have any questions.

Our team is looking forward to getting started on your project immediately upon direction.

Sincerely,

Richard Murakami
Principal

Attachments:
Rolluda Architects – Fee Proposal
Elcon Associates - Scope of Work & Fee Proposal
CeGG Engineering – Scope of Work & Fee Proposal

rolluda architects
architecture planning interior design

105 South Main Street, Suite 323 · Seattle,
Washington 98104 · 206.624.4222 (p) ·
206.624.4226 (f) · info@rolludaarchitects.com (e) ·
www.rolludaarchitects.com (w)

FEE PROPOSAL - CITY HALL GENERATOR STUDY

Owner Name: City of Shoreline
Contact Name: Daniel Johnson

Prepared By: Richard Murakami/Mark McCarter
Date: 7/15/2021

Architectural Project Role	Personnel Required							
	Principal	Project Architect I	Project Architect II	Designer IV/PM	Designer II	Designer I	Admin	
GENERAL PROJECT MANAGEMENT								
PROJECT ORIENTATION								
Consultant Coordination	1			2				
Data Request/Gathering				2				
Code Review								
QA/QC	1			1				
SUBTOTAL - PROJECT MANAGEMENT	**2**	**0**	**0**	**5**	**0**	**0**	**0**	**$ 851**
ARCHITECTURAL DESIGN SERVICES								
SUBTOTAL - DESIGN SERVICES	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**
SUBTOTAL - ARCHITECTURAL BASE FEE	**2**	**0**	**0**	**5**	**0**	**0**	**0**	**$ 851**

	Principal	Project Architect I	Project Architect II	Designer IV/PM	Designer II	Designer I	Admin
Total Man Hours =	**2**	**0**	**0**	**5**	**0**	**0**	**0**
Salary Rates =	$163.01	$99.80	$110.87	$105.02	$70.00	$60.00	$75.00
Salary Subtotal =	**$326.02**	**$0.00**	**$0.00**	**$525.10**	**$0.00**	**$0.00**	**$0.00**

ARCHITECTURAL BASE FEE SUBTOTAL **$ 851**

Reimbursible Expenses 400 **$ 400**

ARCHITECTURAL BASE FEE & REIMBURSABLES TOTAL **$ 1,251**

Subconsultants				
Mechanical	CeGG Mechanical	$ 4,640		
Electrical	Elcon Electrical	$ 7,930		
				$ 12,570
	10% Mark-up on consultants			$ 1,257

SUBCONSULTANTS SUBTOTAL **$ 13,827**

TOTAL **$ 15,078**

ELCON ASSOCIATES, INC.
ENGINEERS–CONSULTANTS

16300 Christensen Rd, Suite 330
Seattle, Washington 98188
Phone: 206.243.5022
www.elcon.com

6/29/2021

Mr. Mark McCarter, MArch, LEED AP
Rolluda Architects
105 South Main Street, Suite 323
Seattle, WA 98104

Subject: Request for Electrical Engineering Services Proposal for the City of Shoreline Electrical Service and HVAC Improvements

Reference: Your June 28, 2021 E-mail for Scope of Work and Fee Proposal

Dear **Mark,**

Based on the referenced e-mail and review of the information Dan Johnson provided for this project, we have developed the following scope of services and fee proposal.

Project Description:
This project includes evaluation of the current generator electrical loads at Police Station at City Hall and determine if the generator can supply five (5) new cooling units or if the current generator will need to be replaced.

Basic Services Scope of Work:
Elcon Associates, Inc. will review as built load calculations from the Police Station at City Hall Project and information provided on additional loads, added after the initial installation of the existing generator such as the elevators. We will determine the spare capacity needed for the four (4) new cooling units for the IDF rooms and one (1) for the Broadcast Center, and if the current generator has capacity for the new loads.

Deliverables:
- Technical memo including:
  - Electrical analysis of the current generator loading and available spare capacity.
  - Additional generator capacity needed for new cooling.
  - Recommendation for electrical upgrades, if needed, to add new cooling loads to generator power.

Assumptions:
- A Time and Materials contract for services will be negotiated and signed and notice to proceed (NTP) issued before work will begin.
- Work to be under the direction of Rolluda Architects personnel.
- A site visit will be conducted to verify existing generator configuration and loading.
- This scope of work does not include any electrical design to revise existing system. All design work will be negotiated for follow on contract.

- All deliverables listed above will be provided electronically in PDF format
- Design, Bidding, and Construction support services are not included in this scope of work and fee. A time and materials contract will be negotiated for any design, bidding and construction phase support, based on the level of effort required by the City of Shoreline.
- Any changes to the scope or fee of this agreement shall be documented in writing (email will suffice) before additional work is performed.

Compensation:
Our Time and Materials price for electrical engineering services described above is **$7,930**. This proposal is valid for 90 days.

Thank you for the opportunity to propose on this work. Please call or e-mail if you have any questions. We look forward to working with you on this project.

Sincerely,
ELCON ASSOCIATES, INC.

Dimitri Siaterlis, PE
Principal Electrical Engineer

Estimate for Engineering Services

Project: Electrical Service and HVAC Improvements

Client No:

Elcon No: S2106Q

Phase: Study/Technical Memo

Revision: June 29, 2021

ELCON ASSOCIATES, INC.
ENGINEERS - CONSULTANTS

Budgeted Labor By Category in Manhours

ENGINEERING SERVICES	Project Manager	Senior Engineer	Engineer	Sr. Designer	CADD	Clerical	Total
STUDY/TECHNICAL MEMO							
1. Project planning and administration	8					2	10
2. Review as-builds provided by the City		4					4
3. Site inspection and verification		8					8
4. Coordination with Generator Supplier		10					10
5. Technical memo/report		12				2	14
6. QC Review	2						2
Total Labor Hours:	10	34				4	48
Labor Rate: Standard Rate	$200.00	$165.00	$140.00	$125.00	$95.00	$80.00	
Total Labor Cost:	$2,000	$5,610				$320	$7,930

EXPENSES				
	Travel	*trips of*	miles @	
		Per diem x	$/Day	
	Parking	*trips*	@	
	Postage, Courier			
	Total Expenses			
TOTAL ESTIMATED FEE				$7,930

Mark McCarter

From: Goren Hattatoglu <goren@cegginc.com>
Sent: Wednesday, June 30, 2021 10:08 AM
To: Mark McCarter; DSiaterlis@elcon.com
Cc: Rich Murakami
Subject: RE: [EXTERNAL] RE: Fee amendment request

It looks like my scope is to specify basic split cooling units.
Could you ask Dan if they can send us a list of the rooms and heat generating equipment in these rooms.
As for the site visits, I am booked for this week. I can do a site visit on Saturday or next Wednesday at 8 a.m. I may not need a preliminary site visit if I get the equipment list.

As for the fee I anticipate sizing/specifying 5 ea split units and 1 site visit and the fee as $145/hr Not to exceed $4,640.

Please le t me know if you have any questions.

Thanks.
Goren

Goren Hattatoglu, P.E.
LEED AP

CeGG engineering
Please note our address change.
1211 N 32nd Street
Renton, WA 98056
Tel 206 223 6447 (forwarded to cell & voicemail)

From: Mark McCarter [mailto:mark@rolludaarchitects.com]
Sent: Wednesday, June 30, 2021 9:46 AM
To: Goren Hattatoglu; DSiaterlis@elcon.com
Cc: Rich Murakami
Subject: FW: [EXTERNAL] RE: Fee amendment request

Goren & Dimitri;
See Dan's email below and let us know your earliest availability for advance site visit.

Thanks,
Mark

From: Daniel Johnson <djohnson@shorelinewa.gov>
Sent: Wednesday, June 30, 2021 9:38 AM
To: Mark McCarter <mark@rolludaarchitects.com>; Rich Murakami <richard@rolludaarchitects.com>; Tom Dawson <TDawson@myrgroup.com>
Cc: Hazel DelaCruz <hdelacruz@shorelinewa.gov>; Phil Ramon <pramon@shorelinewa.gov>
Subject: RE: [EXTERNAL] RE: Fee amendment request

Mark and Rich, in our efforts to cleanup the IDF Rooms in preparation for adding auxiliary cooling we found a 400 Amp Panel with Generator Back up to it.

The Panel is IT-2 a 120/ 208V with a 312 Amp capacity with 42 circuits pass thru with a 150 Amp Breaker to the 4th floor with 29 spares in it .Our Ace Electrician says that it is burning 28 Amps only on A Phase ,22 Amps only on B Phase and 22 Amps on C Phase There. This leaves approximately 240 Amps for additional use . Our electrical vendor Sturgeon can now supply power to these auxiliary cooling units TBD by CGEC. We are adding 20 Amp Circuits to each IDF Room for this purpose.

As such, I see the scope for Elcon changing to As built and verification of electrical circuitry to align with generator capacity.
CGEC still needs to spec the cooling units and verify that 208V- 20 Amp is sufficient.
Sturgeon is also adding a 125 V Transformer in the main electrical room for and a new 200 Amp Panel for further generator usage.

We are actively working this modification before we have the next power outage.
Please share with the team.
I am suggesting that Elcon and CGEC due an advance site visit to get their scope clarified for you to present in advance of the contract being signed. Sturgeon Electric will have personnel here to show you the existing conditions and modifications in play.

Thank you.

From: Mark McCarter <mark@rolludaarchitects.com>
Sent: Monday, June 28, 2021 12:03 PM
To: Daniel Johnson <djohnson@shorelinewa.gov>; Rich Murakami <richard@rolludaarchitects.com>
Cc: Hazel DelaCruz <hdelacruz@shorelinewa.gov>; Phil Ramon <pramon@shorelinewa.gov>
Subject: [EXTERNAL] RE: Fee amendment request

Hi Dan;
Sorry to hear of the power outage especially during this hot spell! We've forwarded your request to Dimitri and Goren and will follow up shortly.

Thanks,
Mark

Mark McCarter LEED AP
associate | senior project designer
rolludaarchitects
O 206.624.4222 | D 206.734.3858 | C 206.327.5737

MBE + DBE #D5M8218356

From: Daniel Johnson <djohnson@shorelinewa.gov>
Sent: Monday, June 28, 2021 9:31 AM
To: Rich Murakami <richard@rolludaarchitects.com>; Mark McCarter <mark@rolludaarchitects.com>
Cc: Hazel DelaCruz <hdelacruz@shorelinewa.gov>; Phil Ramon <pramon@shorelinewa.gov>
Subject: Fee amendment request

Good morning, I hope you are all dealing with the heat successfully.
We are requesting a fee proposal for Electrical Service and HVAC Improvements at City Hall.

We lost power yesterday and went on full generator power. The Police Station at City Hall Project added a Kohler Gen Set to Power the Police Station, fire alarm system and access control system with a few additional outlets here and there.
Since then, we have added the elevators to the generator system and a few more locations.
our Electrical Contractor Sturgeon tells us we are nearing capacity of the generator.

We are looking at adding either additional room coolers in our IDF servicer rooms (4) and our broadcast center to maintain IT system integrity.
It is our hope that Dimitri and Goren can evaluate this for us and advise if our existing generator can supply this power for 5 individual cooling units or : do we need to upsize the current generator ?

I will work with Hazel to assemble the Electrical Distribution materials and generator load calcs for the as built Police Station at City Hall and I will gather the information on what additional loads we created by adding components so you can review.

Looking forward to getting together after it cools down.

Best, Dan.

Dan Johnson
Parks, Fleet and Facilities Manager
City of Shoreline
17500 Midvale Avenue North
Shoreline WA 98133-4905
djohnson@shorelinewa.gov

Mark McCarter

From: Daniel Johnson <djohnson@shorelinewa.gov>
Sent: Monday, July 12, 2021 6:19 AM
To: Mark McCarter
Cc: Rich Murakami
Subject: RE: [EXTERNAL] Fwd: Fee amendment request

Good morning, this looks good. Please prepare an amendment request.

Thank you.

From: Mark McCarter <mark@rolludaarchitects.com>
Sent: Saturday, July 10, 2021 11:17 AM
To: Daniel Johnson <djohnson@shorelinewa.gov>
Cc: Rich Murakami <richard@rolludaarchitects.com>
Subject: FW: [EXTERNAL] Fwd: Fee amendment request

Dan;
Great to see you yesterday. Please review Dimitri's list of scope items and let us know if you see anything missing or need clarification.

Thank you,
Mark

Mark McCarter LEED AP
associate | senior project designer
rolludaarchitects
O 206.624.4222 | D 206.734.3858 | C 206.327.5737

MBE + DBE #D5M8218356

From: Dimitri Siaterlis <dsiaterlis@elcon.com>
Sent: Saturday, July 10, 2021 10:06 AM
To: Mark McCarter <mark@rolludaarchitects.com>
Cc: Rich Murakami <richard@rolludaarchitects.com>; Goren Hattatoglu <goren@cegginc.com>; Luis Otaegui <lotaegui@elcon.com>
Subject: RE: [EXTERNAL] Fwd: Fee amendment request

Mark,

Based on our site visit on Friday, July 9, 2021, review of e-mails and City Hall existing drawings, we have outlined the list of scope items:

1. Prepare electrical load calculations based on mechanical HVAC loads (by Goren) for each of the four (4) IDF Data Rooms and the Broadcast Center
2. Review existing electrical load calculations of the entire building's normal and generator loads, based on existing one-line diagram and plans
3. Coordinate with Seattle City Light on entire building's maximum demand for a minimum of the past 12 months, as required by NEC to add new load to an existing system
4. Perform load calculations on 3rd and 4th floors (essential services areas) to determine if these loads can be moved from normal power to the generator system
5. Look at options to install the already purchased 800A, 480V generator feeder breaker, on the main 2,000A, 480/277V switchboard, to take advantage of the generator full load capacity
6. Coordinate with Chris of Sturgeon Electric to support him with design for the installation of two transformers and panelboards in the main electrical room, and the NW area
7. Perform additional site visit as required, after we go over all existing drawings and site visit notes

I will e-mail the photos I took during our site visit. Probably this Monday.

Please call or e-mail if you have any questions or comments.

Best Regards,
Dimitri Siaterlis, PE
Principal
Elcon Associates, Inc.
D 206-267-3043
M 206-512-9599
MBE/DBE – WA/OR/CA

From: Mark McCarter <mark@rolludaarchitects.com>
Sent: Friday, July 9, 2021 10:30 AM
To: Dimitri Siaterlis <dsiaterlis@elcon.com>
Cc: Rich Murakami <richard@rolludaarchitects.com>; Goren Hattatoglu <goren@cegginc.com>
Subject: RE: [EXTERNAL] Fwd: Fee amendment request

[**CAUTION:** This email was received from an external source.]
Hi Dimitri;
If you could provide a list of scope items your heard today, I will then forward onto Dan for his confirmation. Then perhaps if you have additional questions we can chat on Monday as we coordinate scope, photos, load calcs etc with Goren.

Thanks,
Mark

From: Dimitri Siaterlis <dsiaterlis@elcon.com>
Sent: Thursday, July 08, 2021 7:41 PM
To: Mark McCarter <mark@rolludaarchitects.com>
Cc: Hazel DelaCruz <hdelacruz@shorelinewa.gov>; Daniel Johnson <djohnson@shorelinewa.gov>; Rich Murakami <richard@rolludaarchitects.com>
Subject: RE: [EXTERNAL] Fwd: Fee amendment request

Mark,

Council Meeting Date: August 16, 2021 **Agenda Item:** 7(h)

CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Authorize the City Manager to Execute a Professional Services Contract with Blueline, Inc. in the Amount of $237,250 for Design of the N/NE155th St Overlay Project
DEPARTMENT:	Public Works
PRESENTED BY:	Tricia Juhnke, City Engineer
ACTION:	____ Ordinance ____ Resolution __X__ Motion ____ Discussion ____ Public Hearing

PROBLEM/ISSUE STATEMENT:

The asphalt pavement in the travel lanes of N/NE 155th St between Midvale Ave N and 15th Ave NE is in poor condition and needs structural repairs and an asphalt overlay within the next few years to avoid completely reconstructing the roadway at a much higher cost. Pavement conditions vary along the corridor, with the roadway segment between Midvale Ave N and 1st Ave NE in substantially worse condition than the segment between 1st Ave NE and 15th Ave NE. Staff began preparing for repairs and an overlay by rehabilitating the sidewalks along the corridor in 2018, and by getting basic survey work and a full geotechnical analysis in 2020. However, required reconstruction of the curb ramps on the corridor could not be included in the Annual Road Surface Maintenance (ARSM) budget at that time.

Given these needs, the City is initiating design of pavement structure repairs for the entire corridor, curb ramp reconstruction, and an asphalt overlay for N/NE 155th St between Midvale Ave N and 1st Ave NE. To advertise for bids in January 2022, the City needs to engage a design consultant immediately. Due to the timing constraints, staff requested and received a waiver from the Request for Qualifications process and initiated Administrative Selection of a consultant firm from among five qualified firms that have successfully provided similar services to the City in the recent past.

Blueline, Inc. was selected based on the best proposed combination of project manager and schedule. Scope and fee negotiations have been completed, and the proposed scope of work and fee are attached as Attachment A.

RESOURCE/FINANCIAL IMPACT:

This project is fully funded by the City's Annual Road Surface Maintenance (ARSM) program. The following outlines the N/NE 155th St Overlay Project budget breakdown:

Project Expenditures

Staff and other Direct Expenses	$ 22,000
Geotechnical Study	$ 41,000
Preliminary Survey (KPFF)	$ 9,000
Design (*This Contract*)	**$ 237,250**
Right-of-Way Acquisition	$ 48,000
Construction	$1,570,000
TOTAL	**$1,927,250**

Project Revenue

Vehicle License Fees	$1,927,250
TOTAL	**$1,927,250**

RECOMMENDATION

Staff recommends that the City Council authorize the City Manager to execute a design contract with Blueline, in the amount of $237,250 for the N/NE155th St Overlay Project.

Approved By: City Manager ***DT*** City Attorney ***MK***

BACKGROUND

The asphalt pavement in the travel lanes of N/NE 155th St between Midvale Ave N and 15th Ave NE is in poor condition and needs structural repairs and an asphalt overlay within the next two to three years to avoid completely reconstructing the roadway. Pavement conditions vary along the corridor, with the segment between Midvale Ave N and 1st Ave NE in substantially worse condition than the segment between 1st Ave NE and 15th Ave NE.

Staff's analysis of the needed paving work and the Annual Road Surface Maintenance (ARSM) program budget indicates that the City should construct the pavement structural repairs over the full length of the street and construct the overlay between Midvale Ave N and 1st Ave NE in 2022. The project will also include reconstruction of over 30 curb ramps within the project area. Staff will add an overlay of the remaining segment of NE 155th (from the east limit of ST's overlay to 15th Ave NE) into the ARSM budget for a subsequent year.

DISCUSSION

This project involves design of pavement structure repairs and curb ramp reconstruction on N/NE 155th St between Midvale Ave N and 15th Ave NE, and an asphalt overlay for N/NE 155th St between Midvale Ave N and 1st Ave NE. To advertise for bids in January 2022, the City needs to engage a design consultant immediately. Staff requested and received a waiver from the Request for Qualifications process and initiated Administrative Selection of a consultant firm from among five qualified firms that have successfully provided similar services to the City in the recent past. Blueline Inc. was selected as the best qualified firm to provide these services.

Engaging Blueline, Inc. to complete the overall design (which includes curb ramps), pavement structure repairs, and the first overlay (from Midvale Ave N to 1st Ave NE) and then constructing the project in 2022 sets up the corridor for full restoration in 2024 or a subsequent year.

COUNCIL GOAL(S) ADDRESSED

This project addresses Council Goal #2: Continue to deliver highly valued public services through management of the City's infrastructure and stewardship of the natural environment. This project will address this goal by extending the lifespan of the roadway pavement and structure.

RESOURCE/FINANCIAL IMPACT

This project is fully funded by the City's Annual Road Surface Maintenance (ARSM) program. Below is a breakdown of the budget for the N/NE 155th St Overlay Project:

Project Expenditures

Staff and other Direct Expenses	$ 22,000
Geotechnical Study	$ 41,000
Preliminary Survey (KPFF)	$ 9,000
Design (*This Contract*)	**$ 237,250**
Right-of-Way Acquisition	$ 48,000
Construction	$1,570,000
TOTAL	**$1,927,250**

Project Revenue

Vehicle License Fees	$1,927,250
TOTAL	**$1,927,250**

RECOMMENDATION

Staff recommends that the City Council authorize the City Manager to execute a design contract with Blueline, in the amount of $237,250 for the N/NE155th St Overlay Project.

ATTACHMENTS

Attachment A: N 155th St Overlay Project Design Consulting Contract Scope of Work
Attachment B: Vicinity Map

Project Name: N 155th St Overlay **Job #: 21-262** **Effective Date: August 3, 2021**

Project Description

The Blueline Group, LLC ("Blueline") will provide engineering services including design drawings, specifications, and estimates for the City of Shoreline's N 155th St Overlay Project ("Project") generally consisting of pavement improvements in the following areas of the City, as determined by City staff:

- Along N 155th St from Midvale Ave N to 1st Ave NE:
  - 3-inch grind and overlay of general-purpose traffic lanes
  - 8-inch grind out repairs within the overlay
  - Replacement of up to 36 ADA ramps
  - Associated pavement striping as needed
- Along N 155th St from 1st Ave NE to 15th Ave NE:
  - 3-inch or 8-inch grind out repairs
- Along N 155th St from 1st Ave NE to Shoreline Fire Department Station 65:
  - Half street 3-inch grind and overlay if Sound Transit does not perform

Task Summary

Task 001	Project Management
Task 002	Survey & Base Mapping
Task 003	60% Design
Task 004	90% Design
Task 005	Final Design
Task 006	Permits & Coordination
Task 007	Sound Transit Overlay Design
Task 008	Drainage Report
Task 009	Easement Coordination (Blueline)
Task 010	Easement Generation (Axis)
Task 011	Bidding & Award Services
Task 012	Unassigned Services Reserve

Project Schedule

Our Team shall begin work immediately upon receipt of Notice to Proceed and proceed according to the attached Project Schedule. This schedule reflects the City's desire to complete construction in 2022. Key dates include:

Notice to Proceed ..... August 16, 2021
Survey & Geotechnical Explorations..... September 17, 2021
60% Design Submittal (3 week City review) ..... October 8, 2021
90% Design Submittal (3 week City review) ..... November 29, 2021
Final Design Submittal ..... January 14, 2022
Bidding & Award ..... Early February 2022
Construction Begins ..... Spring 2022

Scope of Work

Blueline's scope of work for the project is outlined on the following pages.

Task 001 Project Management

Fee: Not to Exceed ($16,330)

This task is for general coordination and meetings on the project, including coordination with the City, internal plan review/discussion meetings, subconsultant coordination, in-house quality assurance, and bi-weekly meetings with the City to discuss project status. Blueline will prepare monthly invoices for work performed during the previous month. Included with the invoices will be pertinent backup materials and progress reports of the project to date.

Deliverables: *Monthly Invoices, Progress Reports.*

Task 002 Survey & Base Mapping

Fee: Fixed Fee ($38,530)

Axis Survey and Mapping (Axis) will prepare base mapping for the overlay areas and ADA Improvements along N 155th St from Midvale Ave N east to the Interstate 5 overpass. AutoCAD drawings will be prepared at a scale of 1"=20'. Services will include the following:

- Incorporate previous control network completed by others.
- Control survey in NAD 83/91 Horizontal Datum, with all elevations derived from and checked to NAVD 88 Vertical Datum.
- Delineate parcel lines within above-described area as available from recorded plats and public records further compared to King County Parcel GIS lines.
- Ground elevations within mapping limits on an approximate 50' grid plus elevations along obvious topographic breaks.
- Show and dimension located topographic features and contours at 2' intervals.
- Location, elevation, and road clearance of the Interstate 5 overpass located on N 155th Street.
- Location and elevation of the following infrastructure improvements:
    - Asphalt, curbing, sidewalks and other surface improvements at intersections. Asphalt and curbing between intersections.
    - Catch basins, culverts, sewer manholes, fire hydrants and other utilities which are observable from surface exploration.
    - Detailed mapping of intersections and existing ADA improvements for all intersections along N 155th Street.

- Set additional elevation benchmarks at each end of project area and every 500-700' along the route.
- Depict hard and soft surfaces on individual layers per accepted APWA standards.
- Show known utilities as provided by City of Shoreline and GIS, research of available utility as-built records and as located by utility locators. Cost for private utility locators to mark utilities at the intersections ($9,300) included herein.

Deliverables: *AutoCAD 2016 drawing file with dtm files.*

ASSUMPTIONS & EXCLUSIONS

The scope and fee for this task includes the following assumptions and exclusions:

- The City will provide all available GIS data for utilities and property information.
- The City will provide all necessary right of entry into private property and notice to landowners along the route of mapping activity. The City will provide a copy of the notice to be presented to landowners by Axis crews.

Task 003 60% Design

Fee: Not to Exceed ($22,540)

Based on the base maps prepared by Axis under Task 002, Blueline will complete the 60% Design stage for the project. The services under this task will include:

- Initial site visit.
- Kickoff meeting with City staff.
- Incorporation of the City's previous design.
- Preparing 60% Design Plan Sheets for the proposed improvements including:
  - Sheets at 22"x34" with roughly an 18"x28" drawing area.
  - Drawing scale at 1"=20' horizontal.
  - ADA curb ramp layouts in plan view only.
- Preparing 60% Special Provisions outline with placeholders for all bid items.
- Preparing a 60% Engineer's Estimate including quantities and a large contingency.
- Preparing a design memo discussing design assumptions, questions, and recommendations.
- Up to 1 additional site visit to verify quantities and field conditions.

Deliverables: *60% Plans (PDF).*
60% Special Provisions (PDF).
60% Engineer's Estimate (PDF).
Design memo accompanying the submittal that outlines assumptions, questions, and recommendations (PDF).

Task 004 90% Design

Fee: Not to Exceed ($52,120)

Based on City review comments from the 60% Design stage, Blueline will complete the 90% Design stage for the project. The services under this task will include:

- Review meeting and project walk-through with the City's Engineering and Operations staff after receiving 60% Design submittal comments.
- Incorporating the City's 60% comments into the contract documents.
- Preparing 90% Design Plan Sheets for the proposed improvements including grading and staking callouts for up to 36 ADA curb ramps.
- Preparing 90% Special Provisions including Measurement and Payment in WSDOT format, using City-provided special provisions when available.
- Preparing a 90% Engineer's Estimate including quantities and a small contingency.
- Preparing a design memo discussing design assumptions, questions, and recommendations.
- Internal constructability review and QA/QC.

Deliverables:

90% Plans (PDF).

90% Special Provisions (PDF).

90% Engineer's Estimate (PDF).

Design memo accompanying the submittal that outlines assumptions, questions, and recommendations (PDF).

Task 005 Final Design

Fee: Not to Exceed ($35,190)

Based on City review comments from the 90% Design stage, Blueline will proceed to producing the Final Design (Bid Documents). The services under this task will include:

- Review meeting with City staff after receiving 90% Design submittal comments.
- Incorporating the City's 90% comments into the contract documents.
- Final Plans, Special Provisions, and Engineer's Estimate developed to the bid-ready stage.
- Internal constructability review.
- Preparing MEF documentation for non-compliant ramps.

Deliverables:

Final Design Plans (PDF).

Final Design Special Provisions (PDF and word files).

Final Engineer's Estimate (PDF).

Design memo accompanying the submittal that outlines assumptions, questions, and recommendations (PDF).

MEF Documentation (PDF).

Task 006 Permits & Coordination

Fee: Not to Exceed ($7,130)

This task will include preparation and submittal of applications for known necessary permits and approvals pertaining to this project as well as coordination with impacted agencies. The services under this task will include:

- Preparing a draft SEPA for the City to review and submit.
- Coordinating with WSDOT and Sound Transit.

Deliverables: *Draft SEPA submitted with 60% Design (PDF).*

Task 007 Sound Transit Overlay Design

Fee: Not to Exceed ($8,710)

Blueline will include design of a half street overlay from 1st Ave NE to Shoreline Fire Department Station 65. The services under this task will include:

- Preparing 60%, 90% and Final Design Plan Sheets for the proposed improvements.
- Preparing a 60%, 90% and Final Design Engineer's Estimate including quantities.
- Preparing 60%, 90% and Final Design Special Provisions including Measurement and Payment in WSDOT format.

Deliverables: *Include design in 60%, 90% and Final Deign submittals. Bid items will be included in separate schedule.*

ASSUMPTIONS & EXCLUSIONS

The scope and fee for this task includes the following assumptions and exclusions:

- Design will include combining survey with aerial GIS and no additional survey will be performed for this portion of the project.

Task 008 Drainage Report

Fee: Not to Exceed ($4,070)

Blueline will prepare a Stormwater Technical Memorandum per the 2019 Department of Ecology Stormwater Management Manual for Western Washington as supplemented by the 2021 City of Shoreline Engineering Development Manual demonstrating compliance with the following minimum requirements:

- Minimum Requirement #1: Preparation of Stormwater Site Plans
- Minimum Requirement #3: Source Control of Pollution
- Minimum Requirement #4: Preservation of Natural Drainage Systems and Outfalls

- Minimum Requirement #5: On-site Stormwater Management

Deliverables: *Draft Stormwater Technical Memorandum with 60% Design (PDF).*
Final Stormwater Technical Memorandum with 90% Design (PDF.)

ASSUMPTIONS & EXCLUSIONS

The scope and fee for this task includes the following assumptions and exclusions:

- Construction SWPPP shall be prepared by the Contractor and NOT included in the Stormwater Technical Memorandum.

Task 009 Easement Coordination (Blueline)

Fee: Not to Exceed ($12,410)

Blueline will assist the City with easement determination, coordination, and acquisition. It is assumed for budgeting purposes that the following will be required. The services under this task will include:

- Working with Axis and the City to determine necessary easement locations for up to 4 easements.
- Assisting the City with easement negotiations, City will initiate contact.
- On-going follow-up, support, and assistance until necessary easements have been secured.
- Review and respond to edits from City Attorney to Easement Documents.

Task 010 Easement Generation (Axis)

Fee: Time and Expense (Estimated $14,950)

Under this task Axis is anticipated to include the following:

- Ordering plat certificates and researching additional parcels' legal descriptions for easement efficacy.
- Consulting with Blueline and the City for permanent and temporary construction easements determination and need.
- Generating up to 15 legal descriptions and exhibits for inclusion in new easements.
- Reviewing and responding to edits from Blueline and the City.

Task 011 Bidding & Award Services

Fee: Not to Exceed ($2,770)

Blueline will provide consulting services during the bidding process, including:

- Addressing questions from prospective bidders, if necessary.

- Generally assisting the City during the bidding process as needed.
- Preparing and issuing addenda to clarify the construction documents, if necessary.

Deliverables: *Addenda if necessary.*

Task 012 Unassigned Services Reserve

Fee: Not to Exceed ($21,500)

This task provides for unanticipated services deemed to be necessary during the course of the Project that are not specifically identified in the scope of work tasks defined above. Any additional work or funds under this item are not to be used unless explicitly authorized by the City.

Deliverables: *Not yet identified.*

General Assumptions and Notes

- Scope and fees outlined above are based on the Project Understanding included with this proposal as well as the following information (any changes to these documents may result in changes to the fees):
    - Applicable permit applications, checklists and standards current as of the effective date of this Agreement.
    - Correspondence between the City of Shoreline and The Blueline Group prior to the effective date of this Agreement.
- Blueline does not anticipate that additional Structural, Environmental, Geotechnical, or Transportation Engineering services will be necessary for this project, and they are not included in this proposal.
- It is anticipated that one tree will be removed for the project and that the City Arborist will provide recommendations for removal and replacement.
- The following items are not anticipated to be necessary and are not included in this proposal:
    - Sanitary sewer main replacement/improvements.
    - Water main replacement/improvements.
    - Gas main relocation coordination.
    - Power relocation coordination (City to coordinate).
    - Other dry utility relocation coordination.
    - Wall or rockery design.
    - Flow control design.
    - Capacity analysis of existing stormwater conveyance system.
    - Environmental documentation/permits beyond what is included in the scope above.
    - Construction Administration, Staking, or Inspection Services (a separate fee proposal can be provided upon request).
- The Client shall provide Blueline with a soils/geotechnical engineering report including pavement design report, and any critical areas reports.
- The City will prepare all front-end contract documents. Blueline will prepare special provisions for inclusion in the specification package.
- Any design or reports required for additional permits intended to expedite the beginning of construction, beyond those required for the full construction of the project are excluded. Should this be requested by the Client an Additional Services Authorization (ASA) will be provided.
- Blueline will not pay any Agency fees on behalf of the Client. This includes any fees associated with permits.
- Obtaining any offsite easements or right-of-entry including temporary construction easements outside of permanent easement acquisition (if required) will be the responsibility of the Client.

- Traffic Control Plans will be submitted by the Contractor and are therefore, not included within Blueline's scope of work.
- The City will coordinate with franchise utility companies for any required pole relocations.
- This scope of work anticipates a single construction package. If the project becomes split into separate packages, an additional fee estimate can be provided for those packages after the first complete construction documents.
- The fees stated above do not include reimbursable expenses such as large format copies (larger than legal size), mileage, and plots. These will appear under a separate task called **EXPENSES**. **Estimate: $1,000.**
- Time and expense items are based on Blueline's current hourly rates.
- These fees stated above are valid if accepted within 30 days of the date of the proposal.
- Blueline reserves the right to adjust fees per current market conditions for tasks not started within a year of contract execution.
- Project stops/starts and significant changes to the Project Schedule may result in changes to the fees provided above and a separate fee proposal will be provided.
- Client revisions requested after the work is completed will be billed at an hourly rate under a new task called Client Requested Revisions. A fee estimate can be provided to the Client prior to proceeding with the revisions.
- Blueline reserves the right to move funds between approved Tasks 001 – 011 as necessary based on approved scope of work provided the overall budget of Tasks 001 – 011 is not exceeded. City Project Manager will be notified if funds are shifted.
- If the Client requests Blueline's assistance in complying with any public records request, including without limitation providing copies of documents and communications, Client will pay Blueline's hourly fees and costs incurred in providing such assistance at then-current rates. Such fees and costs will be billed as a separate task and will be in addition to the maximum or total fees and costs stated in the agreement to which this scope of work as attached.

N 155th St Overlay

Attachment A

Job Number:	21-262	Prepared By:	Kai Pope, EIT
Date:	8/3/2021	Checked By:	Rob Dahn, PE

Task #	Base Tasks	Project Manager $205/hr Hours	Engineer $165/hr Hours	Engineering Designer $152/hr Hours	Total Hours	Total Fee
001	Project Management	70	12	0	82	$16,330
002	Survey & Base Mapping					$38,530
003	60% Design	11	64	64	139	$22,540
004	90% Design	23	92	212	327	$52,120
005	Final Design	18	108	90	216	$35,190
006	Permits & Coordination	14	24	2	40	$7,130
007	Sound Transit Overlay Design	6	14	34	54	$8,710
008	Drainage Report	4	16	4	24	$4,070
009	Easement Coordination (Blueline)	14	44	15	73	$12,410
010	Easement Generation (Axis)					$14,950
011	Bidding & Award Services	4	10	2	16	$2,770
012	Unassigned Services Reserve					$21,500
	Expenses					$1,000
	Total Hours	164	384	423	971	
	Blueline Personnel	$33,620	$63,360	$64,296		**$237,250**

Attachment A

001	Project Management		Project Manager	Engineer	Engineering Designer	Total Hours	
Item #	Description		$205/hr	$165/hr	$152/hr		
			Hours	Hours	Hours		
1	Project Meetings		20	12	-	**32**	
2	Monthly Invoices / Progress Reports		12	-	-	**12**	
3	QA / QC		18	-	-	**18**	
4	General Project Coordination		20	-	-	**20**	
		Total Hours	70	12	0	**82**	
		Total Fee	$14,350	$1,980	$0		**$16,330**

002	Survey & Base Mapping			Total Cost	Blueline Markup		Total
Item #	Description			(Per Axis)	15%		
1	Survey & Base Mapping			$33,500	$5,025		
			Total Fee	$33,500	$5,025		**$38,530**

003	60% Design		Project Manager	Engineer	Engineering Designer	Total Hours	
Item #	Description		$205/hr	$165/hr	$152/hr		
			Hours	Hours	Hours		
1	Initial Site Visit, Photos, Notes		4	8	-	**12**	
2	Kickoff Meeting with City		2	4	-	**6**	
3	Incorporate exisisting design and survey		0	4	12		
4	60% Design Plans		2	20	48	**70**	
5	60% Design Special Provisions		1	8	-	**9**	
6	60% Design Engineer's Estimate		1	12	4	**17**	
7	60% Design Memo		1	4	-	**5**	
8	Additional Site Visits		-	4	-	**4**	
		Total Hours	11	64	64	**139**	
		Total Fee	$2,255	$10,560	$9,728		**$22,540**

004	90% Design		Project Manager	Engineer	Engineering Designer	Total Hours	
Item #	Description		$205/hr	$165/hr	$152/hr		
			Hours	Hours	Hours		
1	60% Review Meeting & Project Walk Through with City		6	8	-	**14**	
2	ADA Ramp Grading (up to 36 ramps)		4	40	170	**214**	
3	90% Design Plans		2	12	40	**54**	
4	90% Design Special Provisions		2	16	-	**18**	
5	90% Engineer's Estimate		2	12	2	**16**	
6	QA/QC		6	-	-	**6**	
7	90% Design Memo		1	4	-	**5**	
		Total Hours	23	92	212	**327**	
		Total Fee	$4,715	$15,180	$32,224		**$52,120**

005	Final Design		Project Manager	Engineer	Engineering Designer	Total Hours	
Item #	Description		$205/hr	$165/hr	$152/hr		
			Hours	Hours	Hours		
1	90% Review Meeting with City		2	4	-	**6**	
2	ADA Ramp Adjustments (up to 36 ramps)		6	16	60	**82**	
3	Final Design Plans		2	20	30	**52**	
4	Final Design Special Provisions		2	24	-	**26**	
5	MEF Documentation		4	40	-	**44**	
6	Final Design Engineer's Estimate		2	4	-	**6**	
		Total Hours	18	108	90	**216**	
		Total Fee	$3,690	$17,820	$13,680		**$35,190**

006	Permits & Coordination		Project Manager	Engineer	Engineering Designer	Total Hours	
Item #	Description		$205/hr	$165/hr	$152/hr		
			Hours	Hours	Hours		
1	SEPA Preparation		2	8	2	**12**	
2	WSDOT Coordination		6	8	-	**14**	
3	Sound Transit Coordination		6	8	-	**14**	
		Total Hours	14	24	2	**40**	
		Total Fee	$2,870	$3,960	$304		**$7,130**

007	Sound Transit Overlay Design		Project Manager	Engineer	Engineering Designer	Total Hours	
Item #	Description		$205/hr	$165/hr	$152/hr		
			Hours	Hours	Hours		
1	60% Half Street Overlay Design		2	6	16	**24**	
2	90% Half Street Overlay Design		2	4	12	**18**	
5	Final Half Street Overlay Design		2	4	6	**12**	
		Total Hours	6	14	34	**54**	
		Total Fee	$1,230	$2,310	$5,168		**$8,710**

008	Drainage Report		Project Manager	Engineer	Engineering Designer	Total Hours	
Item #	Description		$205/hr	$165/hr	$152/hr		
			Hours	Hours	Hours		
1	Prepare Stormwater Technical Memorandum		2	10	2	**14**	
2	Revisions Per City Review Comments		2	6	2	**10**	
		Total Hours	4	16	4	**24**	
		Total Fee	$820	$2,640	$608		**$4,070**

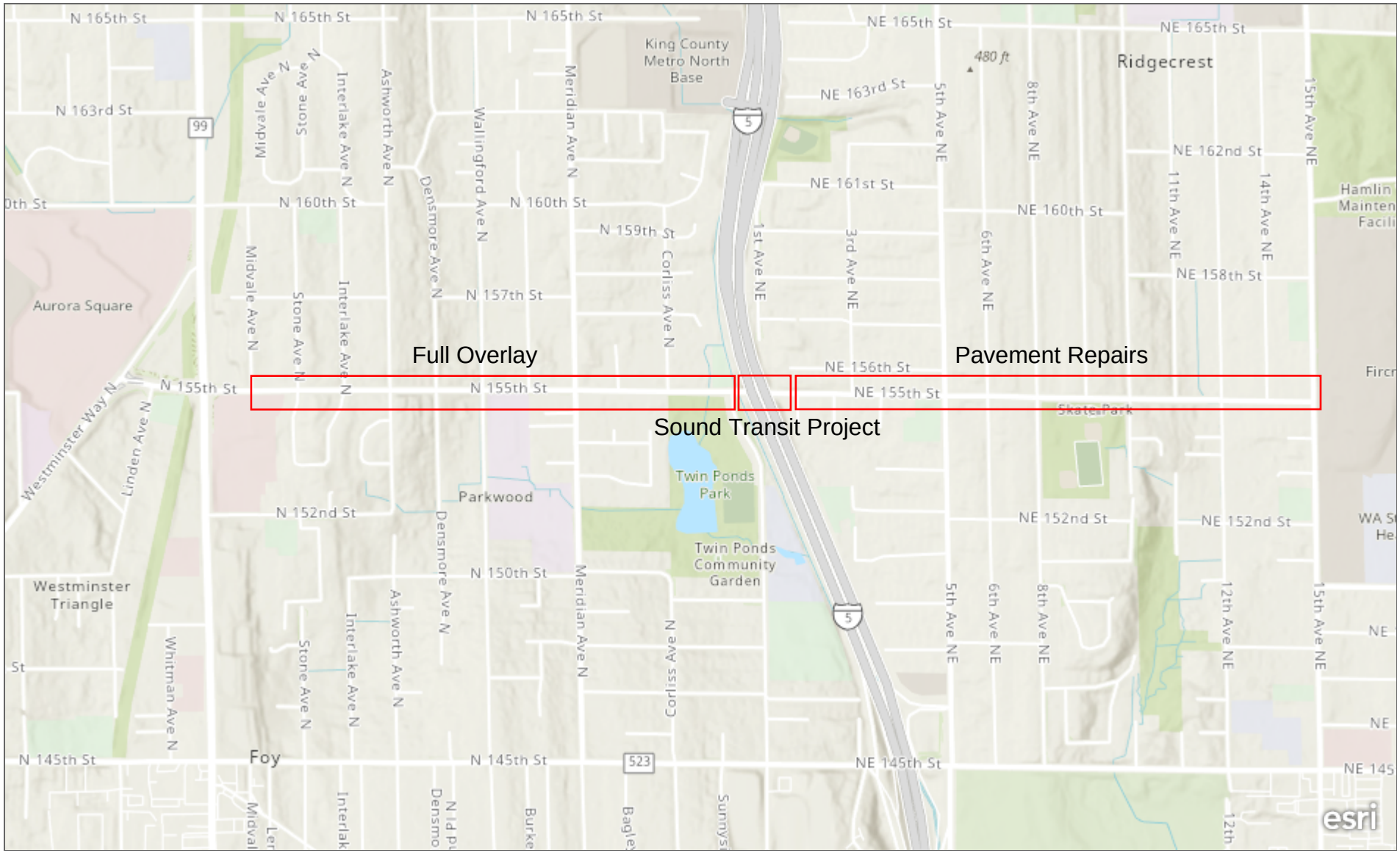
009	Easement Coordination (Blueline)		Project Manager	Engineer	Engineering Designer	Total Hours	
Item #	Description		$205/hr	$165/hr	$152/hr		
			Hours	Hours	Hours		
1	Easement Determination and Coordination		4	8	15	**27**	
2	Property Owner Coordination		6	16	-	**22**	
3	Follow-up, Support, and Assistance		4	20	-	**24**	
		Total Hours	14	44	15	**73**	
		Total Fee	$2,870	$7,260	$2,280		**$12,410**

010	Easement Generation (Axis)		Total Cost	Blueline Markup		Total
Item #	Description		(Per Axis)	15%		
1	Legal Descriptions & Exhibits		$13,000	$1,950		
		Total Fee	$13,000	$1,950		**$14,950**

011	Bidding & Award Services		Project Manager	Engineer	Engineering Designer	Total Hours	
Item #	Description		$205/hr	$165/hr	$152/hr		
			Hours	Hours	Hours		
1	Address Questions & General Assistance		2	6	-	**8**	
2	Assist with Addenda as Necessary		2	4	2	**8**	
		Total Hours	4	10	2	**16**	
		Total Fee	$820	$1,650	$304		**$2,770**

012	Unassigned Services Reserve		Total Cost		Total
Item #	Description				
1	Unassigned Services Reserve		$21,475		
		Total Fee	$21,475		**$21,500**

N/NE 155th St Overlay Project



Council Meeting Date: August 16, 2021 **Agenda Item:** 8(a)

CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Discussion of Prohibition of Fossil Fuels in New Construction
DEPARTMENT:	Planning and Community Development Recreation, Cultural and Community Services
PRESENTED BY:	Ray Allshouse, Building Official Autumn Salamack, Environmental Services Coordinator
ACTION:	____ Ordinance ____ Resolution ____ Motion _X_ Discussion ____ Public Hearing

PROBLEM/ISSUE STATEMENT:

The City's 2019 communitywide greenhouse gas emissions inventory showed a 1.3% increase in emissions compared to 2009. This trend is not on track to meet the City's goals to reduce emissions by 25% by 2020, 50% by 2030, and 80% by 2050, as compared to 2009. Fossil fuels used in the built environment were responsible for approximately 30% of communitywide emissions in 2019, with 28% from natural gas and 2% from heating oil.

Increasing concerns about the environmental and public health impacts of fossil fuels used in buildings have led some municipalities to ban fossil fuel hookups in new construction. The City Council discussed this topic at their 2021 Strategic Planning Workshop in March 2021 and indicated general support for a natural gas ban on space/water heating for new residential construction (referring to both single-family and multi-family construction), with an allowance for gas for cooking only.

Staff has since evaluated options to ban fossil fuels in various types of new construction and the current policy in Washington State prohibits local governments from passing electrification ordinances for new residential construction. Given this prohibition, the City can only evaluate limitations on the use of fossil fuels for commercial construction and multi-family projects over three stories in height.

To this end, the City could incorporate the same language used in the City of Seattle's 2018 Energy Code Update regarding the ban of the use of fossil fuels in new commercial and large multi-family construction projects for space heating and most water heating. The code envisioned to ban the use of fossil fuels for space and water heating in new commercial construction would be included under Shoreline Municipal Code (SMC) Title 15 – local amendments to the State Construction Codes, specifically amending the State Energy Code Commercial Provisions.

Tonight, staff is interested in hearing from Council on their interest in staff bringing back a proposed ordinance for Council consideration that would ban the use of fossil fuels in new commercial and large multi-family construction for space heating and most water heating. Staff is also interested in receiving any additional feedback from Council on other regulatory options that Council would like staff to explore.

RESOURCE/FINANCIAL IMPACT:
City staff time would be required to codify and implement changes to SMC Title 15 and provide outreach to local builders.

RECOMMENDATION

This is a discussion item only; no action is required tonight. Based on feedback from the 2021 Council Strategic Planning Workshop, staff recommends that the Council discuss the Regional Code Collaboration Suggested Commercial Energy Code Amendments and provide staff feedback on whether Council would like staff to develop an ordinance for Council consideration that aligns with these amendments.

Approved By: City Manager ***DT*** City Attorney ***MK***

BACKGROUND

The City of Shoreline's 2019 communitywide greenhouse gas emissions inventory showed a 1.3% increase in emissions compared to 2009. This trend is not on track to meet the City's goals to reduce emissions by 25% by 2020, 50% by 2030, and 80% by 2050, as compared to 2009. Working to reduce emissions is critical to preventing the most catastrophic impacts of climate change for the community. The more quickly emissions are reduced, the more quickly climate change impacts are mitigated.

The Puget Sound region is already experiencing the impacts of a changing climate and is likely to see more extreme weather due to climate change, including extreme heat, wildfires, rising sea levels, and more-frequent flooding, all of which can harm public health. Direct effects, such as breathing problems from long exposure to wildfire smoke and heat-related illness from lasting heat waves, are already being seen. The communities in Shoreline that are most likely to be harmed by climate change include people of color, immigrants, and/or refugees; people with low incomes; and those who are experiencing homelessness. These communities are also the least likely to have resources to respond to climate change.

In Shoreline, buildings are largely heated by three fuel sources: electricity from Seattle City Light, natural gas from Puget Sound Energy, and heating oil from private companies. Electricity from Seattle City Light is considered carbon neutral and thus is the preferred energy source from both a carbon emissions reduction and public health perspective.

The City's 2019 communitywide greenhouse gas emissions inventory (Figure 1) reported that the largest sources of emissions were transportation (67%) and the built environment (32%), primarily from natural gas usage in the residential and commercial sectors. As shown in Figure 2, natural gas consumption was responsible for 87% of emissions from the built environment. The residential sector was the largest consumer of natural gas (11,681 customers, ~9.4 million therms), followed by the commercial sector (563 customers, ~4.8 million therms).

Figure 1. Sources of communitywide greenhouse gas emissions for Shoreline in 2019 (328,790 metric tons of carbon dioxide equivalent, MTCO2e).

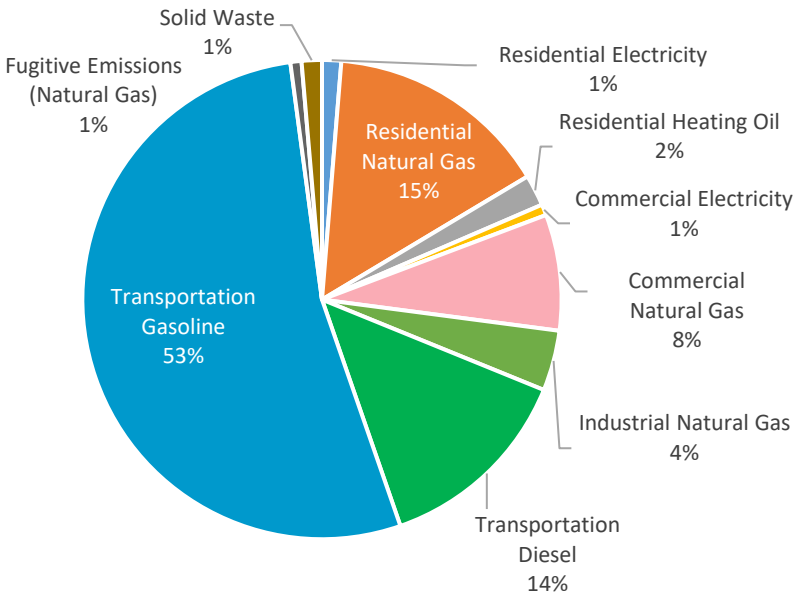
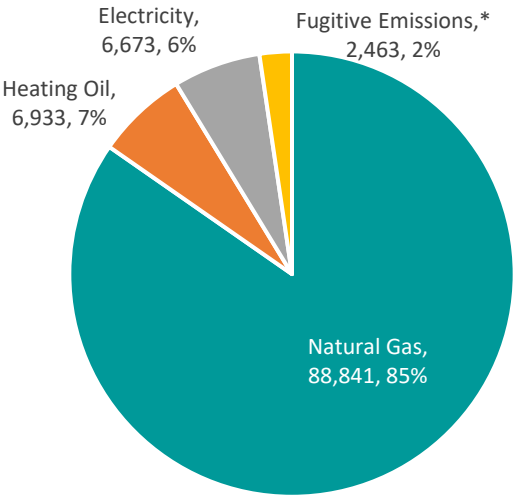


Figure 2. 2019 greenhouse gas emissions from the building energy use (104,910 MTCO2e).



*Fugitive emissions refers to leakage in the local natural gas distribution system based on the total quantity of natural gas consumed (14,194,696 therms) and assumed leakage rate (default value = 0.3%).

Reducing the number of buildings that rely on fossil fuels for heating spaces and water is an important way to both reduce greenhouse gas emissions and protect public health. Per an April 2020 “Building Code Amendments – Energy Focus” document from King County, “Even large-scale changes in how we make electricity cannot make up for the

carbon we release by using natural gas. Also, natural gas stoves and ovens are bad for indoor air quality. They can increase a child's chance of developing asthma by 42%."

Various tools have been used to either encourage all-electric buildings or ban fossil fuels, such as natural gas, for specific uses in new construction. Building codes are one such tool that can have a powerful influence on the type of energy used in buildings and resulting emissions.

City of Seattle Fossil Fuel Ban

In December 2020, the City of Seattle announced that they would ban the use of fossil fuels in new commercial and large multi-family construction for space heating and most water heating. The Seattle Energy Code update includes the following key changes for commercial and large multifamily buildings:

- eliminates all gas and most electric resistance space heating systems;
- eliminates gas water heating in large multifamily buildings and hotels;
- improves building exteriors to improve energy efficiency and comfort;
- creates more opportunities for solar power; and
- requires electrical infrastructure necessary for future conversion of any gas appliances in multifamily buildings.

2018 State Energy Code

The 2018 Washington State Energy Code, which went into effect on February 1, 2021, includes elements that continue to work towards a 70% reduction in net annual energy consumption in newly constructed residential and nonresidential buildings by 2031, compared to the 2006 Washington State Energy Code. The 2018 Code includes a few elements that support increased electrification of building energy systems, including the following:

- new energy modeling protocol based on source carbon emissions savings instead of site energy savings for the proposed building in comparison to the baseline building (commercial code);
- carbon emissions factors for each fuel source (commercial code);
- new requirement for a minimum efficiency standard for fireplaces (residential code);
- new general section to prohibit continuously burning pilot lights (residential code); and
- revised additional required energy credits to discourage the use of gas furnaces (residential code).

Incident to the energy credits, the Code provides "Fuel Normalization Credits" that establish a negative 1 credit for solely electric resistance systems as well as all heating energy sources other than heat pumps. This penalty must be compensated by other energy credit options. It is important to note that gas is not totally ruled out because installation of a high efficiency gas furnace earns 1 credit back. However, it makes no headway towards satisfying the bottom-line additional requirement.

Inquiries to local Shoreline builders indicate that it is too early to conclude the impact of these new provisions since most new ongoing construction projects were vested under the prior Energy Code. Heat pump systems are common, but high efficiency gas furnaces already represent a significant percentage of new installations as an exercised option under prior Energy Code compliance, so the true impact of the 2018 Energy Code remains to be seen.

Limits to Local Options

While local jurisdictions have free reign to modify the State commercial Energy Code, state law restricts local jurisdictions from making the residential Energy Code anything other than equivalent to the State Code. The term "Mini-Maxi" is used to reflect this limitation depicting this code as both a minimum as well as a maximum requirement. The only flexibility is in the form of additional energy credit options that must be selected beyond baseline requirements based on the new dwelling size in square feet. The minimum additional credits required are 3, 6, and 7 for small, medium, and large dwelling units respectively. The 2018 Energy Code also addresses apartment building units and additions separately.

DISCUSSION

The City Council discussed this topic at their 2021 Strategic Planning Workshop in March 2021 and indicated general support for a natural gas ban on space/water heating for new residential construction (referring to both single-family and multi-family construction), with an allowance for gas for cooking only.

Staff has since evaluated options to ban fossil fuels in various types of new construction. The current policy in Washington State (RCW 19.27A.020) prohibits local governments from passing electrification ordinances for new residential construction, defined as single family homes, townhouses, and multi-family dwelling unit buildings that are three stories and less. Given the State's Mini-Maxi restrictions for the residential Energy Code, the City can thus only evaluate limitations on the use of fossil fuels for commercial construction and multi-family projects over three stories in height.

The City of Seattle has successfully enacted their 2018 Energy Code Update regarding the ban on the use of fossil fuels in new commercial and large multi-family construction for space heating and most water heating. The City of Seattle Commercial Energy Code aims to exceed the State baseline savings by 20%. The City of Seattle's amendments have been outlined in a modified format for consideration by other jurisdictions in the Regional Code Collaboration Suggested 2018 Energy Code Amendment Package (Attachment A). Other local jurisdictions, namely unincorporated King County and Bellingham, are currently pursuing adoption of Seattle's amendments, in large part, as early as this calendar year. The City of Shoreline could also incorporate the City of Seattle's code update language. A King County presentation regarding the Regional Code Collaboration Proposed Energy Code Amendments is attached to this staff report as Attachment B.

A Shoreline Municipal Code envisioned ban for the use of fossil fuels for space/water heating in new commercial construction, including multi-family dwelling unit buildings that are four stories or more, would be included under SMC Title 15 – local amendments to the State Construction Codes, specifically amending the State Energy Code Commercial Provisions. This approach would provide consistency for builders operating in Seattle, Shoreline and King County and yield regional emission reduction benefits. Staff would share information and seek comment from local developers and utility companies, including Puget Sound Energy, on proposed amendments to Title 15.

Tonight's Council Discussion

Given the State preclusion of a natural gas ban on space/water heating for new residential construction, tonight, staff is interested in hearing from Council on their interest in staff bringing back a proposed ordinance for Council consideration that would ban the use of fossil fuels in new commercial and large multi-family construction for space heating and most water heating, in alignment with the Regional Code Collaboration Suggested 2018 Energy Code Amendment Package. Staff is also interested in receiving any additional feedback from Council on other regulatory options that Council would like staff to explore.

Given the State's Mini-Maxi restrictions for the residential Energy Code, and the fact that the Regional Code Collaboration Suggested 2018 Energy Code Amendment Package has already been implemented in other jurisdictions, staff recommends that Council move forward with a similar ordinance for Shoreline.

RESOURCE/FINANCIAL IMPACT

City staff time would be required to codify and implement changes to SMC Title 15 and provide outreach to local builders.

RECOMMENDATION

This is a discussion item only; no action is required tonight. Based on feedback from the 2021 Council Strategic Planning Workshop, staff recommends that the Council discuss the Regional Code Collaboration Suggested Commercial Energy Code Amendments and provide staff feedback on whether Council would like staff to develop an ordinance for Council consideration that aligns with these amendments.

ATTACHMENT

Attachment A: Regional Code Collaboration Suggested 2018 Energy Code Amendment Package
Attachment B: Regional Code Collaboration Proposed Energy Code Amendments Presentation

RCC SUGGESTED 2018 ENERGY CODE AMENDMENT PACKAGE
King County is currently evaluating the possibility to adopt this package in its entirety – it will be transmitted to Council in July 9, 2021

This package includes:

- *RCC suggested amendments to the 2018 WA State Energy Code which are based on Seattle's 2018 Energy Code amendments - slightly modified to better reflect other jurisdictions. Amendments have been written in standard underline and strikeout format. This document is not the entire 2018 code, only the amended sections.*
- *It is suggested that jurisdictions adopt this package in its near entirety; However, if the focus is only on decarbonization, the text in green reflects the text associated with decarbonization (The "Highlights" matrix below provides a brief overview of these sections).*
- *Seattle's code has "Informative Notes" which provide clarification for the design professional. These have been left in; Delete if unnecessary.*
- *Seattle's code had some delayed enforcement dates in order to allow time for the industry to acclimate. These have been left in.*
- *WA State's IRC Appendix T, Solar-ready provisions for detached single family, duplex, townhouse structures*

2018 Amendment Package Highlights Include:

Heat Pump Space Heating: New Sections: C403.1.4, C403.4.1.1, 503.4.6	No gas space heating permitted, and no electric resistance space heating. A long list of exceptions allowing electric resistance for certain small loads and for supplemental heat used during very cold weather. (Delayed implementation to June 1, 2021 permit application date)
Heat Pump Water Heater: * New Section C404.2.3 * New definitions for "multi-pass", "single-pass", and "temperature maintenance"	Require heat pump water heaters for R-1 & R-2 buildings with central hot water (Seattle delays implementation to Jan 1, 2022)
Section 406 Energy Efficiency Credits: * Alter Sections C406.1, C406.5 - C406.9, Table C406.1 * Delete Section C406.12 & Table C406.5	Increase C406 credit requirement to 8 (from 6) credits. Add & alter credits to say that credits cannot be applied toward gas-sourced equipment or electric baseboard
Electrical Outlets at Gas Appliances: New Section C405.7.1	Provide receptacles at dwelling unit gas-fired appliances for future electric appliances
Solar Readiness: * Alter Section C411.1 * New definition "solar zone" * AND Adopt IRC Appendix T	Require solar readiness for multifamily and commercial buildings
Renewable Energy Requirement: * Alter C407.3, Table C407.2, Table C407.3(1 * New Section 412 * New definition for "affordable housing"	Require on-site PV, 0.25 watts per sf of conditioned space, or get evidence that they donated their solar to affordable housing
Reduced Fenestration U-Values + Increased Allowable Window Are: * Alter Sections: C402.4.1, C402.4.1.1, C402.1.1.2, & Table C402.4	Reduces allowable fenestration U-values + increases allowable area for glazing from 30% up to 35% of wall area
Thermal Bridging: Control for Concrete Balconies: * New Sections C402.2.9 * Alter Table C402.1.4, footnote h * New definition "Thermal Bridging"	Thermal bridging control for concrete balconies. Specifies that cantilevered concrete balconies either have to use an R-10 thermal break assembly (such as Schoeck Isokorb or similar product) or calculate the additional heat loss in UxA calculation
Thermal Bridging: Control for Window Frames: * New Section C402.2.10 * Alter Section C402.2 * New definition "Thermal Bridging"	Thermal bridging control for window frames. Requires that the plane of the glass line up with the wall insulation layer (or within 2 inches of it) and that any space between the outside face of the fenestration frame and the outside face of framing get R-3 insulation
Total System Performance Ratio (TSPR): * Alter Sections: C403.1.1 *If adopting Appendix D:* ** Alter Sections: D101, D601.2.1, D601.4.1, D601.4.2, D601.6, D601.7 & Tables: D601.11.2, D602.11*	Increase the scope of WA State's TSPR requirement to include R-2 MF, medical office, and exempt other service areas. Just check to be sure they ran the online test and passed
Service Hot Water Efficiency Improvements: Alter Section C404.7.3.1	Insulation and efficiency improvements to hot water circulation systems. (Typically for reviewer of potable water systems)
Lighting Control Systems: Alter C405.2 + subsections	Provide LLLC (luminaire-level lighting controls) or networked lighting control system for large (>5,000 sf) open office areas
Lighting Power Allowance: Alter Tables C405.4.2(1) and C405.4.2(2)	Reduce interior LPAs (lighting power allowances) 10% below state code
Indoor Horticultural Lighting: Alter Section C405.4.1	Require efficacy for "indoor horticultural lighting" of 1.6 micromoles per joule (for cannabis grow facilities)
Eliminate Sub-Standard Envelopes: * Alter Sections: C407.3, C407.3.1, Table C407.2	For energy modeling, prohibit envelope heat loss more than 10% worse than prescriptive code (state code permits 20% worse)
Total Building Performance (BPF): * Alter Table C407.3(2)	Require BPF (building performance factor) 10% below WA Appendix G modeling values, to stay equivalent to prescriptive code
Heat Recovery: New Table C403.3.2(13)	Add new table from ASHRAE 90.1 – 2019 for heat-recovery chiller efficiency
DCV (demand control ventilation) and Energy Recovery: Alter Sections: C403.3.5.1, C403.7.1	Require both DCV (demand control ventilation) and energy recovery for high occupancy spaces larger than 650 sf and more than 15 occ per 1000 sf. (This adds retail and large conference rooms to list of spaces requiring DCV & energy recovery.)
Energy Recovery Ventilation Alter Sections: C403.3.5.1, C403.7.6	Increases energy recovery ventilation effectiveness to 60%
Altered Cooling System: Alter Section C503.4.3	Clarifies that cooling system alterations must comply with the economizer compliance table, both at the individual equipment level and the total system level
Envelope Exemption for Commercial Kitchens/Laundries: Alter Sections: C505.1, C503.1	Exempt change of use projects with high process loads (commercial kitchen, laundry, etc.) from envelope improvement requirements, if use Energy star Equipment and no use of natural gas
Metering for Existing Buildings: New Section C506 (relocated from C409.5)	Requires individual meters in existing buildings where applicable

CHAPTER 1 [CE]

SCOPE AND ADMINISTRATION

SECTION C101

SCOPE AND GENERAL REQUIREMENTS

C101.1 Title. This code, consisting of Chapter 1 [CE] through Chapter ((~~5~~)) 6 [CE] and Appendices A through D, shall be known as the *Washington State Energy Code*, and shall be cited as such. It is referred to herein as "this code."

Commented [PK1]: Note to RCC: Confirm this is your jurisdiction's scope

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C101.3 Intent. This code shall regulate the design and construction of buildings for the use and conservation of energy and the reduction of carbon emissions over the life of each building. This code is intended to provide flexibility to permit the use of innovative approaches and techniques to achieve this objective. This code is not intended to abridge safety, health or environmental requirements contained in other applicable codes or ordinances.

SECTION C102

ALTERNATIVE MATERIALS, DESIGN AND METHODS OF CONSTRUCTION AND EQUIPMENT

C102.1 General. The provisions of this code ((~~are not intended to~~)) do not prevent the installation of any material, or to prohibit any design or method of construction prohibited by this code or not specifically ((~~prescribed~~)) allowed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *code official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety. Where the alternative material, design or method of construction is not approved, the *code official* shall respond in writing, stating the reasons why the alternative was not approved.

The *code official* may require that sufficient evidence or proof be submitted to reasonably substantiate any claims regarding the use or suitability of the alternate. The *code official* may, but is not required to, record the approval of modifications and any relevant information in the files of the building official or on the *approved* permit plans.

C102.2 Modifications. The *code official* may modify the requirements of this code for individual cases provided the *code official* finds: (1) there are practical difficulties involved in carrying out the provisions of this code; (2) the modification is in conformity with the intent and purpose of this code; (3) the modification will provide a reasonable level of fire protection and structural integrity when considered together with other safety features of the building or other relevant circumstances, and (4) the modification maintains or improves the energy efficiency of the building. The *code official* may, but is not required to, record the approval of modifications and any relevant information in the files of the *code official* or on the *approved* permit plans.

Commented [PK2]: Note to RCC: These amendments aren't critical, but they may be helpful

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CHAPTER 2 [CE]

DEFINITIONS

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SECTION C202

GENERAL DEFINITIONS

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AFFORDABLE HOUSING. Affordable housing for the purposes of this code shall include buildings which; a) receive or have received public funding or an allocation of federal low-income housing tax credits; and b) are subject to a regulatory agreement, covenant, or other legal instrument recorded on the property title, and enforceable by [the Jurisdiction], Washington State Housing Finance Commission, State of Washington, King County, U.S. Department of Housing and Urban Development, or other similar entity as *approved* by the Seattle Director of Housing, that either:

1) Restricts at least 40 percent of the units to occupancy by households earning no greater than 60 percent of median income, and controls the rents that may be charged, for a minimum period of 40 years; or

2) Restricts initial and subsequent sales of at least 40 percent of the residential units to households with incomes no greater than 80 percent of median income, for a minimum period of 50 years. The sale price for sales subsequent to the initial sale shall be calculated to allow modest growth in homeowner equity while maintaining long-term affordability for future buyers.

***

ATTIC AND OTHER ROOFS. ((~~All other roofs~~)) Roofs other than roofs with insulation entirely above deck and metal building roofs, including roofs with insulation entirely below (inside of) the roof structure (i.e., attics, cathedral ceilings, and single-rafter ceilings), roofs with insulation both above and below the roof structure, and roofs without insulation. ((~~but excluding roofs with insulation entirely above deck and metal building roofs.~~))

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AUTOMATIC CONTROL DEVICE. A device capable of automatically turning loads off and on without manual intervention.

***

BUILDING ENTRANCE. Any doorway, set of doors, revolving door, vestibule, or other form of portal (including elevator doors such as in parking garages) that is ordinarily used to gain access to the building or to exit from the building by its users and occupants. This does not include doors solely used to directly enter mechanical, electrical, and other building utility service equipment rooms, or doors for emergency egress only. Where buildings have separate one-way doors to enter and leave, this also includes any doors ordinarily used to leave the building.

***

COMPUTER ROOM. A room whose primary function is to house equipment for the processing and storage of electronic data and that has a design total *information technology equipment (ITE)* equipment load less than or equal to 20 watts per square foot of *conditioned floor area* (215 watts/m^2) or a design *ITE* equipment load less than or equal to 10 kW. See also *data center*.

Commented [PK3]: Note to RCC: "[the jurisdiction]" is littered throughout the document. Please replace with your jurisdiction

Commented [PK4]: Note to RCC: Modify to reference local information

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CONDITIONED SPACE. An area, room or space that is enclosed within the *building thermal envelope* and that is directly heated or cooled or that is indirectly heated or cooled. Spaces are indirectly heated or cooled where they communicate through openings with *conditioned spaces*, where they are separated from *conditioned spaces* by uninsulated walls, floors or ceilings, or where they contain uninsulated ducts, piping or other sources of heating or cooling. Elevator shafts, stair enclosures, enclosed corridors connecting *conditioned spaces,* and *enclosed spaces* through which conditioned air is transferred at a rate exceeding three air changes per hour are considered *conditioned spaces* for the purposes of the *building thermal envelope* requirements.

CONTINUOUS INSULATION (CI). Insulating material that is continuous across all structural members without metal thermal bridges other than fasteners that have a total cross-sectional area not greater than 0.04 percent (0.12 percent where all metal thermal bridges are stainless steel) of the envelope surface through which they penetrate, and service openings. It is installed on the interior or exterior or is integral to any opaque surface of the building envelope.

CONTROLLED PLANT GROWTH ENVIRONMENT. Group F and U buildings or spaces that are used exclusively for and specifically controlled to facilitate and enhance plant growth and production by manipulating various indoor environmental conditions. Technologies include indoor agriculture, cannabis growing, hydroponics, aquaculture and aquaponics. Controlled indoor environment variables include, but are not limited to, temperature, air quality, humidity and carbon dioxide.

Commented [PK5]: Note to RCC: Not imperative, but it may provide general clarity

CONTROLLED RECEPTACLE. An electrical receptacle that is controlled by an *automatic control device.*

***

IT (INFORMATION TECHNOLOGY) ENERGY. Electrical energy consumed by UPS (uninterruptible power supply) units, servers, and associated electronic data storage and data processing equipment, but not by lighting or HVAC equipment.

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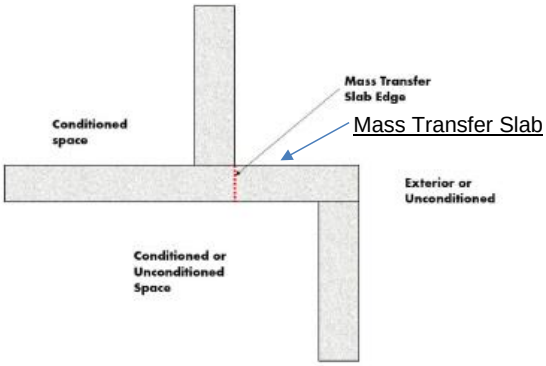
LUMINAIRE-LEVEL LIGHTING CONTROL. A lighting system consisting of one or more *luminaires* where each *luminaire* has embedded lighting control logic, occupancy and ambient light sensors, and local override switching capability, where required. Each *luminair*e shall also have local or central wireless networking capabilities to detect and share information with other *luminaires* to adjust to occupancy and/or daylight in the space.

***

MASS TRANSFER DECK SLAB ((~~EDGE~~)). ~~That portion of the *above-grade wall* made up of the concrete slab where it extends past the footprint of the floor above.))~~ A concrete slab designed to transfer structural load from the building perimeter wall or column line above, laterally to an offset wall or column line below, and which has conditioned or semi-heated space on the inside of the upper wall and exterior or unconditioned space on the outside of the upper wall. The area of the slab edge shall be defined as the thickness of the slab multiplied by the ((~~perimeter~~)) length of the edge condition. Examples of this condition include, but are not limited to, the transition from an above-grade structure to a below-grade structure or the transition from a tower to a podium. A cantilevered concrete balcony does not constitute a mass transfer deck slab.



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MULTI-PASS. A heat pump water heater control strategy requiring multiple passes of water through the heat pump to reach the final target storage water temperature.

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SINGLE-PASS. A heat pump water heater control strategy using variable flow or variable capacity to deliver water from the heat pump at the final target storage water temperature in a single pass through the heat exchanger with variable incoming water temperatures.

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SOLAR ZONE. A clear area or areas reserved solely for current and future installation of photovoltaic or solar hot water systems.

SPACE CONDITIONING CATEGORY. Categories are based on the allowed peak space conditioning output capacity per square foot of *conditioned floor area*, or the design set point temperature, for a building or space. Space conditioning categories ((~~from lowest to highest~~)) include: low energy, semi-heated, conditioned, refrigerated walk-in and warehouse coolers, and refrigerated walk-in and warehouse freezers.

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TEMPERATURE MAINTENANCE. The system used to maintain the temperature of the building domestic hot water delivery system, typically by circulation and reheating or by a heat trace system.

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CHAPTER 3 [CE]

GENERAL REQUIREMENTS

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SECTION C302

DESIGN CONDITIONS

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C302.2 Exterior design conditions. The heating or cooling outdoor design temperatures shall be ((~~selected from Appendix C~~)) 24°F for heating and 86°F dry bulb and 67°F wet bulb for cooling.

***

CHAPTER 4 [CE]

COMMERCIAL ENERGY EFFICIENCY

SECTION C401

GENERAL

* * *

C401.2 Application. *Commercial buildings* shall comply with one of the following:

1. **Prescriptive Path.** The requirements of ((~~Sections C402, C403, C404, C405, C406, C408, C409, C410 and C411~~)) all of Chapter 4, other than Section C407.
2. **Total Building Performance Path.** The requirements of Section C407.
3. **Appendix F is not adopted by [the Jurisdiction].** ((~~When adopted by the local jurisdiction, the requirements of Appendix F, Outcome-Based Energy Budget, Sections C408, C409, C410, C411 and any specific section in Table C407.2 as determined by the local jurisdiction. The Proposed Total UA of the proposed building shall be no more than 20 percent higher than the Allowed Total UA as defined in Section C402.1.5.~~))

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SECTION C402
BUILDING ENVELOPE REQUIREMENTS

C402.1 General. *Building thermal envelope* assemblies for buildings that are intended to comply with the code on a prescriptive basis, in accordance with the compliance path described in Item 1 of Section C401.2, shall comply with the following:

1. The opaque portions of the *building thermal envelope* shall comply with the specific insulation requirements of Section C402.2 and the thermal requirements of either the R-value based method of Section C402.1.3, the U-, C- and F-factor based method of Section C402.1.4, or the component performance alternative of Section C402.1.5.
2. Fenestration in the building envelope assemblies shall comply with Section C402.4, or the component performance alternative of Section C402.1.5.
3. Air leakage of building envelope assemblies shall comply with Section C402.5.

[Jurisdiction] Informative Note: For the application of the building envelope requirements to elevator shafts and stair enclosures, see the definition of *conditioned space* in Chapter 2 and the exception to Section C402.1.3.

Commented [PK6]: Note to RCC: Seattle provides informative notes that your jurisdiction may want to also use, so these have been kept in this document

***

C402.1.1.2 Semi-heated buildings and spaces. The building envelope of *semi-heated* buildings, or portions thereof, shall comply with the same requirements as that for *conditioned spaces* in Section C402, except as modified by this section. The total installed output capacity of mechanical space conditioning systems serving a *semi-heated* building or space shall comply with Section C202, except as modified by this section. Building envelope assemblies separating *conditioned space* from semi-heated space shall comply with the exterior envelope insulation requirements.

Semi-heated spaces heated by mechanical systems that do not include electric resistance heating equipment are not required to comply with the opaque wall insulation provisions of Section C402.2.3 for walls that separate semi-heated spaces from the exterior or low energy spaces. Fenestration that forms part of the *building thermal envelope* enclosing semi-heated spaces shall comply with Section C402.4. Semi-heated spaces shall be calculated separately from other *conditioned spaces* for compliance purposes.

Opaque walls in semi-heated spaces shall be calculated as fully code compliant opaque walls for both the target and proposed for the Target UA calculations for the component performance alternative in Section C402.1.5, and for the ((~~Standard Reference~~)) Baseline Building Design for Total Building Performance compliance per ASHRAE 90.1, Appendix G. The capacity of heat trace temperature maintenance systems complying with Section C404.7.2 that are provided for freeze protection of piping and equipment only, shall not be included in the total installed output capacity of mechanical space conditioning systems.

Exception: Building or space may comply as *semi-heated* when served by ((~~one or more of~~)) the following system ((~~alternatives~~)) alternative:

1. Electric infrared heating equipment for localized heating applications, but not for general area heating, insulated in compliance with Section C402.2.8 and controlled by occupant sensing devices in compliance with Section C403.11.1.

((~~2. Heat pumps with cooling capacity permanently disabled, as pre-approved by the jurisdiction.~~))

[Jurisdiction] Informative Note: There is no separate “freeze protection” space conditioning category for unoccupied utility buildings. Spaces with no cooling and less than 3.4 BTU/h-ft^2 heating capacity are not required to be insulated. The opaque walls of spaces that meet the definition of “semiheated” in Chapter 2 are not required to be insulated, but otherwise the thermal envelope of semiheated spaces must meet all requirements for *conditioned space.* Spaces with any mechanical cooling or with more than 8 BTU/h-ft^2 heating capacity must meet all the *building thermal envelope* requirements for *conditioned space.*

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C402.1.3 Insulation component *R*-value method. *Building thermal envelope* opaque assemblies shall comply with the requirements of Section C402.2 based on the *climate zone* specified in Chapter 3. For opaque portions of the *building thermal envelope* intended to comply on an insulation component *R*-value basis, the *R*-values for insulation shall not be less than that specified in Table C402.1.3. *Commercial buildings* or portions of *commercial buildings* enclosing Group R occupancies shall use the *R*-values from the "Group R" column of Table C402.1.3. *Commercial buildings* or portions of *commercial buildings* enclosing occupancies other than Group R shall use the *R*-values from the "All other" column of Table C402.1.3.

Exception: For stair and elevator shafts that do not comply with Section C402.1.2.1 and that are located within enclosed garages or other enclosed non-conditioned spaces and without conditioned supply air or cooling or heating appliances rated higher than 2 kW in any shaft, walls enclosing the shafts are permitted to be:

1. Concrete or masonry with minimum R-5 *continuous insulation*;
2. Metal studs with R-15 *cavity insulation* and without *continuous insulation*; or
3. Other assemblies with a maximum U-value of 0.120.

Slab floors, intermediate mass floor edges and elevator pits within shafts using this exception are excluded from envelope insulation requirements. Shaft surfaces using this exception shall not

be included in the gross exterior wall area for purposes of maximum fenestration area calculations in Section C402.4.1 component performance calculations in Section C402.1.5, or for the total building performance calculation of Section C407.

TABLE C402.1.3
OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MINIMUM REQUIREMENTS, R-VALUE METHOD[a, j]

CLIMATE ZONE	5 AND MARINE 4	
	All Other	Group R
Roofs		
Insulation entirely above deck	R-38ci	R-38ci
Metal buildings[b]	R-25 .+ ((~~R-11~~)) R-22 LS	R-25 .+ ((~~R-11~~)) R-22 LS
Attic and other	R-49	R-49
Walls, Above Grade[i]		
Mass[h]	((~~R-9.5[c] ci~~)) Exterior: R-16 c.i. Interior: R-13 + R-6 ci wood stud, or R-13 + R-10 ci metal stud	((~~R-13.3ci~~)) Exterior: R-16 c.i. Interior: R-13 + R-6 ci wood stud, or R-13 + R-10 ci metal stud
Mass transfer deck slab edge	((~~R-5~~)) N/R	((~~R-5~~)) N/R
Metal building	R-19ci or R-13+13ci	R-19ci or R-13+13ci
Steel framed	R-13 .+ R-10ci	R-19 .+ R-8.5ci
Wood framed and other	((~~R-21 int or R-15+5ci std~~)) R-13 + R-7.5 ci	R-13+7.5ci std or R-20+3.8ci std or R-25 std
Walls, Below Grade		
Below-grade wall[d, h]	((~~Same as above grade~~)) Exterior: R-10 ci Interior: R-19 wood stud, or R-13 + R-6 ci metal stud	((~~Same as above grade~~)) Exterior: R-10 ci Interior: R-19 wood stud, or R-13 + R-6 ci metal stud

CLIMATE ZONE	5 AND MARINE 4	
	All Other	Group R
Floors		
Mass[f]	R-30ci	R-30ci
Joist/framing	((~~R-30[e]~~)) <u>Steel frame: R-38 +R-10 ci</u> <u>Wood frame: R-38</u>	((~~R-30[e]~~)) <u>Steel frame: R-38 +R-10 ci</u> <u>Wood frame: R-38</u>
Slab-on-Grade Floors		
Unheated slabs	R-10 for 24" below	R-10 for 24" below
Heated slabs[d]	R-10 perimeter & under entire slab	R-10 perimeter & under entire slab
Opaque Doors[g]		
<u>*Swinging*</u>	<u>U-0.37</u>	<u>U-0.37</u>
Nonswinging	R-4.75	R-4.75

<u>Keys for Table C402.1.3</u>

For SI: 1 inch = 25.4 mm. ci = *Continuous insulation*. NR = No requirement. LS = Liner system

<u>Footnotes for Table C402.1.3</u>

a. Assembly descriptions can be found in Chapter 2 and Appendix A.

b. Where using *R*-value compliance method, a thermal spacer block with minimum thickness of ½ inch and minimum R-value of R-3.5 shall be provided, otherwise use the *U*-factor compliance method in Table C402.1.4.

<u>c. (Reserved)</u> ((~~Exception: Integral insulated concrete block walls complying with ASTM C90 with all cores filled and meeting both of the following:~~

1. ~~At least 50 percent of cores must be filled with vermiculite or equivalent fill insulation; and~~
2. ~~The building thermal envelope encloses one or more of the following uses: Warehouse (storage and retail), gymnasium, auditorium, church chapel, arena, kennel, manufacturing plant, indoor swimming pool, pump station, water and waste water treatment facility, storage facility, storage area, motor vehicle service facility. Where additional uses not listed (such as office, retail, etc.) are contained within the building, the exterior walls that enclose these areas may not utilize this exception and must comply with the appropriate mass wall R-value from Table C402.1.3/U-factor from Table C402.1.4.~~))

d. Where heated slabs are below grade, they shall comply with the insulation requirements for heated slabs.

<u>e. (Reserved)</u> ((~~Steel floor joist systems shall be insulated to R-38 + R-10ci.~~))

f. "Mass floors" shall include floors weighing not less than:

1. 35 pounds per square foot of floor surface area; or
2. 25 pounds per square foot of floor surface area where the material weight is not more than 120 pounds per cubic foot.

g. Not applicable to *garage doors*. See Table C402.1.4.

h. Peripheral edges of intermediate concrete floors are included in the above grade mass wall category and therefore must be insulated as above grade mass walls unless they meet the definition of Mass Transfer Deck Slab Edge. The area of the peripheral edges of concrete floors shall be defined as the thickness of the slab multiplied by the perimeter length of the edge condition. See Table A103.3.7.2 for typical default u-factors for above grade slab edges and footnote c for typical conditions of above grade slab edges.

<u>i. Where the total area of through-wall mechanical equipment is greater than 1 percent of the opaque *above-grade wall* area, use of the *R*-value method is not permitted. See Section C402.1.4.2.</u>

((~~i~~)) i. For roof, wall or floor assemblies where the proposed assembly would not be *continuous insulation*, ((~~an~~)) alternate nominal *R*-value compliance ((~~option~~)) options for assemblies with isolated metal ((~~penetrations of~~)) fasteners that penetrate otherwise *continuous insulation* ((~~is~~)) are as shown in Columns B and C of Table C402.1.3(i):

Table C402.1.3(j)
Continuous Insulation Equivalents

Column A Assemblies with continuous insulation (see definition)	Column B Alternate option for assemblies with metal penetrations, greater than 0.04% but less than 0.08%	Column C Alternate option for assemblies with metal penetrations, greater than or equal to 0.08% but less than 0.12%
R-9.5ci	R-11.9ci	R-13ci
R-11.4ci	R-14.3ci	R-15.7ci
R-13.3ci	R-16.6ci	R-18.3ci
R-15.2ci	R-19.0ci	R-21ci
R-30ci	R-38ci	R-42ci
R-38ci	R-48ci	R-53ci
R-13 + R-7.5ci	R-13 + R-9.4ci	R-13 + R-10.3ci
R-13 + R-10ci	R-13 + R-12.5ci	R-13 + R-13.8ci
R-13 + R-12.5ci	R-13 + R-15.6ci	R-13 + R-17.2ci
R-13 + R-13ci	R-13 + R-16.3ci	R-13 + R-17.9ci
R-19 + R-8.5ci	R-19 + R-10.6ci	R-19 + R-11.7ci
R-19 + R-14ci	R-19 + R-17.5ci	R-19 + R-19.2ci
R-19 + R-16ci	R-19 + R-20ci	R-19 + R-22ci
R-20 + R-3.8ci	R-20 + R-4.8ci	R-20 .+ R-5.3ci
R-21 + R-5ci	R-21 + R-6.3ci	R-21 + R-6.9ci

Footnotes for Table C402.1.3(j)

((~~This~~)) These alternate nominal R-value compliance ((~~option is~~)) options are allowed for projects complying with all of the following:

1. The ratio of the cross-sectional area, as measured in the plane of the surface, of metal penetrations of otherwise *continuous insulation* to the opaque surface area of the assembly is greater than 0.0004 (0.04%), but less than 0.0008 (0.08%), for use of Column B equivalents, and greater than or equal to 0.0008 (0.08%), but less than 0.0012 (0.12%), for use of Column C equivalents.
   a. Where all metal penetrations are stainless steel, Column B is permitted to be used for penetrations greater than 0.12% but less than 0.24% of opaque surface area, and Column C is permitted to be used for penetrations greater than or equal to 0.24% but less than 0.48% of opaque surface area.
2. The metal penetrations of otherwise *continuous insulation* are isolated or discontinuous (e.g., brick ties or other discontinuous metal attachments, offset brackets supporting shelf angles that allow insulation to go between the shelf angle and the primary portions of the wall structure). No continuous metal elements (e.g., metal studs, z-girts, z-channels, shelf angles) penetrate the otherwise continuous portion of the insulation.
3. Building permit drawings shall contain details showing the locations and dimensions of all the metal penetrations (e.g., brick ties or other discontinuous metal attachments, offset brackets, etc.) of otherwise *continuous insulation*. In addition, calculations shall be provided showing the ratio of the cross-sectional area of metal penetrations of otherwise *continuous insulation* to the overall opaque wall area.

For other cases where the proposed assembly is not *continuous insulation*, see Section C402.1.4 for determination of U-factors for assemblies that include metal other than screws and nails.

***

C402.1.4.1 Thermal resistance of cold-formed steel stud walls. *U*-factors of walls with cold-formed steel studs shall be permitted to be determined either by using the values in Table C402.1.4.1, or in accordance with Equation 4-1:

$U = 1/[Rs + (ER)]$ **(Equation 4-1)**

where:

Rs = The cumulative *R*-value of the wall components along the path of heat transfer, excluding the *cavity insulation* and steel studs.

ER = The effective *R*-value of the *cavity insulation* with steel studs.

C402.1.4.2 Thermal resistance of mechanical equipment penetrations. When the total area of penetrations from through-wall mechanical equipment or equipment listed in Table C403.3.2(3) exceeds 1 percent of the opaque *above-grade wall* area, the mechanical equipment penetration area shall be calculated as a separate wall assembly with a default U-factor of 0.5. Mechanical system ducts and louvers, including those for supply, exhaust and relief, and for condenser air intake and outlet, are not considered to be mechanical equipment for the purposes of this section.

Exception: Where mechanical equipment has been tested in accordance with *approved* testing standards, the mechanical equipment penetration area is permitted to be calculated as a separate wall assembly using the U-factor determined by such test.

TABLE C402.1.4

OPAQUE THERMAL ENVELOPE ASSEMBLY MAXIMUM REQUIREMENTS, *U*-FACTOR METHOD[a, f]

	CLIMATE ZONE 5 AND MARINE 4	
	All Other	**Group R**
Roofs		
Insulation entirely above deck	U-0.027	U-0.027
Metal buildings	((~~U-0.031~~)) U-0.027	((~~U-0.031~~)) U-0.027
Attic and other	U-0.021	U-0.021
Joist or single rafter	U-0.027	U-0.027
Walls, Above Grade		
Mass[g,k]	((~~U-0.104[g]~~)) U-0.057	((~~U-0.078~~)) U-0.057
Mass transfer deck slab edge[j]	U-0.20	U-0.20
Slab penetrating thermal envelope wall[h]	U-0.10	U-0.10
Metal building[k]	U-0.052	U-0.052
Steel framed[k]	U-0.055	U-0.055
Wood framed and other[k]	((~~U-0.054~~)) U-0.051	U-0.051
Walls, Below Grade		

Below-grade wall[b,g]	((~~Same as above grade~~)) U-0.070	((~~Same as above grade~~)) U-0.070
Floors		
Mass[e]	U-0.031	U-0.031
Joist/framing	((~~U-0.029~~)) U-0.029 steel joist U-0.025 wood joist	((~~U-0.029~~)) U-0.029 steel joist U-0.025 wood joist
Concrete column or concrete wall penetrating thermal envelope floor[i]	U-0.55	U-0.55
Concrete slab floor directly above an electrical utility vault	N.R.	N.R.
Slab-on-Grade Floors		
Unheated slabs	F-0.54	F-0.54
Heated slabs[c]	F-0.55	F-0.55
Opaque Doors		
Swinging door	U-0.37	U-0.37
Nonswinging door	U-0.34	U-0.34
Garage door <14% glazing	U-0.31	U-0.31

Footnotes for Table C402.1.4

a. Use of opaque assembly *U*-factors, *C*-factors, and *F*-factors from Appendix A is required unless otherwise allowed by Section C402.1.4.

b. (Reserved) ((~~Where heated slabs are below grade, they shall comply with the *F*-factor requirements for heated slabs.~~))

c. Heated slab *F*-factors shall be determined specifically for heated slabs. Unheated slab factors shall not be used.

d. (Reserved) ((~~Exception: Integral insulated concrete block walls complying with ASTM C90 with all cores filled and meeting both of the following:~~

~~1. At least 50 percent of cores must be filled with vermiculite or equivalent fill insulation; and~~

~~2. The building thermal envelope encloses one or more of the following uses: Warehouse (storage and retail), gymnasium, auditorium, church chapel, arena, kennel, manufacturing plant, indoor swimming pool, pump station, water and waste water treatment facility, storage facility, storage area, motor vehicle service facility. Where additional uses not listed (such as office, retail, etc.) are contained within the building, the exterior walls that enclose these areas may not utilize this exception and must comply with the appropriate mass wall R-value from Table C402.1.3/U-factor from Table C402.1.4.~~))

e. "Mass floors" shall include floors weighing not less than:
1.35 pounds per square foot of floor surface area; or
2.25 pounds per square foot of floor surface area where the material weight is not more than 120 pounds per cubic foot.

f. Opaque assembly U-factors based on designs tested in accordance with ASTM C1363 shall be permitted. The R-value of *continuous insulation* shall be permitted to be added or subtracted from the original test design.

g. Peripheral edges of intermediate concrete floors are included in the above grade mass wall category and therefore must be insulated as above grade mass walls unless they meet the definition of Mass Transfer Deck Slab Edge. The area of the peripheral edges of concrete floors shall be defined as the thickness of the slab multiplied by the perimeter length of the edge condition. See Table A103.3.7.2 for typical default u-factors for above grade slab edges and footnote c for typical conditions of above grade slab edges.

h. Intermediate concrete floor slabs penetrating the *building thermal envelope* shall comply with Section C402.2.9. The area of such penetrating concrete floor slabs shall be defined as the thickness of the slab multiplied by the length of the penetration. The "exposed concrete" row in Table A103.3.7.2 shall be used for typical default *U*-factors for the penetrating concrete slab.

i. Value applies to concrete columns and concrete walls that interrupt mass floor insulation, but not to perimeter walls or columns separating interior *conditioned space* from exterior space.

j. A mass transfer deck, due to its configuration, is not insulated. The table value (U-0.20) shall be used as the baseline value for component performance or total building performance path calculations. For the proposed value, the appropriate value from the top line of Table A104.3.7.2 shall be used.

k. Through-wall mechanical equipment subject to Section C402.1.4.2 shall be calculated at the U-factor defined in Section C402.1.4.2. The area-weighted U-factor of the wall, including through-wall mechanical equipment, shall not exceed the value in the table.

TABLE C402.1.4.1

EFFECTIVE *R*-VALUES FOR STEEL STUD WALL ASSEMBLIES

NOMINAL STUD DEPTH (inches)	SPACING OF FRAMING (inches)	CAVITY *R*-VALUE (insulation)	CORRECTION FACTOR (*Fc*)	EFFECTIVE *R*-VALUE (ER) (Cavity *R*-Value *x Fc*)
3 1/2	16	13	0.46	5.98
		15	0.43	6.45
3 1/2	24	13	0.55	7.15
		15	0.52	7.80
6	16	19	0.37	7.03
		21	0.35	7.35
6	24	19	0.45	8.55
		21	0.43	9.03
8	16	25	0.31	7.75
	24	25	0.38	9.50

C402.1.5 Component performance alternative. Building envelope values and fenestration areas determined in accordance with Equation 4-2 shall be permitted in lieu of compliance with the *U*-factors and *F*-factors in Table C402.1.4 and C402.4 and the maximum allowable fenestration areas in Section C402.4.1.

For buildings with more than one *space conditioning category*, component performance compliance shall be demonstrated separately for each space conditioning category. Interior partition ceilings, walls, fenestration and floors that separate space conditioning areas shall be applied to the component performance calculations for the space conditioning category with the highest level of space conditioning.

Proposed Total UA ≤ Allowable Total UA **(Equation 4-2)**

Where:

Proposed Total UA	=	UA-glaz-prop + UA sky-prop + UA-opaque-prop + FL-slab-prop
Allowable Total UA	=	UA-glaz-allow + UA-glaz-excess + UA sky-allow + UA-sky-excess + UA-opaque-allow + FL-slab-allow
UA-glaz-prop	=	Sum of (proposed U-value x proposed area) for each distinct vertical fenestration type, up to code maximum area
UA-sky-prop	=	Sum of (proposed U-value x proposed area) for each distinct skylight type, up to the code maximum area
UA-opaque-prop	=	Sum of (proposed U-value x proposed area) for each distinct opaque thermal envelope type
FL-slab-prop	=	Sum of (proposed F-value x proposed length) for each distinct slab on grade perimeter assembly
UA-glaz-allow	=	Sum of (code maximum vertical fenestration U-value from Table C402.4, or Section C402.4.1.1.2 if applicable, x proposed area) for each distinct vertical fenestration type, not to exceed the code maximum area [1]
UA-glaz-excess	=	U-value for the proposed wall type from ((~~Table C402.4~~)) Table C402.1.4[2] x vertical fenestration area in excess of the code maximum area
UA-sky-allow	=	Sum of (code maximum skylight U-value from Table C402.4 x proposed area) for each distinct skylight type proposed, not to exceed the code maximum area
UA-sky-excess	=	U-value for the proposed roof type from Table C402.4[3] x skylight area in excess of the code maximum area
UA-opaque-allow	=	Code maximum opaque envelope U-value from Table C402.1.4 for each opaque door, wall, roof, and floor assembly x proposed area
FL-slab-allow	=	Code maximum F-value for each slab-on-grade perimeter assembly x proposed length

Notes

1. Where multiple vertical fenestration types are proposed and the code maximum area is exceeded, the U-value shall be the average Table C402.1.4 U-value weighted by the proposed vertical fenestration area of each type.
2. Where multiple wall types are proposed the U-value shall be the average Table C402.1.4 U-value weighted by the proposed above grade wall area of each type.
3. Where multiple roof types are proposed the U-value shall be the average Table C402.1.4 U-value weighted by the proposed roof area of each type.

C402.1.5.1 Component *U*-factors and F-factors. The *U*-factors and F-factors for typical construction assemblies are included in Chapter 3 and Appendix A. These values shall be used for all calculations. Where proposed construction assemblies are not represented in Chapter 3 or Appendix A, values shall be calculated in accordance with the ASHRAE *Handbook of Fundamentals*, using the framing factors listed in Appendix A.

For envelope assemblies containing metal framing, the *U*-factor shall be determined by one of the following methods:

1. Results of laboratory measurements according to acceptable methods of test.
2. ASHRAE *Handbook of Fundamentals* where the metal framing is bonded on one or both sides to a metal skin or covering.
3. The zone method as provided in ASHRAE *Handbook of Fundamentals*.
4. Effective framing/cavity *R*-values as provided in Appendix A. When return air ceiling plenums are employed, the roof/ceiling assembly shall:

a. For thermal transmittance purposes, not include the ceiling proper nor the plenum space as part of the assembly; and

b. For gross area purposes, be based upon the interior face of the upper plenum surface.

5. Tables in ASHRAE 90.1 Normative Appendix A.

6. Calculation method for steel-framed walls in accordance with Section C402.1.4.1 and Table C402.1.4.1.

***

C402.2 Specific building thermal envelope insulation requirements. Insulation in *building thermal envelope* opaque assemblies shall comply with Sections C402.2.1 through ((~~C402.2.6~~)) C402.2.10 and Table C402.1.3.

Where this section refers to installing insulation levels as specified in Section C402.1.3, assemblies complying with Section ((~~C402.1.5~~)) C402.1.4 and buildings complying with Section C402.1.5 are allowed to install alternate levels of insulation so long as the U-factor of the insulated assembly is less than or equal to the U-factor required by the respective path.

C402.2.1 Roof assembly. The minimum thermal resistance (*R*-value) of the insulating material installed either between the roof framing or continuously on the roof assembly shall be as specified in Table C402.1.3, based on construction materials used in the roof assembly. *Continuous insulation* board shall be installed in not less than 2 layers and the edge joints between each layer of insulation shall be staggered. Insulation installed on a suspended ceiling with removable ceiling tiles shall not be considered part of the minimum thermal resistance of the roof insulation.

Exceptions:

1. Continuously insulated roof assemblies where the thickness of insulation varies 1 inch (25 mm) or less and where the area-weighted *U*-factor is equivalent to the same assembly with the *R*-value specified in Table C402.1.3.

2. (Reserved) ((~~Where tapered insulation is used with insulation entirely above deck, those roof assemblies shall show compliance on a *U*-factor basis per Section C402.1.4. The effective *U*-factor shall be determined through the use of Tables A102.2.6(1), A102.2.6(2) and A102.2.6(3).~~))

3. Two layers of insulation are not required where insulation tapers to the roof deck, such as at roof drains. At roof drains, the immediate 24" x 24" plan area around each roof drain has a minimum insulation requirement of R-13, but otherwise is permitted to be excluded from roof insulation area-weighted calculations.

***

C402.2.9 Above-grade exterior concrete slabs. Above-grade concrete slabs that penetrate the *building thermal envelope*, including but not limited to decks and balconies, shall each include a minimum R-10 thermal break, aligned with the primary insulating layer in the adjoining wall assemblies. Stainless steel (but not carbon steel) reinforcing bars are permitted to penetrate the thermal break. If the Total Building Performance path or the component performance alternative in Section C402.1.5 is utilized and the thermal break required by this section is not provided where concrete slabs penetrate the *building thermal envelope*, the sectional area of the penetration shall be assigned the default U-factors from the "exposed concrete" row of Table A103.3.7.2.

Exception: *Mass transfer deck slab* edges.

C402.2.10 *Vertical fenestration* intersection with opaque walls. *Vertical fenestration* shall comply with items 1, 2 and 3, as applicable:

1. Where wall assemblies include *continuous insulation*, the exterior glazing layer of *vertical fenestration* and any required thermal break in the frame shall each be aligned within 2 inches laterally of either face of the *continuous insulation* layer.
2. Where wall assemblies do not include *continuous insulation*, the exterior glazing layer of *vertical fenestration* and any required thermal break in the frame shall each be aligned within the thickness of the *wall* insulation layer and not more than 2 inches laterally from the exterior face of the outermost insulation layer.
3. Where the exterior face of the *vertical fenestration* frame does not extend to the exterior face of the opaque wall rough opening, the exposed exterior portion of the rough opening shall be covered with either a material having an *R-value* not less than R-3, or with minimum 1.5-inch thickness wood.

C402.4 Fenestration. Fenestration shall comply with Sections C402.4 through C402.4.4 and Table C402.4. *Daylight responsive controls* shall comply with this section and Section ((~~C405.2.4.1~~)) C405.2.4.

Exception: For prescriptive envelope compliance, single-pane glazing is permitted for security purposes and for revolving doors, not to exceed 1 percent of the gross exterior wall area. Where Section C402.1.5, component performance alternative, is used, the single glazing shall be included in the percentage of the total glazing area, U-factor and SHGC requirements.

TABLE C402.4

BUILDING ENVELOPE FENESTRATION MAXIMUM *U*-FACTOR AND SHGC REQUIREMENTS

CLIMATE ZONEs 5 AND MARINE 4		
***U*-factor for Class AW windows rated in accordance with AAMA/CSA101/I.S.2/A440, vertical curtain walls and site-built fenestration products[a]**		
Fixed[b] *U*-factor	((~~U-0.38~~)) U-0.34	
Operable[c] *U*-factor	((~~U-0.40~~)) U-0.36	
***Entrance doors*[d]**		
U-factor	U-0.60	
U-factor for all other vertical fenestration		
Fixed *U*-factor	((~~U-0.30~~)) U-0.26	
Operable[c] *U*-factor	U-0.28	
SHGC for all vertical fenestration		
Orientation[e,f]	**SEW**	**N**
PF < 0.2	0.38	0.51
0.2 ≤ PF < 0.5	0.46	0.56
PF ≥ 0.5	0.61	0.61

Skylights	
***U*-factor**	((~~U-0.50~~)) U-0.45
SHGC	((~~0.35~~)) 0.32

Footnotes for Table C402.4

a. U-factor and SHGC shall be rated in accordance with NFRC 100.
b. "Fixed" includes *curtain wall*, storefront, picture windows, and other fixed windows.
c. "Operable" includes openable fenestration products other than "entrance doors."
d. "Entrance door" includes glazed *swinging* entrance doors and *automatic* glazed sliding *entrance doors*. Other doors which are not entrance doors, including manually operated sliding glass doors, are considered "operable."
e. "N" indicates vertical fenestration oriented within 30 degrees of true north. "SEW" indicates orientations other than "N."
f. Fenestration that is entirely within the *conditioned space* or is between conditioned and other *enclosed space* is exempt from solar heat gain coefficient requirements and not included in the SHGC calculation.

[Jurisdiction] Informative Note: The category at the top of Table C402.4, labeled "*U-factor for Class AW windows rated in accordance with AAMA/CSA101/I.S.2/A440, vertical curtain walls and site-built fenestration products*," includes *curtain wall*, storefront, ribbon wall, window wall, and similar site-assembled systems, but does not include typical punched-opening manufactured windows except for "Class AW" windows. Class AW is the AAMA designation for windows typically used in mid-rise and high-rise buildings to resist high wind and water intrusion loads.

C402.4.1 Maximum area. The total building vertical fenestration area (not including opaque doors and opaque spandrel panels) shall not exceed ((~~30~~)) 35 percent of the total building gross *above-grade wall* area. The skylight area shall not exceed 5 percent of the total building gross roof area (skylight-to-roof ratio).

For buildings with more than one *space conditioning category*, compliance with the maximum allowed window-to-wall ratio and skylight-to-roof ratio shall be demonstrated separately for each *space conditioning category*. Interior partition ceiling, wall, fenestration and floor areas that separate space conditioning areas shall not be applied to the window-to-wall ratio and skylight-to-roof ratio calculations.

C402.4.1.1 Vertical fenestration maximum area with high performance alternates. For buildings that comply with Section C402.4.1.1.1 or C402.4.1.1.2, the total building vertical fenestration area is permitted to exceed ((~~30~~)) 35 percent but shall not exceed 40 percent of the gross above grade wall area for the purpose of prescriptive compliance with Section C402.1.4.

When determining compliance using the component performance alternative in accordance with Section C402.1.5, the total building vertical fenestration area allowed in Equation 4-2 is 40 percent of the above grade wall area for buildings that comply with the vertical fenestration alternates described in this section.

C402.4.1.1.1 Optimized daylighting. All of the following requirements shall be met:

1. Not less than 50 percent of the total *conditioned floor area* in the building is within a *daylight zone* that includes *daylight responsive controls* complying with Section C405.2.4.1.
2. Visible transmittance (VT) of all *vertical fenestration* in the building is greater than or equal to 1.1 times the required solar heat gain coefficient (SHGC) in accordance with Section C402.4, or 0.50, whichever is greater. It shall be permitted to demonstrate compliance

based on the area weighted average *VT* being greater than or equal to the area weighted average of the minimum *VT* requirements.

Exception: Fenestration that is outside the scope of NFRC 200 is not required to comply with Item 2.

C402.4.1.1.2 High-performance *fenestration*. All of the following requirements shall be met:

1. All *vertical fenestration* in the building shall comply with the following maximum U-factors:
   a. U-factor for Class AW windows rated in accordance with AAMA/CSA101/I.S.2/A440, vertical *curtain wall*s and site-built fenestration products (fixed) = ((~~0.34~~)) 0.30
   b. U-factor for Class AW windows rated in accordance with AAMA/CSA101/I.S.2/A440, vertical *curtain wall*s and site-built fenestration products (operable) = 0.36
   c. Entrance doors = 0.60
   d. U-factor for all other vertical fenestration, fixed = ((~~0.28~~)) 0.22
   e. U-factor for all other vertical fenestration, operable = 0.24

2. The SHGC of the vertical fenestration shall be ((~~less than or equal to 0.35, adjusted for projection factor in compliance with C402.4.3~~))no more than 0.90 times the maximum SHGC values listed in Table C402.4.

An area-weighted average shall be permitted to satisfy the U-factor requirement for each fenestration product category listed in Item 1 of this section. Individual fenestration products from different fenestration product categories shall not be combined in calculating the area-weighted average *U*-factor.

C402.4.2 Minimum skylight fenestration area. For buildings with single story *enclosed space*s greater than 2,500 square feet (232 m^2) in floor area that are directly under a roof and have a ceiling height greater than 15 feet (4572 mm) for no less than 75 percent of the ceiling area; these single-story spaces shall be provided with *skylights* and *daylight responsive control*s in accordance with Section C405.2.4. Space types required to comply with this provision include office, lobby, atrium, concourse, corridor, gymnasium/exercise center, convention center, automotive service, manufacturing, nonrefrigerated warehouse, retail store, distribution/sorting area, transportation, and workshop. Skylights in these spaces are required to provide a total toplit zone area not less than 50 percent of the floor area and shall provide one of the following:

1. A minimum ratio of skylight area to toplit *daylight zone* area of not less than 3 percent where all skylights have a VT of at least 0.40 as determined in accordance with Section C303.1.3

2. A minimum skylight effective aperture of at least 1 percent determined in accordance with Equation 4-5.

$$\text{Skylight Effective Aperture} = \frac{(0.85 \times \text{Skylight Area} \times \text{Skylight VT} \times \text{WF})}{\text{Toplit zone}}$$

(Equation 4-5)

where:

Skylight area	=	Total fenestration area of skylights.
Skylight VT	=	Area weighted average visible transmittance of skylights.
WF	=	Area weighted average well factor, where well factor is 0.9 if light well depth is less than 2 feet (610 mm), or 0.7 if light well depth is 2 feet (610 mm) or greater, or 1.0 for *tubular daylighting devices* with *VT-annual* ratings measured according to NFRC 203.
Light well depth	=	Measure vertically from the underside of the lowest point of the skylight glazing to the ceiling plane under the skylight.

Exceptions:

1. Skylights above *daylight zone*s of *enclosed space*s are not required in:
   1.1. Reserved.

   1.2. Spaces where the designed *general lighting* power densities are less than 0.5 W/ft^2 (5.4 W/m^2) and at least 10 percent lower than the lighting power allowance in Section C405.4.2.

   1.3. Areas where it is documented that existing structures or natural objects block direct beam sunlight on at least half of the roof over the enclosed area for more than 1,500 daytime hours per year between 8 a.m. and 4 p.m.

   1.4. Spaces where the *daylight zone* under rooftop monitors is greater than 50 percent of the *enclosed space* floor area.

   1.5. Spaces where the total floor area minus the sidelit zone area is less than 2,500 square feet (232 m^2), and where the lighting in the *daylight zone* is controlled in accordance with Section ((~~C405.2.3.1~~)) C405.2.4.

2. The skylight effective aperture, calculated in accordance with Equation 4-5, is permitted to be 0.66 percent in lieu of one percent if the *VT-annual* of the skylight or *TDD*, as measured by NFRC 203, is greater than 38 percent.

C402.4.2.1 Lighting controls in daylight zones under skylights. *Daylight responsive controls* complying with Section ((~~C405.2.4.1~~)) C405.2.4 shall be provided to control all electric lights within toplit zones.

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C402.5.1.1 Air barrier construction. The *continuous air barrier* shall be constructed to comply with the following:

1. The *air barrier* shall be continuous for all assemblies that are the thermal envelope of the building and across the joints and assemblies.
2. *Air barrier* joints and seams shall be sealed, including sealing transitions in places and changes in materials. The joints and seals shall be securely installed in or on the joint for its entire length so as not to dislodge, loosen or otherwise impair its ability to resist positive and negative pressure from wind, stack effect and mechanical ventilation.
3. Penetrations of the *air barrier* shall be caulked, gasketed or otherwise sealed in a manner compatible with the construction materials and location. Sealing shall allow for expansion, contraction and mechanical vibration. Joints and seams associated with penetrations shall be sealed in the same manner or taped. Sealing materials shall be securely installed around the penetrations so as not to dislodge, loosen or otherwise impair the penetrations' ability to resist positive and negative pressure from wind, stack effect, and mechanical ventilation. Sealing of concealed fire sprinklers, where required, shall be in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings.
4. Recessed lighting fixtures shall comply with Section C402.5.8. Where similar objects are installed which penetrate the *air barrier*, provisions shall be made to maintain the integrity of the *air barrier*.
5. Construction documents shall contain a diagram showing the building's pressure boundary in plan(s) and section(s) and a calculation of the area of the pressure boundary to be considered in the test.

[Jurisdiction] Informative Note: The continuous air barrier is intended to control the air leakage into and out of the *conditioned space*. The definition of *conditioned space* includes semi-heated spaces, so these spaces are included when detailing the continuous air barrier and when determining the pressure boundary for conducting the air leakage test. However, unheated spaces are not included when determining the pressure boundary.

C402.5.1.2 Building test. The completed building shall be tested and the air leakage rate of the *building envelope* shall not exceed 0.25 cfm/ft^2 at a pressure differential of 0.3 inches water gauge (((~~2.0~~)) 1.27 L/s x m^2 at 75 Pa) at the upper 95 percent confidence interval in accordance with ASTM E 779 or an equivalent method *approved* by the *code official*. A report that includes the tested surface area, floor area, air by volume, stories above grade, and leakage rates shall be submitted to the building owner and the *code official*. If the tested rate exceeds that defined here by up to 0.15 cfm/ft^2, a visual inspection of the *air barrier* shall be conducted and any leaks noted shall be sealed to the extent practicable. An additional report identifying the corrective actions taken to seal air leaks shall be submitted to the building owner and the *Code Official* and any further requirement to meet the leakage air rate will be waived. If the tested rate exceeds 0.40 cfm/ft^2, corrective actions must be made and the test completed again. A test above 0.40 cfm/ft^2 will not be accepted.

1. Test shall be accomplished using either (1) both pressurization and depressurization or (2) pressurization alone, but not depressurization alone. The test results shall be plotted against the correct P for pressurization in accordance with Section 9.4 of ASTM E779.
2. The test pressure range shall be from 25 Pa to 80 Pa per Section 8.10 of ASTM E779, but the upper limit shall not be less than 50 Pa, and the difference between the upper and lower limit shall not be less than 25 Pa.
3. If the pressure exponent *n* is less than 0.45 or greater than 0.85 per Section 9.6.4 of ASTM E779, the test shall be rerun with additional readings over a longer time interval.

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C402.5.7 Vestibules. All *building entrances* shall be protected with an enclosed vestibule, with all doors opening into and out of the vestibule equipped with self-closing devices. Vestibules shall be designed so that in passing through the vestibule it is not necessary for the interior and exterior doors to open at the same time. The installation of one or more revolving doors in the *building entrance* shall not eliminate the requirement that a vestibule be provided on any doors adjacent to revolving doors. For the purposes of this section, "*building entrances*" shall include exit-only doors in buildings where separate doors for entering and exiting are provided.

Interior and exterior doors shall have a minimum distance between them of not less than 7 feet. T he exterior envelope of conditioned vestibules shall comply with the requirements for a *conditioned space*. Either the interior or exterior envelope of unconditioned vestibules shall comply with the requirements for a *conditioned space*. The building lobby is not considered a vestibule.

Exception: Vestibules are not required for the following:

1. Doors not intended to be used as *building entrances*.
2. Unfinished ground-level space greater than 3,000 square feet (298 m^2) if a note is included on the permit documents at each exterior entrance to the space stating "Vestibule required at time of tenant build-out if entrance serves a space greater than 3,000 square feet in area."
3. Doors opening directly from a *sleeping unit* or *dwelling unit*.
4. Doors between an *enclosed space* smaller than 3,000 square feet (298 m2) in area and the exterior of the building or the *building entrance* lobby, where those doors do not comprise one of the primary *building entrance* paths to the remainder of the building. The space must be enclosed and separated without transfer air paths from the primary *building entrance*

paths. If there are doors between the space and the primary entrance path then the doors shall be equipped with self-closing devices so the space acts as a vestibule for the primary *building entrance*.

5. Revolving doors.
6. Doors used primarily to facilitate vehicular movement or material handling and adjacent personnel doors.
7. In buildings less than three stories above grade or in spaces that do not directly connect with the building elevator lobby, doors that have an *air curtain* with a velocity of not less than 6.56 feet per second (2 m/s) at the floor that have been tested in accordance with ANSI/AMCA 220 and installed in accordance with the manufacturer's instructions. *Manual* or *automatic* controls shall be provided that will operate the *air curtain* with the opening and closing of the door. *Air curtains* and their controls shall comply with Section C408.2.3.
8. *Building entrances* in buildings that are less than four stories above grade and less than 10,000 square feet in area.
9. Elevator doors in parking garages provided that the elevators have an enclosed lobby at each level of the garage.
10. Entrances to semi-heated spaces.
11. Doors that are used only to access outdoor seating areas that are separated from adjacent walking areas by a fence or other barrier.

[Jurisdiction] Informative Note: *Building entrance* is defined as the means ordinarily used to gain access to the building. Doors other than *building entrances,* such as those leading to service areas, mechanical rooms, electrical equipment rooms, outdoor seating areas or exits from fire stairways, are not covered by this requirement. There is less traffic through these doors, and the vestibule may limit access for large equipment. Note that enclosed lobbies in parking garages also serve to reduce the flow of vehicle exhaust into the building.

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SECTION C403

MECHANICAL SYSTEMS

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C403.1.1 HVAC total system performance ratio (*HVAC TSPR*). For systems serving office, medical office, retail, library and education occupancies and buildings, and the *dwelling unit*s and residential common areas within R-2 multifamily buildings, which are subject to the requirements of Section C403.3.5 without exceptions, the *HVAC total system performance ratio* (*HVAC TSPR*) of the *proposed design* HVAC system shall be more than or equal to the *HVAC TSPR* of the *standard reference design* as calculated according to Appendix D, Calculation of HVAC Total System Performance Ratio.

Exceptions:

1. Buildings with *conditioned floor area* less than 5,000 square feet.
2. HVAC systems using district heating water, chilled water or steam.
3. HVAC systems not included in Table D601.11.1.

4. HVAC systems with chilled water supplied by absorption chillers, heat recovery chillers, water to water heat pumps, air to water heat pumps, or a combination of air and water cooled chillers on the same chilled water loop with no more than 10 percent of the cooling capacity of the combination being supplied by air cooled chillers.
5. HVAC system served by heating water plants that include air to water or water to water heat pumps.
6. Underfloor air distribution HVAC systems.
7. Space conditioning systems that do not include *mechanical cooling*.
8. *Alterations* to existing buildings that do not substantially replace the entire HVAC system.
9. HVAC systems meeting all the requirements of the *standard reference design* HVAC system in Table D602.11, Standard Reference Design HVAC Systems.
10. HVAC systems serving laundry rooms, elevator rooms, mechanical rooms, electrical rooms, *data centers*, *computer rooms*, and kitchens.
11. Buildings or areas of medical office buildings that comply fully with ASHRAE Standard 170, including but not limited to surgical centers, or that are required by other applicable codes or standards to provide 24/7 air handling unit operation,

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C403.1.3 Data centers. *Data center systems* shall comply with Sections 6 and 8 of ASHRAE Standard 90.4 (2019). ((~~, with the following changes:~~

~~1. Replace design MLC in ASHRAE Standard 90.4 Table 6.2.1.1 "Maximum Design Mechanical Load Component (Design MLC)" with the following per applicable *climate zone*:~~

~~Zone 4C Design MLC = 0.22 Zone 5B Design MLC = 0.24~~

~~2. Replace annualized MLC values of Table 6.2.1.2 "Maximum Annualized Mechanical Load Component (Annualized MLC)" in ASHRAE Standard 90.4 with the following per applicable *climate zone*:~~

~~Zone 4C Annual MLC = 0.18 Zone 5B Annual MLC = 0.17~~))

C403.1.4 Use of electric resistance and fossil fuel-fired HVAC heating equipment. HVAC heating energy shall not be provided by electric resistance or fossil fuel combustion appliances. For the purposes of this section, electric resistance HVAC heating appliances include but are not limited to electric baseboard, electric resistance fan coil and VAV electric resistance terminal reheat units and electric resistance boilers. For the purposes of this section, fossil fuel combustion HVAC heating appliances include but are not limited to appliances burning natural gas, heating oil, propane, or other fossil fuels.

Exceptions.

1. **Low heating capacity.** Buildings or areas of buildings, other than *dwelling unit*s or sleeping units, that meet the interior temperature requirements of IBC Chapter 12 with a total installed HVAC heating capacity no greater than 8.5 BTU/h (2.5 watts) per square foot of *conditioned space* are permitted to be heated using electric resistance appliances. For the purposes of this exception, overhead or wall-mounted radiant heating panels installed in an unheated or semi-heated space, insulated in compliance with Section C402.2.8 and controlled by occupant sensing devices in compliance with Section C403.11.1 need not be included as part of the HVAC heating energy calculation.

2. **Dwelling and sleeping units.** Dwelling or sleeping units having an installed HVAC heating capacity no greater than 750 watts in any separate habitable room with exterior fenestration are permitted to be heated using electric resistance appliances.

a. Corner rooms. A room within a dwelling or sleeping unit that has two primary walls facing different cardinal directions, each with exterior fenestration, is permitted to have an installed HVAC heating capacity no greater than 1000 watts. Bay windows and other minor offsets are not considered primary walls.

3. **Small buildings.** Buildings with less than 2,500 square feet of *conditioned floor area* are permitted to be heated using electric resistance appliances.

4. **Defrost**. Heat pumps are permitted to utilize electric resistance as the first stage of heating when a heat pump defrost cycle is required and is in operation.

5. **Air-to-air heat pumps.** Buildings are permitted to utilize internal electric resistance heaters to supplement heat pump heating for air-to-air heat pumps that meet all of the following conditions:

a. Internal electric resistance heaters have controls that prevent supplemental heater operation when the heatingload can be met by the heat pump alone during both steady-state operation and setback recovery.
b. The heat pump controls are configured to use the compressor as the first stage of heating down to an outdoor air temperature of 17°F or lower.
c. The heat pump complies with one of the following:
    1. Controlled by a digital or electronic thermostat designed for heat pump use that energizes the supplemental heat only when the heat pump has insufficient capacity to maintain set point or to warm up the space at a sufficient rate.
    2. Controlled by a multistage space thermostat and an outdoor air thermostat wired to energize supplemental heat only on the last stage of the space thermostat and when outdoor air temperature is less than 32°F.
    3. The minimum efficiency of the heat pump is regulated by NAECA, its rating meets the requirements shown in Table C403.3.2(2), and its rating includes all usage of internal electric resistance heating.
d. The heat pump rated heating capacity is sized to meet the heating load at an outdoor air temperature of 32°F or lower and has a rated heating capacity at 47°F no less than 2 times greater than supplemental internal electric resistance heating capacity, or utilizes the smallest available factory-available internal electric resistance heater.

6. **Air-to-water heat pumps, up to 2,000 MBH.** Buildings are permitted to utilize electric resistance auxiliary heating to supplement heat pump heating for hydronic heating systems that have air-to-water heat pump heating capacity no greater than 2000 kBTU/hr at 47°F, and that meet all of the following conditions:

a. Controls for the auxiliary electric resistance heating are configured to lock out the supplemental heat when the outside air temperature is above 32°F, unless the hot water supply temperature setpoint to the building heat coils cannot be maintained for 20 minutes.
b. The heat pump controls are configured to use the compressor as the first stage of heating down to an outdoor air temperature of 17°F or lower except during startup or defrost operation.

c. The heat pump rated heating capacity at 47°F is no less than 2 times greater than supplemental electric resistance heating capacity.

7. **Air-to-water heat pumps, up to 3,000 MBH.** Buildings are permitted to utilize electric resistance auxiliary heating to supplement heat pump heating for hydronic heating systems that have air-to-water heat pump heating capacity greater than 2000 KBTU/hr and no greater than 3000 kBTU/hr at 47°F, and that meet all of the following conditions:

a. Controls for the auxiliary electric resistance heating are configured to **lock out the supplemental heat when the outside air temperature is above 36°F,** unless the hot water supply temperature setpoint to the building heat coils cannot be maintained for 20 minutes.
b. The heat pump controls are configured to use the compressor as the first stage of heating down to an outdoor air temperature of 17°F or lower except during startup or defrost operation.
c. The heat pump rated heating capacity at 47°F is no less than 1.75 times greater than supplemental electric resistance heating capacity.

8. **Air-to-water heat pumps, over 3,000 MBH.** Buildings are permitted to utilize electric resistance auxiliary heating to supplement heat pump heating for hydronic heating systems that have air-to-water heat pump heating capacity greater than 3000 kBTU/hr at 47°F and that meet all of the following conditions:

a. Controls for the auxiliary resistance heating are configured to **lock out the supplemental heat when the outside air temperature is above 40°F** unless the hot water supply temperature setpoint to the building heat coils cannot be maintained for 20 minutes.
b. The heat pump controls are configured to use the compressor as the first stage of heating down to an outdoor air temperature of 17°F or lower except during startup or defrost operation.
c. The heat pump rated heating capacity at 47°F is no less than 1.5 times greater than supplemental electric resistance heating capacity.

9. **Ground source heat pumps**. Buildings are permitted to utilize electric resistance auxiliary heating to supplement heat pump heating for hydronic heating systems with ground source heat pump equipment that meets all of the following conditions:

a. Controls for the auxiliary resistance heating are configured to lock out the supplemental heat when the outdoor air temperature is above 32°F, unless the hot water supply temperature setpoint to the building heat coils cannot be maintained for 20 minutes.
b. The heat pump controls are configured to use the compressor as the first stage of heating down to an outdoor temperature of 17°F or lower.
c. The heat pump rated heating capacity at 32°F entering water conditions is no less than 2 times greater than supplemental electric resistance heating capacity.

10. **Small systems.** Buildings in which electric resistance or fossil fuel appliances, including decorative appliances, either provide less than 5 percent of the total building HVAC system heating capacity or serve less than 5 percent of the *conditioned floor area*.

11. **Specific conditions.** Portions of buildings that require fossil fuel or electric resistance space heating for specific conditions *approved* by the *code official* for research, health care, process or other specific needs that cannot practicably be served by heat pump or other space heating systems. This does not constitute a blanket exception for any occupancy type.

12. **Kitchen exhaust.** Make-up air for commercial kitchen exhaust systems required to be tempered by Section 508.1.1 of the International Mechanical Code is permitted to be heated using electric resistance appliances.

13. **District energy.** Steam or hot water district energy systems that utilize fossil fuels as their primary source of heat energy, that serve multiple buildings, and that were already in existence prior to the effective date of this code, including more energy-efficient upgrades to such existing systems, are permitted to serve as the primary heating energy source.

14. **Heat tape.** Heat tape is permitted where it protects water-filled equipment and piping located outside of the *building thermal envelope*, provided that it is configured and controlled to be automatically turned off when the outside air temperature is above 40°F.

15. **Temporary systems.** Temporary electric resistance heating systems are permitted where serving future tenant spaces that are unfinished and unoccupied, provided that the heating equipment is sized and controlled to achieve interior space temperatures no higher than 40°F.

16. **Emergency generators.** Emergency generators are permitted to use fossil fuels.

17. **Pasteurization.** Electric resistance heat controls are permitted to reset the supply water temperature of hydronic heating systems that serve service water heating heat exchangers during pasteurization cycles of the service hot water storage volume. The hydronic heating system supply water temperature shall be configured to be 145°F or lower during the pasteurization cycle.

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C403.2.1 Zone isolation required. HVAC systems serving ((~~*zones*~~)) areas that are intended to operate or be occupied nonsimultaneously shall be divided into isolation areas. *Zones* may be grouped into a single isolation area provided it does not exceed 25,000 square feet (2323 m^2) of *conditioned floor area* nor include more than one floor. Each isolation area shall be equipped with isolation devices and controls configured to automatically shut off the supply of conditioned air and outdoor air to and exhaust air from the isolation area. Each isolation area shall be controlled independently by a device meeting the requirements of Section C403.4.2.2. Central systems and plants shall be provided with controls and devices that will allow system and equipment operation for any length of time while serving only the smallest isolation area served by the system or plant.

Exceptions:

1. Exhaust air and outdoor air connections to isolation areas where the fan system to which they connect is not greater than 5,000 cfm (2360 L/s).
2. Exhaust airflow from a single isolation area of less than 10 percent of the design airflow of the exhaust system to which it connects.
3. Isolation areas intended to operate continuously or intended to be inoperative only when all other isolation areas in a *zone* are inoperative.

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C403.2.3 Variable flow capacity. For fan and pump motors 5 ((~~7.5~~)) hp and greater including motors in or serving custom and packaged air handlers serving variable air volume fan systems, constant volume fans, parking garage ventilation fans, heating and cooling hydronic pumping systems, pool and service water pumping systems, domestic water pressure-booster systems, cooling tower fan, and other pump or fan motors where variable flows are required, there shall be:

1. Variable speed drives; or
2. Other controls and devices that will result in fan and pump motor demand of no more than 30 percent of design wattage at 50 percent of design air volume for fans when static pressure set point equals 1/3 the total design static pressure, and 50 percent of design water flow for pumps, based on manufacturer's certified test data. Variable inlet vanes, throttling valves (dampers), scroll dampers or bypass circuits shall not be allowed.

Exception: Variable speed devices are not required for motors that serve:

1. Fans or pumps in packaged equipment where variable speed drives are not available as a factory option from the equipment manufacturer.
2. Fans or pumps that are required to operate only for emergency fire-life-safety events (e.g., stairwell pressurization fans, elevator pressurization fans, fire pumps, etc.).

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C403.3.2 HVAC equipment performance requirements. Equipment shall meet the minimum efficiency requirements of Tables C403.3.2(1) through ((~~C403.3.2(12)~~)) C403.3.2(13) when tested and rated in accordance with the applicable test procedure. Plate-type liquid-to-liquid heat exchangers shall meet the minimum requirements of Table C403.3.2(10). The efficiency shall be verified through certification and listed under an *approved* certification program or, if no certification program exists, the equipment efficiency ratings shall be supported by data furnished by the manufacturer. Where multiple rating conditions or performance requirements are provided, the equipment shall satisfy all stated requirements. Where components, such as indoor or outdoor coils, from different manufacturers are used, calculations and supporting data shall be furnished by the designer that demonstrates that the combined efficiency of the specified components meets the requirements herein.

Gas-fired and oil-fired forced air furnaces with input ratings of 225,000 Btu/h (65 kW) or greater and all unit heaters shall also have an intermittent ignition or interrupted device (IID), and have either mechanical draft (including power venting) or a flue damper. A vent damper is an acceptable alternative to a flue damper for furnaces where combustion air is drawn from the *conditioned space*. All furnaces with input ratings of 225,000 Btu/h (65 kW) or greater, including electric furnaces, that are not located within the *conditioned space* shall have jacket losses not exceeding 0.75 percent of the input rating.

Air-to-water heat pump manufacturers shall report the hourly heating output or heating efficiency with and without defrost operation at 32°F, in addition to meeting the efficiency requirements of Table C403.3.2(13) at the AHRI 550/590 applicable leaving water temperatures. The hourly heating output or heating efficiency with and without defrost operation shall be documented on the mechanical permit drawings.

Exception:

Heat recovery chillers and air-to-water heat pumps covered under Table C403.3.2(13), are not required to be listed in the AHRI certification program for AHRI 550/590. The equipment heating and cooling efficiency ratings shall be supported by data furnished by the manufacturer at AHRI 550/590 conditions. Where multiple rating conditions or performance requirements are provided, the equipment shall satisfy all stated requirements.

[Jurisdiction] Informative Note: Table C403.3.2.(13) is from ASHRAE 90.1-2019. At the time of the adoption of the 2018 SEC there were no air-to-water heat pumps or heat recovery chillers listed in the AHRI Certified Product Directory. https://www.ahridirectory.org/ According to AHRI 550/590 Section 5.3, "Full and part-load application ratings shall include the range of Rating Conditions listed in Table 2 or be within the operating limits of the equipment."

C403.3.2.1 Chillers. Chilled water plants and buildings with more than 500 tons total capacity shall not have more than 100 tons provided by air-cooled chillers.

Exceptions:

1. Where the designer demonstrates that the water quality at the *building site* fails to meet manufacturer's specifications for the use of water-cooled equipment.
2. Air-cooled chillers with minimum efficiencies at least 10 percent higher than those listed in Table C403.3.2(7).
3. Replacement of existing air-cooled chiller equipment.
4. Air-to-water heat pump units that are configured to provide both heating and cooling and that are rated in accordance with AHRI 550/590. ((~~Where the air-to-water heat pumps are designed for a maximum supply leaving water temperature of less than 140°F, the efficiency rating will be calculated and reported at the maximum unit leaving water temperature for this test condition.~~))

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TABLE C403.3.2(1)B

MINIMUM EFFICIENCY REQUIREMENTS:
ELECTRICALLY OPERATED VARIABLE REFRIGERANT FLOW AIR CONDITIONERS

Equipment Type	Size Category	Heating Section Type	Sub-Category or Rating Condition	Minimum Efficiency	Test Procedure
VRF Air Conditioners, Air Cooled	<65,000 Btu/h	All	VRF Multi-split System	13.0 SEER	AHRI 1230
	≥65,000 Btu/h and <135,000 Btu/h	Electric Resistance (or none)	VRF Multi-split System	11.2 EER 15.5 IEER	
	≥135,000 Btu/h and <240,000 Btu/h	Electric Resistance (or none)	VRF Multi-split System	11.0 EER 14.9 IEER	
	≥240,000 Btu/h	Electric Resistance (or none)	VRF Multi-split System	10.0 EER ((~~13.9 EER~~)) 13.9 IEER	

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TABLE C403.3.2(7)

MINIMUM EFFICIENCY REQUIREMENTS:

WATER CHILLING PACKAGES[a, b]

EQUIPMENT TYPE	SIZE CATEGORY	UNITS	PATH A		PATH B		TEST PROCEDURE[c]
			FULL LOAD	IPLV	FULL LOAD	IPLV	
Air-cooled chillers	< 150 tons	EER	≥ 10.100	≥ 13.700	≥ 9.700	≥ 15.800	AHRI 550/590
	≥ 150 tons	EER	≥ 10.100	≥ 14.000	≥ 9.700	≥ 16.100	
Air cooled without condenser, electrical operated	All capacities	EER	Air-cooled chillers without condensers shall be rated with matching condensers and comply with the air-cooled chiller efficiency requirements				
Water cooled, electrically operated, positive displacement	< 75 tons	kW/ton	≤ 0.750	≤ 0.600	≤ 0.780	≤ 0.500	
	≥ 75 tons and < 150 tons	kW/ton	≤ 0.720	≤ 0.560	≤ 0.750	≤ 0.490	
	≥ 150 tons and < 300 tons	kW/ton	≤ 0.660	≤0.540	≤ 0.680	≤ 0.440	
	≥ 300 tons and < 600 tons	kW/ton	≤ 0.610	≤ 0.520	≤ 0.625	≤ 0.410	
	≥ 600 tons	kW/ton	≤ 0.560	≤ 0.500	≤ 0.585	≤ 0.380	
Water cooled, electrically operated, centrifugal	< 150 tons	kW/ton	≤ 0.610	≤ 0.550	≤ 0.695	≤ 0.440	
	≥ 150 tons and < 300 tons	kW/ton	≤ 0.610	≤ 0.550	≤ 0.695	≤ 0.400	
	≥300 tons and < 400 tons	kW/ton	≤ 0.560	≤ 0.520	≤ 0.595	≤ 0.390	
	≥400 tons	kW/ton	≤0.560	≤ 0.500	≤ 0.585	≤0.380	
Air cooled, absorption single effect	All capacities	COP	≥ 0.600	NR	NA	NA	AHRI 560
Water cooled, absorption single effect	All capacities	COP	≥ 0.700	NR	NA	NA	
Absorption double effect, indirect fired	All capacities	COP	≥ 1.000	≥ 1.050	NA	NA	
Absorption double effect, direct fired	All capacities	COP	≥ 1.000	≥ 1.000	NA	NA	

Keys for Table C403.3.2(7)

For SI: 1 ton = 3517 W, 1 British thermal unit per hour = 0.2931 W, °C = [(°F) - 32]/1.8.

NA = Not applicable, not to be used for compliance; NR = No requirement.

Footnotes for Table C403.2.3(7)

a. ((~~The centrifugal chiller equipment requirements, after adjustment in accordance with Section C403.3.2.2 or Section C403.3.2.3, do not apply to chillers used in low-temperature applications where the design leaving fluid temperature is less than 36ºF. The requirements do not apply to positive displacement chillers with leaving fluid temperatures less than or equal to 32ºF. The requirements do not apply to absorption chillers with design leaving fluid temperatures less than 40ºF.~~)) The requirements for air-cooled, water-cooled positive displacement, and absorption chillers are at standard rating conditions defined in the reference test procedure. The requirements for centrifugal chillers shall be adjusted for nonstandard rating conditions per Section C403.2.3.1 and are only applicable for the range of conditions listed there.

b. Compliance with this standard can be obtained by meeting the minimum requirements of Path A or B. However, both the full load and IPLV shall be met to fulfill the requirements of Path A or B.

c. Chapter 12 of the referenced standard contains a complete specification of the referenced test procedure, including the referenced year version of the test procedure.

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Table C403.3.2(13) [f, g, h, i]

HEAT PUMP AND HEAT RECOVERY CHILLER PACKAGES – MINIMUM EFFICIENCY REQUIREMENTS

Equipment Type	Size Category (tons$_R$)	Cooling only Operation Cooling Efficiency[a] (Air EER FL/IPLV-Btu/W-h) Water Source Power Input per Capacity FL/IPLV-(kW/ton$_R$)		Heating Operation									Test Procedure
				Heating Source Conditions (Entering/ leaving water) or OAT (db/wb) °F	Heat Pump Heating Full Load Efficiency (COP$_H$)[b] (W/W)				Heat Recovery Chiller Full Load Efficiency Full Load Efficiency (COP$_{HR}$)[b,c], (W/W) Simultaneous Cooling and Heating Full Load Efficiency (COP$_{SHC}$)[b], (W/W)				
					Leaving Heating Water Temperature				Leaving Heating Water Temperature				
					Low	Medium	High	Boost	Low	Medium	High	Boost	
		Path A	Path B		105°F	120°F	140°F	140°F	105°F	120°F	140°F	140°F	
Air Source	All sizes	≥9.595 FL ≥13.02 IPLV.IP	≥9.215 FL ≥15.01 IPLV.IP	47 db 43 wb[d]	≥3.290	≥2.770	≥2.310	NA	NA	NA	NA	NA	AHRI 550/590
		≥9.595 FL ≥13.30 IPLV.IP	≥9.215 FL ≥15.30 IPLV.IP	17 db 15 wb[d]	≥2.230	≥1.950	≥1.630	NA	NA	NA	NA	NA	
Water Source electrically operated positive displacement	< 75	≤0.7885 FL ≤0.6316 IPLV.IP	≤0.7875 FL ≤0.5145 IPLV.IP	54/44[e]	≥4.640	≥3.680	≥2.680	NA	≥8.330	≥6.410	≥4.420	NA	AHRI 550/590
				75/65[e]	NA	NA	NA	≥3.550	NA	NA	NA	6.150	
	≥75 and <150	≤0..7579 FL ≤0.5895 IPLV.IP	≤0.7140 FL ≤0.4620 IPLV.IP	54/44[e]	≥4.640	≥3.680	≥2.680	NA	≥8.330	≥6.410	≥4.420	NA	
				75/65[e]	NA	NA	NA	≥3.550	NA	NA	NA	6.150	
	≥150 and <300	≤0.6947 FL ≤0.5684 IPLV.IP	≤0.7140 FL ≤0.4620 IPLV.IP	54/44[e]	≥4.640	≥3.680	≥2.680	NA	≥8.330	≥6.410	≥4.420	NA	
				75/65[e]	NA	NA	NA	≥3.550	NA	NA	NA	6.150	
	≥300 and <600	≤0.6421 FL ≤0.5474 IPLV.IP	≤0.6563 FL ≤0.4305 IPLV.IP	54/44[e]	≥4.930	≥3.960	≥2.970	NA	≥8.900	≥6.980	≥5.000	NA	
				75/65[e]	NA	NA	NA	≥3.900	NA	NA	NA	6.850	
	≥600	≤0.5895 FL ≤0.5263 IPLV.IP	≤0.6143 FL ≤0.3990 IPLV.IP	54/44[e]	≥4.930	≥3.960	≥2.970	NA	≥8.900	≥6.980	≥5.000	NA	
				75/65[e]	NA	NA	NA	≥3.900	NA	NA	NA	6.850	
Water source electrically operated centrifugal	< 75	≤0.6421 FL ≤0.5789 IPLV.IP	≤0.7316 FL ≤0.4632 IPLV.IP	54/44[e]	≥4.640	≥3.680	≥2.680	NA	≥8.330	≥6.410	≥4.420	NA	AHRI 550/590
				75/65[e]	NA	NA	NA	≥3.550	NA	NA	NA	6.150	
	≥75 and <150	≤0.5895 FL ≤0.5474 IPLV.IP	≤0.6684 FL ≤0.4211 IPLV.IP	54/44[e]	≥4.640	≥3.680	≥2.680	NA	≥8.330	≥6.410	≥4.420	NA	
				75/65[e]	NA	NA	NA	≥3.550	NA	NA	NA	6.150	
	≥150 and <300	≤0.5895 FL ≤0.5263 IPLV.IP	≤0.6263 FL ≤0.4105 IPLV.IP	54/44[e]	≥4.640	≥3.680	≥2.680	NA	≥8.330	≥6.410	≥4.420	NA	
				75/65[e]	NA	NA	NA	≥3.550	NA	NA	NA	6.150	

Commented [PK7]: Note to RCC: The amendment here is that the existing table has been replaced by this Table from ASHRAE 90.1

	≥300 and <600	≤0.5895 FL ≤0.5263 IPLV.IP	≤0.6158 FL ≤0.4000 IPLV.IP	54/44[e]	≥4.930	≥3.960	≥2.970	NA	≥8.900	≥6.980	≥5.000	NA	
				75/65[e]	NA	NA	NA	≥3.900	NA	NA	NA	6.850	
	≥600	≤0.5895 FL ≤0.5263 IPLV.IP	≤0.6158 FL ≤0.4000 IPLV.IP	54/44[e]	≥4.930	≥3.960	≥2.970	NA	≥8.900	≥6.980	≥5.000	NA	
				75/65[e]	NA	NA	NA	≥3.900	NA	NA	NA	6.850	

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Footnotes:

a. Cooling-only rating conditions are standard rating conditions defined in AHRI 550/590, Table 1.
b. Heating full-load rating conditions are at rating conditions defined in AHRI 550/590, Table 1.
c. For water-cooled heat recovery chillers that have capabilities for heat rejection to a heat recovery condenser and a tower condenser, the COP_{HR} applies to operation at full load with 100% heat recovery (no tower rejection). Units that only have capabilities for partial heat recovery shall meet the requirements of Table 6.8.1-3
d. Outdoor air entering dry-bulb (db) temperature and wet-bulb (wb) temperature.
e. Source-water entering and leaving water temperature.
f. AHRI ratings are not required for equipment sizes larger than those covered by the test standard.
g. Air-to-water heat pumps that are configured to operate only in heating and not in cooling only need to comply with the minimum heating efficiencies.
h. Units that are both an air-to-water heat pump and an heat recovery chiller are required to comply with either the applicable air source efficiency requirements or the heat recovery chiller requirements but not both.
i. Heat pumps and heat recovery chillers are only required to comply with one of the four leaving heating water temperature criteria. The leaving heater water temperature criteria that is closest to the design leaving water temperature shall be utilized.

C403.3.2.2 Water-cooled centrifugal chilling package. Equipment not designed for operation at AHRI Standard 550/590 test conditions of 44°F (7°C) leaving chilled-water temperature and 2.4 gpm/ton evaporator fluid flow and 85°F (29°C) entering condenser water temperature with 3 gpm/ton (0.054 L/s x kW) condenser water flow shall have maximum full-load kW/ton (*FL*) and part-load ratings adjusted using Equations 4-7 and 4-8.

Exception: Centrifugal chillers designed to operate outside of these temperature ranges are not regulated by this section.

$$FL_{adj} = FL/K_{adj}$$

(Equation 4-7)

$$PLV_{adj} = IPLV/K_{adj}$$

(Equation 4-8)

Where:

K_{adj} = A × B

FL = Full-load kW/ton values as specified in Table C403.3.2(7)

FL_{adj} = Maximum full-load kW/ton rating, adjusted for nonstandard conditions

IPLV = Values as specified in Table C403.3.2(7)

PLV_{adj} = Maximum NPLV rating, adjusted for nonstandard conditions.

A = $0.00000014592 \times (LIFT)^4 - 0.0000346496 \times (LIFT)^3 + 0.00314196 \times (LIFT)^2 - 0.147199 \times LIFT + 3.9302$

B = $0.0015 \times L_{vg}^{Evap}$ (°F) + 0.934

LIFT = $L_{vg}Cond - L_{vg}Evap$

L_{vg}^{Cond} = Full-load condenser leaving fluid temperature (°F)

L_{vg}^{Evap} = Full-load evaporator leaving temperature (°F)

The FL_{adj} and PLV_{adj} values are only applicable for centrifugal chillers meeting all of the following full-load design ranges:

1. Minimum evaporator leaving temperature: 36°F.
2. Maximum condenser leaving temperature: 115°F.
3. LIFT is not less than 20°F and not greater than 80°F.

C403.3.2.4 Packaged and split system electric heating and cooling equipment. Packaged and split system electric equipment providing both heating and cooling, and cooling-only equipment with electric heat in the main supply duct before VAV boxes, in each case with a total cooling capacity greater than 6,000 Btu/h, shall be a heat pump.

Exception: Unstaffed equipment shelters or cabinets used solely for personal wireless service facilities.

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C403.3.5 Dedicated outdoor air systems (DOAS). For buildings with occupancies as shown in Table C403.3.5, outdoor air shall be provided to each occupied space by a dedicated outdoor air system (DOAS) which delivers 100 percent outdoor air without requiring operation of the heating and cooling system fans for ventilation air delivery.

Exceptions:

1. Occupied spaces that are not ventilated by a mechanical ventilation system and are only ventilated by a natural ventilation system in accordance with Section 402 of the *International Mechanical Code*.
2. High efficiency variable air volume (VAV) systems complying with Section C403.6.10 for occupancy classifications other than Groups A-1, A-2 and A-3 as specified in Table C403.3.5, and high efficiency VAV systems complying with Section C403.12 for occupancy classifications Groups A-1, A-2 and A-3 as specified in Table C403.3.5. This exception shall not be used as a substitution for a DOAS per Section C406.6.
3. Spaces that are within building types not subject to the requirements of Section C403.3.5, and that qualify as accessory occupancies according to Section 508.2 of the International Building Code, are not required to comply with this section.

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C403.3.5.1 Energy recovery ventilation with DOAS. The DOAS shall include *energy recovery ventilation*. The energy recovery system shall have a ((~~60 percent minimum sensible recovery effectiveness or have 50~~)) 60 percent enthalpy recovery effectiveness in accordance with Section C403.7.6. For DOAS having a total fan system motor nameplate hp less than 5 hp, total combined fan power shall not exceed 1 W/cfm of outdoor air. For DOAS having a total fan system motor hp greater than or equal to 5 hp, refer to fan power limitations of Section C403.8.1. This fan power restriction applies to each dedicated outdoor air unit in the permitted project, but does not include the fan power associated with the zonal heating/cooling equipment. The airflow rate thresholds for energy recovery requirements in Tables C403.7.6.1(1) and C403.7.6.1(2) do not apply.

Exceptions:

1. Occupied spaces with all of the following characteristics:
   a. ((complying)) Complying with Section C403.7.6((~~,~~));
   b. ((~~served~~)) Served by equipment less than 5000 cfm((~~,~~));
   c. ((~~with~~)) With an average occupant load ((~~greater than 25~~)) 15 people or greater per 1000 square feet (93 m^2) of floor area (as established in Table 403.3.1.1 of the *International Mechanical Code*);
   d. ((~~that~~)) That include *demand control ventilation* configured to reduce outdoor air by at least 50% below design minimum ventilation rates when the actual occupancy of the space served by the system is less than the design occupancy; and
   e. Smaller than 650 square feet.
2. Systems installed for the sole purpose of providing makeup air for systems exhausting toxic, flammable, paint, or corrosive fumes or dust, dryer exhaust, or commercial kitchen hoods used for collecting and removing grease vapors and smoke.
3. The energy recovery systems for R-1 and R-2 occupancies are permitted to provide 60 percent minimum sensible heat recovery effectiveness in lieu of 60 percent enthalpy recovery effectiveness. The return/exhaust air stream temperature for heat recovery device selection shall be 70°F or as determined by an *approved* calculation procedure.

***

C403.3.6 Ventilation for Group R-2 occupancy. For all Group R-2 dwelling and sleeping units, a balanced ventilation system with heat recovery system with minimum 60 percent sensible recovery effectiveness shall provide outdoor air directly to all habitable space. The ventilation system shall allow for the design flow rates to be tested and verified at each habitable space as part of the commissioning process in accordance with Section C408.2.2.

[Jurisdiction] Informative Note. When an H/ERV (heat recovery ventilator or energy recovery ventilator) that is rated and listed in accordance with HVI 920 is used to comply with the "sensible recovery effectiveness" requirement in Section C403.3.6 or C403.7.6 Exception 2, use the product's Adjusted Sensible Recovery Efficiency (ASRE) at 32°F, as listed in the HVI Section 3 H/ERV Directory. Select the ASRE for a flow rate that is no less than the design flow rate, or interpolate between two listed flow rates. HVI refers to the Home Ventilating Institute.

C403.3.7 Hydronic System flow rate. Chilled water and condenser water piping shall be designed such that the design flow rate in each pipe segment shall not exceed the values listed in Table C403.3.7 for the appropriate total annual hours of operation. Pipe sizes for systems that operate under variable flow conditions (e.g., modulating two-way control valves at coils) and that contain

variable speed pump motors are permitted to be selected from the "Variable Flow/Variable Speed" columns. All others shall be selected from the "Other" columns.

EXCEPTION. Design flow rates exceeding the values in Table C403.3.7 are permitted in specific sections of pipe if the pipe is not in the critical circuit at design conditions and is not predicted to be in the critical circuit during more than 30 percent of operating hours.

[Jurisdiction] Informative Note. The flow rates listed here do not consider noise or erosion. Lower flow rates are often recommended for noise sensitive locations.

TABLE C403.3.7

PIPING SYSTEM DESIGN MAXIMUM FLOW RATE IN GPM[1]

Pipe Size	<= 2000 hours/yr		>2000 and <= 4400 hours/year		> 4400 hours/year	
(in)	Other	Variable Flow/ Variable Speed	Other	Variable Flow/ Variable Speed	Other	Variable Flow/ Variable Speed
2 1/2	120	180	85	130	68	110
3	180	270	140	210	110	170
4	350	530	260	400	210	320
5	410	620	310	470	250	370
6	740	1100	570	860	440	680
8	1200	1800	900	1400	700	1100
10	1800	2700	1300	2000	1000	1600
12	2500	3800	1900	2900	1500	2300

1. There are no requirements for pipe sizes smaller than the minimum size or larger than the maximum size shown in the table.

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C403.4.1 Thermostatic controls. The supply of heating and cooling energy to each *zone* shall be controlled by individual thermostatic controls capable of responding to temperature within the *zone*. Controls in the same *zone* or in neighboring *zones* connected by openings larger than 10 percent of the floor area of either *zone* shall not allow for simultaneous heating and cooling. At a minimum, each floor of a building shall be considered as a separate *zone*. Controls on systems required to have economizers and serving single *zones* shall have multiple cooling stage capability and activate the economizer when appropriate as the first stage of cooling. See Section C403.5 for further economizer requirements. Where humidification or dehumidification or both is provided, at least one humidity control device shall be provided for each humidity control system.

Exceptions:

1. Independent perimeter systems that are designed to offset only building envelope heat losses or gains or both serving one or more perimeter *zones* also served by an interior system provided:
   1.1. The perimeter system includes at least one thermostatic control *zone* for each building exposure having exterior walls facing only one orientation (within +/-45 degrees) (0.8 rad) for more than 50 contiguous feet (15,240 mm);

1.2. The perimeter system heating and cooling supply is controlled by a thermostat located within the *zones* served by the system; and

1.3. Controls are configured to prevent the perimeter system from operating in a different heating or cooling mode from the other equipment within the *zones* or from neighboring *zones* connected by openings larger than 10 percent of the floor area of either *zone*.

2. ((~~Any interior *zone* open to a perimeter *zone* shall have set points and dead bands coordinated so that cooling in the interior *zone* shall not operate while the perimeter *zone* is in heating until the interior zone temperature is 5°F (2.8°C) higher than the perimeter *zone* temperature, unless the interior and perimeter *zones* are separated by a partition whose permanent openings are smaller than 10 percent of the perimeter *zone* floor area.~~)) Where an interior zone and a perimeter zone are open to each other with permanent openings larger than 10 percent of the floor area of either zone, cooling in the interior zone is permitted to operate at times when the perimeter zone is in heating and the interior zone temperature is at least 5°F (2.8°C) higher than the perimeter zone temperature. For the purposes of this exception, a permanent opening is an opening without doors or other operable closures.

3. Dedicated outdoor air units that provide *ventilation air*, make-up air or *replacement air* for exhaust systems are permitted to be controlled based on supply air temperature. The supply air temperature shall be controlled to a maximum of 65°F (18.3°C) in heating and a minimum of 72°F (22°C) in cooling unless the supply air temperature is being reset based on the status of cooling or heating in the *zones* served or it being reset based on outdoor air temperature.

C403.4.1.1 Heat pump supplementary heat control. ((~~Unitary air-cooled heat pumps shall include microprocessor controls that minimize supplemental heat usage during start-up, set-up, and defrost conditions. These controls shall anticipate need for heat and use compression heating as the first stage of heat. Controls shall indicate when supplemental heating is being used through visual means (e.g., LED indicators). Heat pumps equipped with supplementary heaters shall be installed with controls that prevent supplemental heater operation above 40°F (4.4°C)~~))Heat pumps equipped with internal electric resistance heaters shall have controls that prevent supplemental heater operation when the heating load can be met by the heat pump alone during both steady-state operation and setback recovery. Supplemental heater operation is permitted during outdoor coil defrost cycles. Heat pumps equipped with supplementary heaters shall comply with all conditions of Section C403.1.4.

Exception. ((~~Packaged terminal heat pumps (PTHPs) of less than 2 tons (24,000 Btu/hr) cooling capacity provided with controls that prevent supplementary heater operation above 40°F.~~))Heat pumps whose minimum efficiency is regulated by NAECA and whose ratings meet the requirements shown in Table C403.3.2(2) and include all usage of internal electric resistance heating.

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C403.4.2 Off-hour controls. For all occupancies other than Group R and for *conditioned spaces* other than *dwelling unit*s within Group R occupancies, each *zone* shall be provided with thermostatic setback controls that are controlled by either an *automatic* time clock or programmable control system.

Exceptions:

1. *Zones* that will be operated continuously.
2. *Zones* with a full HVAC load demand not exceeding 6,800 Btu/h (2 kW) and having a manual shutoff switch located with *ready access*.

***

C403.4.12 Pressure Independent Control Valves. Where design flow rate of heating water and chilled water coils is 10 GPM or higher, modulating pressure independent control valves shall be provided.

C403.5 Economizers. *Air economizer*s shall be provided on all new cooling systems including those serving computer server rooms, electronic equipment, radio equipment, and telephone switchgear. Economizers shall comply with Sections C403.5.1 through C403.5.5.

Exception: Economizers are not required for the systems listed below:

1. Cooling systems not installed outdoors nor in a mechanical room adjacent to outdoors and installed in conjunction with DOAS complying with Section C403.3.5 and serving only spaces with year-round cooling loads from lights and equipment of less than 5 watts per square foot.
2. Unitary or packaged systems serving one zone with dehumidification ((~~that affect other systems so as to~~)) where an economizer would increase the overall building energy consumption. New humidification equipment shall comply with Section C403.3.2.5.
3. Unitary or packaged systems serving one zone where the cooling efficiency meets or exceeds the efficiency requirements in Table C403.5(3).

TABLE C403.5(3)
EQUIPMENT EFFICIENCY PERFORMANCE EXCEPTION FOR ECONOMIZERS

Climate Zone	Efficiency Improvement[a]
4C	64%
5B	59%

a. If a unit is rated with an IPLV, IEER or SEER then to eliminate the required air or *water economizer*, the minimum cooling efficiency of the HVAC unit must be increased by the percentage shown. If the HVAC unit is only rated with a full load metric like EER or COP cooling, then these must be increased by the percentage shown.

4. Equipment serving chilled beams and chilled ceiling space cooling systems only which are provided with a *water economizer* meeting the requirements of Section C403.5.4.
5. For Group R occupancies, cooling units installed outdoors or in a mechanical room adjacent to outdoors with a total cooling capacity less than 20,000 Btu/h and other cooling units with a total cooling capacity less than 54,000 Btu/h provided that these are high-efficiency cooling equipment with IEER, CEER, SEER, and EER values more than 15 percent higher than minimum efficiencies listed in Tables C403.3.2(1) through (3), in the appropriate size category, using the same test procedures. Equipment shall be listed in the appropriate certification program to qualify for this exception. For split systems, compliance is based on the cooling capacity of individual fan coil units.
6. Equipment used to cool *Controlled Plant Growth Environments* provided these are high-efficiency cooling equipment with SEER, EER and IEER values a minimum of 20 percent greater than the values listed in Tables C403.3.2(1), (3) and (7).
7. Equipment serving a space with year-round cooling loads from lights and equipment of 5 watts per square foot or greater complying with the following criteria:
   7.1. Equipment serving the space utilizes chilled water as the cooling source; and
   7.2. The chilled water plant includes a condenser heat recovery system that meets the requirements of Section C403.9.5 or the building and water-cooled system meets the following requirements:

7.2.1. A minimum of 90 percent (capacity-weighted) of the building space heat is provided by hydronic heating water.

7.2.2. Chilled water plant includes a heat recovery chiller or water-to-water heat pump capable of rejecting heat from the chilled water system to the hydronic heating equipment capacity.

7.2.3. Heat recovery chillers shall have a minimum COP of 7.0 when providing heating and cooling water simultaneously.

8. Water-cooled equipment served by systems meeting the requirements of Section C403.9.2.4, Condenser heat recovery.

9. Dedicated outdoor air systems that include energy recovery as required by Section C403.7.6 but that do not include mechanical cooling.

10. Dedicated outdoor air systems not required by Section C403.7.6 to include energy recovery that modulate the supply airflow to provide only the minimum outdoor air required by Section C403.2.2.1 for ventilation, exhaust air make-up, or other process air delivery.

11. Equipment used to cool any dedicated server room, electronic equipment room, elevator machine room or telecom switch room provided the system complies with Option a, b, ((~~or~~)) c, d or e in ((~~the table~~)) Table C403.5(11) below. The total cooling capacity of all fan systems qualifying under this exception without economizers shall not exceed 240,000 Btu/h per building or 10 percent of its *air economizer* capacity, whichever is greater. This exception shall not be used for Total Building Performance.

Table C403.5(11)
Server room, electronic equipment room or telecom room cooling equipment

	Equipment Type	Higher Equipment Efficiency	Part-Load Control	Economizer
Option a	Tables C403.3.2(1) and C403.3.2(2)[a]	+15%[b]	Required over 85,000 Btu/h[c]	None Required
Option b	Tables C403.3.2(1) and C403.3.2(2)[a]	+5%[d]	Required over 85,000 Btu/h[c]	Water-side Economizer[e]
Option c	ASHRAE Standard 127[f]	+0%[g]	Required over 85,000 Btu/h[c]	Water-side Economizer[e]
Option d	Table C403.3.2(7)[h]	+ 25%[i]	Required for all chillers[j]	None Required
Option e	Table C403.3.2(7)[h]	+ 10/15%[k]	Required over 85,000 Btu/h[c]	Dedicated waterside Economizer[e]

((~~Notes for Exception 11~~)) Footnotes for Table C403.5(11):

a. For a system where all of the cooling equipment is subject to the AHRI standards listed in Tables C403.3.2(1) and C403.3.2(2), the system shall comply with ((~~all of the following~~)) the higher equipment efficiency, part-load control and economizer requirements of the row in which this footnote is located, including the associated footnotes (note that if the system contains any cooling equipment that exceeds the capacity limits in Table C403.3.2(1) or C403.3.2(2), or if the system contains any cooling equipment that is not included in Table C403.3.2(1) or C403.3.2(2), then the system is not allowed to use this option).

b. The cooling equipment shall have an SEER/EER value and an IEER/IPLV value that ((~~is~~)) are each a minimum of 15 percent greater than the value listed in Tables C403.3.2(1) and C403.3.2(2).

c. For units with a total cooling capacity over 85,000 Btu/h, the system shall utilize part-load capacity control schemes that are able to modulate to a part-load capacity of 50 percent of the load or less that results in the compressor operating at the same or higher EER at part loads than at full load (e.g., minimum of two-stages of compressor unloading such as cylinder unloading, two-stage scrolls, dual tandem scrolls, but hot gas bypass is not credited as a compressor unloading system).
d. The cooling equipment shall have an SEER/EER value and an IEER/IPLV value that ((~~is~~)) are each a minimum of 5 percent greater than the value listed in Tables C403.3.2(1) and C403.3.2(2).
e. The system shall include a *water economizer* in lieu of *air economizer*. *Water economizer*s shall meet the requirements of Sections C403.5.1 and C403.5.2 and be capable of providing the total concurrent cooling load served by the connected terminal equipment lacking airside economizer, at outside air temperatures of 50°F dry-bulb/45°F wet-bulb and below. For this calculation, all factors including solar and internal load shall be the same as those used for peak load calculations, except for the outside temperatures. The equipment shall be served by a dedicated condenser water system unless a non-dedicated condenser water system exists that can provide appropriate water temperatures during hours when water-side economizer cooling is available.
f. For a system where all cooling equipment is subject to ASHRAE Standard 127, the system shall comply with the higher equipment efficiency, part-load control, and economizer requirements of the row in which this footnote is located, including the associated footnotes.
g. The cooling equipment subject to ASHRAE Standard 127 shall have an ((~~EER value and an IPLV~~)) SCOP value that is ((~~equal or~~)) a minimum of 10 percent greater than the value listed in Tables C403.3.2(1) and C403.3.2(2) (1.10 x values in these tables) when determined in accordance with the rating conditions in ASHRAE Standard 127 (i.e., not the rating conditions in AHRI Standard 210/240 or 340/360). This information shall be provided by an independent third party.
h. For a system with chillers subject to the AHRI standards listed in Table C403.3.2(7) (e.g., a chilled water system with fan coil units), the system shall comply with the higher equipment efficiency, part-load control and economizer requirements of the row in which this footnote is located, including the associated footnotes.
i. The cooling equipment shall have an full-load EER value and an IPLV value that is a minimum of 25 percent greater than the value listed in Table C403.3.2(7) (1.25 x value in Table C403.3.2(7) or a full-load and IPLV kW/ton that is at least 25 percent lower than the value listed in Table C403.3.2(7) (0.75 x value in Table C403.3.2(7)). For all chillers, the system shall utilize part-load capacity control schemes that are able to modulate to a part-load capacity of 50 percent of the load or less and that result in the compressor operating at the same or higher EER at part loads than at full load (e.g., minimum of two-stages of compressor unloading such as cylinder unloading, two-stage scrolls, or dual tandem scrolls, but hot gas bypass is not a qualifying compressor unloading system).
j. For air-cooled chillers, the system shall utilize part-load capacity control schemes that are able to modulate to a part-load capacity of 50 percent of the load or less and that result in the compressor operating at the same or higher EER at part loads than at full load (e.g., minimum of two-stages of compressor unloading such as cylinder unloading, two-stage scrolls, or dual tandem scrolls, but hot gas bypass is not a qualifying compressor unloading system).
k. For air-cooled chillers, the cooling equipment shall have an IPLV EER value that is a minimum of 10 percent greater than the IPLV EER value listed in Table C403.3.2(7) (1.10 x values in Table C403.3.2(7). For water-cooled chillers, the cooling equipment shall have an IPLV kW/ton that is at least 15 percent lower than the IPLV kW/ton value listed in Table C403.3.2(7) (0.85 x values in Table C403.3.2(7)).

12. Medical and laboratory equipment that is directly water-cooled and is not dependent upon space air temperature.

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C403.6.10 High efficiency variable air volume (VAV) systems. For HVAC systems subject to the requirements of Section C403.3.5 but utilizing Exception 2 of that section, a high efficiency multiple-zone VAV system may be provided without a separate parallel DOAS when the system is designed, installed, and configured to comply with all of the following criteria in addition to the applicable requirements of Sections C403.8.6 through C403.8.8. (((~~this~~))This exception shall not be used as a substitution for a DOAS per Section C406.6 or C406.7((~~.~~)):

1. Each VAV system must serve a minimum of 3,000 square feet (278.7 m^2) and have a minimum of five VAV zones.
2. The VAV systems are provided with airside economizer per Section C403.5 without exceptions.

3. A direct-digital control (DDC) system is provided to control the VAV air handling units and associated terminal units per Section C403.4.11 regardless of sizing thresholds of Table C403.4.11.1.
4. Multiple-zone VAV systems with a minimum outdoor air requirement of 2,500 cfm (1180 L/s) or greater shall be equipped with a device capable of measuring outdoor airflow intake under all load conditions. The system shall be capable of increasing or reducing the outdoor airflow intake based on feedback from the VAV terminal units as required by Section C403.6.5, without exceptions, and Section C403.7.1, Demand controlled ventilation.
5. Multiple-zone VAV systems with a minimum outdoor air requirement of 2,500 cfm (1180 L/s) or greater shall be equipped with a device capable of measuring supply airflow to the VAV terminal units under all load conditions.
6. In addition to meeting the zone isolation requirements of C403.2.1 a single VAV air handling unit shall not serve more than 50,000 square feet (4645 m^2) unless a single floor is greater than 50,000 square feet (4645 m^2) in which case the air handler is permitted to serve the entire floor.
7. The primary maximum cooling air for the VAV terminal units serving interior cooling load driven zones shall be sized for a supply air temperature that is a minimum of 5°F greater than the supply air temperature for the exterior zones in cooling.
8. Air terminal units with a minimum primary airflow set point of 50 percent or greater of the maximum primary airflow set point shall be sized with an inlet velocity of no greater than 900 feet per minute. Allowable fan motor horsepower shall not exceed 90 percent of the allowable HVAC *fan system bhp* (Option 2) as defined by Section C403.8.1.1.
9. All fan powered VAV terminal units (series or parallel) shall be provided with electronically commutated motors. The DDC system shall be configured to vary the speed of the motor as a function of the heating and cooling load in the space. Minimum speed shall not be greater than 66 percent of design airflow required for the greater of heating or cooling operation. Minimum speed shall be used during periods of low heating and cooling operation and ventilation-only operation.
   Exception: For series fan powered terminal units where the volume of primary air required to deliver the ventilation requirements at minimum speed exceeds the air that would be delivered at the speed defined above, the minimum speed set point shall be configured to exceed the value required to provide the required ventilation air**.**
10. Fan-powered VAV terminal units shall only be permitted at perimeter zones with an envelope heating load requirement. All other VAV terminal units shall be single duct terminal units.
    Exception: Fan powered VAV terminal units are allowed at interior spaces with an occupant load greater than or equal to 25 people per 1000 square feet of floor area (as established in Table 403.3.1.1 of the *International Mechanical Code*) with *demand control ventilation* in accordance with Section C403.7.1.
11. When in occupied heating or in occupied dead band between heating and cooling all fan powered VAV terminal units shall be configured to reset the primary air supply set point, based on the VAV air handling unit outdoor air vent fraction, to the minimum ventilation airflow required per *International Mechanical Code*.
12. Spaces that are larger than 150 square feet (14 m^2) and with an occupant load greater than or equal to ((~~25~~)) 15 people per 1000 square feet (93 m^2) of floor area (as established in Table 403.3.1.1 of the *International Mechanical Code*) shall be provided with all of the following features:
    12.1. A dedicated VAV terminal unit capable of controlling the space temperature and minimum ventilation shall be provided.
    12.2. *Demand control ventilation* (DCV) shall be provided that utilizes a carbon dioxide sensor to reset the ventilation set point of the VAV terminal unit from the design minimum to design maximum ventilation rate as required by Chapter 4 of the *International Mechanical Code*.

12.3. Occupancy sensors shall be provided that are configured to reduce the minimum ventilation rate to zero and setback room temperature set points by a minimum of 5°F, for both cooling and heating, when the space is unoccupied.

13. Dedicated *data center*s, *computer rooms*, electronic equipment rooms, telecom rooms, or other similar spaces with cooling loads greater than 5 watts/ft^2 shall be provided with separate, cooling systems to allow the VAV air handlers to turn off during unoccupied hours in the office space and to allow the supply air temperature reset to occur.

Exception: The VAV air handling unit and VAV terminal units may be used for secondary backup cooling when there is a failure of the primary HVAC system.

Additionally, *computer rooms*, electronic equipment rooms, telecom rooms, or other similar spaces shall be provided with airside economizer in accordance with Section C403.5 without using the exceptions to Section C403.5.

Exception: Heat recovery per exception 9 of Section C403.5 may be in lieu of airside economizer for the separate, independent HVAC system.

14. HVAC system central heating or cooling plant will include a minimum of one of the following options:
    14.1. VAV terminal units with hydronic heating coils connected to systems with hot water generation equipment limited to the following types of equipment: gas-fired hydronic boilers with a thermal efficiency, Et, of not less than 92 percent, air-to-water heat pumps or heat recovery chillers. Hydronic heating coils shall be sized for a maximum entering hot water temperature of 120°F (48.9°C) for peak anticipated heating load conditions.
    14.2. Chilled water VAV air handing units connected to systems with chilled water generation equipment with IPLV values more than 25 percent higher than the minimum part load efficiencies listed in Table C403.3.2(7), in the appropriate size category, using the same test procedures. Equipment shall be listed in the appropriate certification program to qualify. The smallest chiller or compressor in the central plant shall not exceed 20 percent of the total central plant cooling capacity or the chilled water system shall include thermal storage sized for a minimum of 20 percent of the total central cooling plant capacity.
15. The DDC system shall include a fault detection and diagnostics (FDD) system complying with the following:
    15.1. The following temperature sensors shall be permanently installed to monitor system operation:
        15.1.1. Outside air.
        15.1.2. Supply air.
        15.1.3. Return air.
    15.2. Temperature sensors shall have an accuracy of ±2°F (1.1°C) over the range of 40°F to 80°F (4°C to 26.7°C).
    15.3. The VAV air handling unit controller shall be configured to provide system status by indicating the following:
        15.3.1. Free cooling available.
        15.3.2. Economizer enabled.
        15.3.3. Compressor enabled.
        15.3.4. Heating enabled.
        15.3.5. Mixed air low limit cycle active.
        15.3.6. The current value of each sensor.
    15.4. The VAV air handling unit controller shall be capable of manually initiating each operating mode so that the operation of compressors, economizers, fans and the heating system can be independently tested and verified.
    15.5. The VAV air handling unit shall be configured to report faults to a fault management application able to be accessed by day-to-day operating or service personnel or annunciated locally on zone thermostats.

15.6. The VAV terminal unit shall be configured to report if the VAV inlet valve has failed by performing the following diagnostic check at a maximum interval of once a month:
15.6.1. Command VAV terminal unit primary air inlet valve closed and verify that primary airflow goes to zero or other *approved* means to verify that the VAV terminal unit damper actuator and flow ring are operating properly.
15.6.2. Command VAV thermal unit primary air inlet valve to design airflow and verify that unit is controlling to with 10% of design airflow.
15.7. The VAV terminal unit shall be configured to report and trend when the zone is driving the following VAV air handling unit reset sequences. The building operator shall have the capability to exclude zones used in the reset sequences from the DDC control system graphical user interface:
15.7.1. Supply air temperature set point reset to lowest supply air temperature set point for cooling operation.
15.7.2. Supply air duct static pressure set point reset for the highest duct static pressure set point allowable.
15.8. The FDD system shall be configured to detect the following faults:
15.8.1. Air temperature sensor failure/fault.
15.8.2. Not economizing when the unit should be economizing.
15.8.3. Economizing when the unit should not be economizing.
15.8.4. Outdoor air or return air damper not modulating.
15.8.5. Excess outdoor air.
15.8.6. VAV terminal unit primary air valve failure.

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C403.7.1 Demand control ventilation. *Demand control ventilation* (DCV) shall be provided for spaces larger than 500 square feet (46 m^2) and with an occupant load greater than or equal to ((~~25~~)) 15 people per 1000 square feet (93 m^2) of floor area (as established in Table 403.3.1.1 of the *International Mechanical Code*) and served by systems with one or more of the following:

1. An air-side economizer.
2. *Automatic* modulating control of the outdoor air damper.
3. A design outdoor airflow greater than 3,000 cfm (1416 L/s).

Exception: *Demand control ventilation* is not required for systems and spaces as follows:

1. Systems with energy recovery complying with Section C403.7.6.1 or Section C403.3.5.1. This exception is not available for space types located within the “inclusions” column of Groups A-1 and A-3 occupancy classifications of Table C403.3.5.
2. Multiple-*zone* systems without direct digital control of individual *zones* communicating with a central control panel.
3. System with a design outdoor airflow less than 750 cfm (354 L/s).
4. ((~~Spaces where the supply airflow rate minus any makeup or outgoing transfer air requirement is less than 1,200 cfm (566 L/s)~~)) Spaces, including but not limited to dining areas, where more than 75 percent of the space design outdoor airflow is transfer air required for makeup air supplying an adjacent commercial kitchen.
5. Ventilation provided for process loads only.
6. Spaces with one of the following occupancy categories (as defined by the *International Mechanical Code*): Correctional cells, daycare sickrooms, science labs, barbers, beauty and nail salons, and bowling alley seating.

7. Dormitory sleeping areas.

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C403.7.5 Enclosed loading dock, motor vehicle repair garage and parking garage exhaust ventilation system controls. Mechanical ventilation systems for enclosed loading docks, motor vehicle repair garages and parking garages shall be designed to exhaust the airflow rates (maximum and minimum) determined in accordance with the *International Mechanical Code*.

Ventilation systems shall be equipped with a control device that operates the system automatically by means of carbon monoxide detectors applied in conjunction with nitrogen dioxide detectors. Controllers shall be configured to shut off fans or modulate fan speed to 50 percent or less of design capacity, or intermittently operate fans less than 20 percent of the occupied time or as required to maintain acceptable contaminant levels in accordance with the *International Mechanical Code* provisions.

Gas sensor controllers used to activate the exhaust ventilation system shall stage or modulate fan speed upon detection of specified gas levels. All equipment used in sensor controlled systems shall be designed for the specific use and installed in accordance with the manufacturer's recommendations. The system shall be arranged to operate automatically by means of carbon monoxide detectors applied in conjunction with nitrogen dioxide detectors. ((~~Garage~~)) Parking garages, repair garages and loading docks shall be equipped with a controller and a full array of carbon monoxide (CO) sensors set to maintain levels of carbon monoxide below 35 parts per million (ppm). Additionally, a full array of nitrogen dioxide detectors shall be connected to the controller set to maintain the nitrogen dioxide level below the OSHA standard for eight hour exposure.

Spacing and location of the sensors shall be installed in accordance with manufacturer recommendations.

C403.7.5.1 System activation devices for enclosed loading docks. Ventilation systems for enclosed loading docks shall operate continuously during unoccupied hours at the minimum ventilation rate required by Section 404 of the *International Mechanical Code* and shall be activated to the full required ventilation rate by one of the following:

1. Gas sensors installed in accordance with the *International Mechanical Code*; or
2. Occupant detection sensors used to activate the system that detects entry into the loading area along both the vehicle and pedestrian pathways.

C403.7.5.2 System activation devices for enclosed parking garages. Ventilation systems for enclosed parking garages shall be activated by gas sensors.

Exception: A parking garage ventilation system having a total design capacity under 8,000 cfm may use occupant sensors to activate the full required ventilation rate.

C403.7.6 Energy recovery ventilation systems. Any system with minimum outside air requirements at design conditions greater than 5,000 cfm or any system where the system's supply airflow rate exceeds the value listed in Tables C403.7.6(1) and C403.7.6(2), based on the *climate zone* and percentage of outdoor airflow rate at design conditions, shall include an energy recovery system. Table C403.7.6(1) shall be used for all ventilation systems that operate less than 8,000 hours per year, and Table C403.7.6(2) shall be used for all ventilation systems that operate 8,000 hours or more per year. The energy recovery system shall have the capability to provide a change in the enthalpy of the outdoor air supply of not less than ((~~50~~)) 60 percent of the difference between the outdoor air and return air enthalpies, at design conditions. Where an *air economizer* is required, the energy recovery system shall include a bypass of the energy recovery media for both the outdoor air and exhaust air or return air dampers and controls which permit operation of the *air economizer* as required by Section C403.5. Where a single room or space is supplied by multiple units, the aggregate ventilation (cfm) of those units shall be used in applying this requirement. The

return/exhaust air stream temperature for heat recovery device selection shall be 70°F (21°C) at 30 percent relative humidity, or as calculated by the registered design professional.

[Jurisdiction] Informative Note: In Seattle, the energy recovery effectiveness is determined typically by the winter heat recovery condition. See example below for how the minimum supply air enthalpy leaving the energy recovery media is calculated for the winter condition:

1. In Seattle, the winter outdoor design air temperature is 24°F as specified in Appendix C. The registered design professional shall determine the coincident winter wet bulb temperature or percent relative humidity at the anticipated design conditions. Based on these conditions the outdoor design air enthalpy is determined from a psychrometric chart.

2. Determine the return/exhaust air stream enthalpy from a psychrometric chart based on the 70°F (21°C) at 30 percent relative humidity.

3. Calculate the 60% difference between the outside air and return air enthalpies at design winter conditions.

4. See example below:

   a. OA Enthalpy at 24°F / 23°F (drybulb / wetbulb) = 8.2 BTU/LB

   b. RA/EA Enthalpy at 70°F and 30% RH = 21.9 BTU/LB

   c. SA Enthalpy Minimum Leaving Energy Recovery Media

   = (8.2 + (21.9 – 8.2)*60%)

   = 16.42 BTU/LB

(Note that this example represents 60% enthalpy recovery. For an equivalent sensible-only recovery system, it would take 73.9% effectiveness (increasing from 24°F DB to 58°F DB) to achieve the same enthalpy recovery.)

Commented [PK8]: Note to RCC: Keep if this note is helpful and alter with your local content

Exceptions:

1. The energy recovery systems for occupancy type I-2 hospitals, medical office buildings, and buildings that primarily consist of technical laboratory spaces, are permitted to provide a change of enthalpy of the outdoor air and return air of not less than 50 percent of the difference between the outdoor air and return air enthalpies, at design conditions. These occupancies are also permitted to utilize exception #3.

2. The energy recovery systems for R-1 and R-2 occupancies shall have a 60 percent minimum sensible heat recovery effectiveness, in lieu of 60 percent enthalpy recovery effectiveness. The return/exhaust air stream temperature for heat recovery device selection shall be 70°F (21°C), or as calculated by the registered design professional.

3. An energy recovery ventilation system shall not be required in any of the following conditions:

   3.1. Where energy recovery systems are restricted per Section 514 of the *International Mechanical Code* to sensible energy, recovery shall comply with one of the following:

      3.1.1. Kitchen exhaust systems where they comply with Section C403.7.7.1.

      3.1.2. Laboratory fume hood systems where they comply with Exception 2 of Section C403.7.6.

      3.1.3. Other sensible energy recovery systems with the capability to provide a change in dry bulb temperature of the outdoor air supply of not less than 50 percent of the difference between the outdoor air and the return air dry bulb temperatures, at design conditions.

3.2. Laboratory fume hood systems that include at least one of the following features and also comply with Section C403.7.7.2:

3.2.1. Variable-air-volume hood exhaust and room supply systems capable of reducing exhaust and makeup air volume to 50 percent or less of design values.

3.2.2. Direct makeup (auxiliary) air supply equal to at least 75 percent of the exhaust rate, heated no warmer than 2°F (1.1°C) above room set point, cooled to no cooler than 3°F (1.7°C) below room set point, no humidification added, and no simultaneous heating and cooling used for dehumidification control.

3.3. Systems serving spaces that are heated to less than 60°F (15.5°C) and are not cooled.

3.4. Where more than 60 percent of the outdoor air heating energy is provided from site-recovered energy.

3.5. Systems exhausting toxic, flammable, paint or corrosive fumes or dust.

3.6. Cooling energy recovery in *Climate Zones* 3C, 4C, 5B, 5C, 6B, 7 and 8.

3.7. Systems requiring dehumidification that employ energy recovery in series with the cooling coil.

3.8. Multi-zone systems where the supply airflow rate is less than the values specified in Tables C403.7.6(1) and C403.7.6(2) for the corresponding percent of outdoor air. Where a value of NR is listed, energy recovery shall not be required.

3.9. Equipment which meets the requirements of Section C403.9.2.4.

3.10. Systems serving Group R-1 and R-3 dwelling or sleeping units where the largest source of air exhausted at a single location at the building exterior is less than 25 percent of the design outdoor air flow rate.

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C403.7.8.1 Shutoff dampers for building isolation. Outdoor air supply, exhaust openings and relief outlets and stairway and elevator hoistway shaft vents shall be provided with Class I motorized dampers. See Sections C403.10.1 and C403.10.2 for ductwork insulation requirements upstream and downstream of the shutoff damper.

Exceptions:

1. Gravity (nonmotorized) dampers shall be permitted in lieu of motorized dampers as follows:
   1.1. Relief dampers serving systems less than ((~~5,000~~)) 300 cfm total supply shall be permitted. ((~~in buildings less than three stories in height.~~))
   1.2. Gravity (nonmotorized) dampers where the design outdoor air intake or exhaust capacity does not exceed ((~~400~~)) 300 cfm (189 L/s).
   1.3. Systems serving areas which require continuous operation for 24/7 occupancy schedules.
2. Shutoff dampers are not required in:
   2.1. Combustion air intakes.
   2.2. Systems serving areas which require continuous operation in animal hospitals, kennels and pounds, laboratories, and Group H, I and R occupancies.

2.3. Subduct exhaust systems or other systems that are required to operate continuously by the *International Mechanical Code.*

2.4. Type I grease exhaust systems or other systems where dampers are prohibited by the *International Mechanical Code* to be in the airstream.

2.5. Unconditioned stairwells or unconditioned elevator hoistway shafts that are only connected to unconditioned spaces.

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C403.8.1 Allowable fan motor horsepower. Each HVAC system having a total fan system motor nameplate horsepower exceeding 5 hp (3.7kW) at fan system design conditions shall not exceed the allowable *fan system motor nameplate hp* (Option 1) or *fan system bhp* (Option 2) as shown in Table C403.8.1(1). This includes supply fans, exhaust fans, return/relief fans, and fan-powered VAV air terminal units associated with systems providing heating or cooling capability. Single *zone* variable-air-volume systems shall comply with the constant volume fan power limitation. Zone heating and/or cooling terminal units installed in conjunction with a dedicated outdoor air system (DOAS) shall be evaluated as separate HVAC systems for allowable fan motor horsepower.

Exceptions:

1. Hospital, vivarium and laboratory systems that utilize flow control devices on exhaust or return to maintain space pressure relationships necessary for occupant health and safety or environmental control shall be permitted to use variable volume fan power limitation.
2. Individual exhaust fans with motor nameplate horsepower of 1 hp or less are exempt from the allowable fan motor horsepower requirements, but must meet the requirements of Section C405.8 for fractional hp fan motors.

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C403.8.3 Fan efficiency. Fans shall have a fan efficiency grade (FEG) of 67 or higher based on manufacturers' certified data, as defined by AMCA 205. The total efficiency of the fan at the design point of operation shall be within 15 percentage points of the maximum total efficiency of the fan.

Exception: The following fans are not required to have a fan efficiency grade:

1. Individual fans with a motor nameplate horsepower of 5 hp (3.7 kW) or less that are not part of a group operated as the functional equivalent of a single fan.
2. Multiple fans in series or parallel that have a combined motor nameplate horsepower of 5 hp (3.7 kW) or less and are operated as the functional equivalent of a single fan.
3. Fans that are part of equipment covered under Section C403.3.2.
4. Fans included in an equipment package certified by an *approved* agency for air or energy performance.
5. Powered wall/roof ventilators.
6. Fans outside the scope of AMCA 205.
7. Fans that are intended to operate only during emergency conditions.
8. Fans and fan arrays having a fan energy index (FEI) of not less than 1.00, or 0.95 for VAV systems, at the design point of operation, as determined in accordance with AMCA 208 by an approved, independent testing laboratory and labeled by the

manufacturer. The FEI for fan arrays shall be calculated in accordance with AMCA 208 Annex C.

C403.8.4 Group R occupancy ((~~exhaust~~)) ventilation fan efficacy. The Group R occupancies of the building shall be provided with ventilation that meets the requirements of the *International Mechanical Code*, as applicable, or with other *approved* means of ventilation. Mechanical ventilation system fans with 400 cfm or less in capacity shall meet the efficacy requirements of Table C403.8.4 at one or more rating points. Air flow shall be tested in accordance with Home Ventilating Standard (HVI) Standard 916 and listed. Fan efficacy shall be listed or shall be derived from listed power and airflow. Fan efficacy for fully ducted HRV, ERV, balanced, and in-line fans shall be determined at a static pressure of not less than 0.2 inch w.c. Fan efficacy for other exhaust fans shall be determined at a static pressure of not less than 0.1 inch w.c.

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Exceptions:

1. ((~~Group R heat recovery ventilator and energy recovery ventilator fans that are less than 400 cfm.~~

~~2.~~)) Where whole house ventilation fans are integrated with forced-air systems that are tested and listed HVAC equipment, provided they are powered by an electronically commutated motor where required by Section C405.8

((~~3~~))2. Domestic clothes dryer booster fans, domestic range rood exhaust fans, and domestic range booster fans that operate intermittently.

TABLE C403.8.4

GROUP R EXHAUST FAN EFFICACY

Fan location	((~~Air Flow Rate Minimum (cfm)~~))	Minimum Efficacy (cfm/watt)	Air Flow Rate ((~~Minimum~~)) (cfm)
Exhaust fan: Bathroom, utility room, whole house	((~~10~~))	2.8	< 90
Exhaust fan: Bathroom, utility room, whole house	((~~90~~))	3.5	((~~Any~~)) ≥ 90
In-line (single-port and multi-port) fans	((~~Any~~))	3.8	Any
ERV, HRV or balanced fan		1.2	Any

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C403.9.1 Heat rejection equipment. Heat rejection equipment, including air-cooled condensers, dry coolers, open-circuit cooling towers, closed-circuit cooling towers and evaporative condensers, shall comply with this section.

Exception: Heat rejection devices where energy use is included in the equipment efficiency ratings listed in Tables C403.3.2(1)A, C403.3.2(1)B, C403.3.2(1)C, C403.3.2(2), C403.3.2(3), C403.3.2(7) and C403.3.2(9).

Heat rejection equipment shall have a minimum efficiency performance not less than values specified in Table C403.3.2(8).

Cooling towers serving chilled water systems shall be selected to maintain a return condenser water temperature to the tower of 86°F (30°C) or less at peak design conditions.

EXCEPTION: In existing buildings where physical constraints preclude a change from the original design, replacement cooling towers of the same or smaller capacity are exempt from this requirement.

Single-pass water cooling systems that use domestic water only one time before dumping it to waste shall not be used for hydronic heat pump and other cooling and refrigeration equipment, including but not limited to icemakers and walk-in coolers.

EXCEPTIONS:

1. Replacement of existing icemakers is exempt from this requirement.
2. Use of single-pass cooling for medical and dental equipment during power outages and other emergencies is exempt from this requirement.

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C403.9.2.2 Steam condensate systems. On-site steam heating systems shall have condensate water ((~~heat~~)) recovery. On-site includes a system that is located within or adjacent to one or more buildings within the boundary of a contiguous area or campus under one ownership and which serves one or more of those buildings.

Buildings using steam generated off-site with steam heating systems which do not have condensate water recovery shall have condensate ((~~water~~)) heat recovery.

C403.9.2.3 Refrigeration condenser heat recovery. Facilities having food service, meat or deli departments and having 500,000 Btu/h or greater of remote refrigeration condensers shall have condenser waste heat recovery from freezers and coolers and shall use the waste heat for service water heating, space heating or for dehumidification reheat. Facilities having a gross *conditioned floor area* of 40,000 ft^2 or greater and 1,000,000 Btu/h or greater of remote refrigeration shall have condenser waste heat recovery from freezers and coolers and shall use the waste heat for service water heating, and either for space heating or for dehumidification reheat for maintaining low space humidity. The required heat recovery system shall have the capacity to provide the smaller of:

1. 60 percent of the peak heat rejection load at design conditions; or
2. 50 percent of the sum of the service water heating load plus space heating load.

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C403.10.2 Duct construction. Ductwork shall be constructed and erected in accordance with the *International Mechanical Code*. For the purposes of this section, longitudinal seams are joints oriented in the direction of airflow. Transverse joints are connections of two duct sections oriented perpendicular to airflow. Duct wall penetrations are openings made by any screw, fastener, pipe, rod or wire. All other connections are considered transverse joints, including but not limited to spin-ins, taps and other branch connections, access door frames and jambs, and duct connections to equipment.

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C403.10.2.2 Medium-pressure duct systems. Ducts and plenums designed to operate at a static pressure greater than 2 inches water gauge (w.g.) (500 Pa) but less than 3 inches w.g. (750 Pa) shall be insulated and sealed in accordance with Section C403.10.1. Pressure classifications specific to the *duct system* shall be clearly indicated on the construction documents in accordance with the *International Mechanical Code*.

C403.10.2.3 High-pressure and exterior duct systems. Ducts designed to operate at static pressures equal to or greater than 3 inches water gauge (w.g.) (750 Pa) and all supply and return

ductwork located outside the *building thermal envelope* that serves a *conditioned space* shall be insulated and sealed in accordance with Section ((~~C403.2.10.1~~)) C403.10.1. In addition, ducts and plenums shall be leak-tested in accordance with the SMACNA *HVAC Air Duct Leakage Test Manual* and shown to have a rate of air leakage (*CL*) less than or equal to 4.0, regardless of the Design Construction Pressure Class level, as determined in accordance with Equation 4-9. Ducts shall be tested using a pressure equal to the average operating pressure or the design Duct Construction Pressure Class level in accordance with the SMACNA HVAC Air Duct Leakage Test Manual.

$CL = F/P^{0.65}$ **(Equation 4-9)**

Where:

F = The measured leakage rate in cfm per 100 square feet of duct surface.

P = The static pressure of the test.

Documentation shall be furnished by the designer demonstrating that representative sections totaling at least 25 percent of the duct area have been tested and that all tested sections meet the requirements of this section.

C403.10.3 Piping insulation. All piping, other than refrigerant piping, serving as part of a heating or cooling system shall be thermally insulated in accordance with Table C403.10.3.

Exceptions:

1. Factory-installed piping within HVAC equipment tested and rated in accordance with a test procedure referenced by this code.
2. Factory-installed piping within room fan-coils and unit ventilators tested and rated according to AHRI 440 (except that the sampling and variation provisions of Section 6.5 shall not apply) and 840, respectively.
3. Piping that conveys fluids that have a design operating temperature range between 60°F (15°C) and 105°F (41°C).
4. Piping that conveys fluids that have not been heated or cooled through the use of fossil fuels or electric power.
5. Strainers, control valves, and balancing valves associated with piping 1 inch (25 mm) or less in diameter.
6. Direct buried piping that conveys fluids at or below 60°F (15°C).

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C403.10.3.1 Protection of piping insulation. Piping insulation exposed to weather shall be protected from damage, including that due to sunlight, moisture, equipment maintenance and wind, and shall provide shielding from solar radiation that can cause degradation of the material. ((~~Adhesives~~)) Adhesive tape shall not be permitted.

C403.10.4 Insulation of refrigerant piping. Refrigerant piping, other than piping factory installed in HVAC equipment, shall have minimum 1/2-inch insulation within conditioned spaces and 1-inch insulation outside of conditioned spaces, at a conductivity rating of 0.21 to 0.26 Btu x in/(h x ft^2 x °F) with a mean temperature rating of 75°F.

C403.11 Mechanical systems located outside of the building thermal envelope. Mechanical systems providing heat outside of the thermal envelope of a building shall be configured to comply with Section C403.11.1 through C403.11.3.

C403.11.1 Heating outside a building or in unheated spaces. Systems installed to provide heat outside a building or in unheated spaces shall be radiant systems.

Such heating systems shall be controlled by an occupancy sensing device or a timer switch, so that the system is automatically deenergized when no occupants are present in the area heated by each individual device for a period not to exceed 20 minutes.

C403.12 High efficiency single-zone variable air volume (VAV) systems. For HVAC systems subject to the requirements of Section C403.3.5 but utilizing Exception 2 of that section, a high efficiency single-zone VAV system may be provided without a separate parallel DOAS when the system is designed, installed, and configured to comply with all of the following criteria. (This ((~~exception~~)) option shall not be used as a substitution for a DOAS per Section C406.6 or as a modification to the requirements for the *Standard Reference Design* in accordance with Section C407):

1. The single-zone VAV system is provided with airside economizer in accordance with Section 403.3 without exceptions.
2. A direct-digital control (DDC) system is provided to control the system as a single zone in accordance with Section C403.4.11 regardless of sizing thresholds of Table C403.4.11.1.
3. Single-zone VAV systems with a minimum outdoor air requirement of 1,000 cfm (472 L/s) or greater shall be equipped with a device capable of measuring outdoor airflow intake under all load conditions. The system shall be capable of increasing or reducing the outdoor airflow intake based on Section C403.7.1, Demand controlled ventilation.
4. Allowable fan motor horsepower shall not exceed 90 percent of the allowable HVAC *fan system bhp* (Option 2) as defined by Section C403.8.1.1.
5. Each single-zone VAV system shall be designed to vary the supply fan airflow as a function of heating and cooling load and minimum fan speed shall not be more than the greater of:
   5.1. 30 percent of peak design airflow; or
   5.2. The required ventilation flow assuming no occupants.
6. Spaces that are larger than 150 square feet (14 m^2) and with an occupant load greater than or equal to 25 people per 1000 square feet (93 m^2) of floor area (as established in Table 403.3.1.1 of the *International Mechanical Code*) shall be provided with all of the following features:
   6.1. *Demand control ventilation* (DCV) shall be provided that utilizes a carbon dioxide sensor to reset the ventilation set point of the single-zone VAV system from the design minimum to design maximum ventilation rate as required by Chapter 4 of the *International Mechanical Code*.
   6.2. Occupancy sensors shall be provided that are configured to reduce the minimum ventilation rate to zero and setback room temperature set points by a minimum of 5°F, for both cooling and heating, when the space is unoccupied.
7. Single-zone VAV systems shall comply with one of the following options:
   7.1. Single-zone VAV air handling units with a hydronic heating coil connected to systems with hot water generation equipment limited to the following types of equipment: gas-fired hydronic boilers with a thermal efficiency, E_t, of not less than 92 percent, air-to-water heat pumps or heat recovery chillers. Hydronic heating coils shall be sized for a maximum entering hot water temperature of 120°F for peak anticipated heating load conditions.
   7.2. Single-zone VAV air handing units with a chilled water coil connected to systems with chilled water generation equipment with IPLV values more than 25 percent higher than the minimum part load efficiencies listed in Table C403.3.2(7), in the appropriate size category, using the same test procedures. Equipment shall be listed in the appropriate certification program to qualify. The smallest chiller or compressor in the central plant shall not exceed 20 percent of

the total central plant cooling capacity or the chilled water system shall include thermal storage sized for a minimum of 20 percent of the total central cooling plant capacity.

7.3. Single-zone VAV air handling units with DX cooling, heat pump heating or gas-fired furnace shall comply with the following requirements as applicable:

7.3.1. Have a DX cooling coil with cooling part load efficiency that are a minimum of 15 percent higher than the minimum SEER or IEER listed in Tables C403.3.2(1) and C403.3.2(2).

7.3.2. Have a gas-fired furnace with a thermal efficiency, Et, of not less than 90 percent or heat pump with a minimum heating HSPF or COP efficiency that are a minimum of 10 percent higher than the minimum heating efficiency in Tables C403.3.2(1) and C403.3.2(2).

7.3.3. Heating coils or burner output shall be modulating or have a minimum of 2 stages with the first stage being less than 50 percent of total heating capacity. Cooling coils shall be modulating or have a minimum of 2 stages with the first stage being less than 50 percent of the total cooling capacity.

8. The DDC system shall include a fault detection and diagnostics (FDD) system complying with the following:

8.1. The following temperature sensors shall be permanently installed to monitor system operation:

8.1.1. Outside air.

8.1.2. Supply air.

8.1.3. Return air.

8.2. Temperature sensors shall have an accuracy of ±2°F (1.1°C) over the range of 40°F to 80°F (4°C to 26.7°C).

8.3. The single-zone VAV air handling unit controller shall be configured to provide system status by indicating the following:

8.3.1. Free cooling available.

8.3.2. Economizer enabled.

8.3.3. Compressor enabled.

8.3.4. Heating enabled.

8.3.5. Mixed air low limit cycle active.

8.3.6. The current value of each sensor.

8.4. The single-zone VAV air handling unit controller shall be capable of manually initiating each operating mode so that the operation of compressors, economizers, fans and the heating system can be independently tested and verified.

8.5. The single-zone VAV air handling unit shall be configured to report faults to a fault management application able to be accessed by day-to-day operating or service personnel or annunciated locally on zone thermostats.

8.6. The FDD system shall be configured to detect the following faults:

8.6.1. Air temperature sensor failure/fault.

8.6.2. Not economizing when the unit should be economizing.

8.6.3. Economizing when the unit should not be economizing.

8.6.4. Outdoor air or return air damper not modulating.

8.6.5. Excess outdoor air.

***

C403.14 Compressed air and vacuum air. Compressed air and vacuum air systems shall comply with all of the following:

EXCEPTION: Compressed air and vacuum air systems used for medical purposes are exempt from this section.

1. Air Compressors (50-150 PSI), General: Air compressors operating at 50-150 PSI shall comply with the following:
   a. All water drains shall be “no air loss” drains.
   b. Timed unheated desiccant air driers shall not be allowed.
2. Rotary Screw Air Compressors over 10 hp (50-150 PSI): Rotary screw air compressors over 10 hp operating at 50-150 PSI shall not rely on modulation control and shall have one of the following:
   a. Receiver capacity greater than three gallons per cfm to allow efficient load/unload control;
   b. Variable speed drive controlled air compressor; or
   c. Multiple air compressors using a smaller trim-air compressor to trim. The trim compressor shall use variable speed drive control, or shall use load/unload control with greater than three gallon receiver capacity per cfm for the trim air compressor.

C403.15 Commercial food service. The following types of equipment within the scope of the applicable Energy Star program shall comply with the energy-efficiency and water-efficiency criteria required to achieve the Energy Star label:

   a. Commercial fryers: Energy Star Program Requirements for Commercial Fryers.
   b. Commercial hot food holding cabinets: Energy Star Program Requirements for Hot Food Holding Cabinets.
   c. Commercial steam cookers: Energy Star Program Requirements for Commercial Steam Cookers.
   d. Commercial dishwashers: Energy Star Program Requirements for Commercial Dishwashers.

SECTION C404

SERVICE WATER HEATING AND PRESSURE-BOOSTER SYSTEMS

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TABLE C404.2

MINIMUM PERFORMANCE OF WATER-HEATING EQUIPMENT

EQUIPMENT TYPE	SIZE CATEGORY (input)	SUBCATEGORY OR RATING CONDITION	PERFORMANCE REQUIRED[a, b]	TEST PROCEDURE
Water heaters, electric	≤ 12 kW[d]	Tabletop[e], ≥ 20 gal and < 120 gal	0.93 - 0.00132*V*, EF	DOE 10 CFR Part 430
		Resistance ≥ 20 gal and ≤ 55 gal	0.960 - 0.0003*V*, EF	
		Grid-enabled[f] > 75 gal and ≤ 120 gal	1.061 - 0.00168*V*, EF	
	> 12 kW	Resistance ≥ 20 gal	~~(((0.3 + 27)/V_m, %/h[g]))~~ (0.3 + 27/V_m), %/h[g]	Section G.2 of ANSI Z21.10.3
	≤ 24 amps and ≤ 250 volts	Heat pump	2.057 - 0.00113*V*, EF	DOE 10 CFR Part 430
Instantaneous water heaters, electric	All	Resistance	0.93 - 0.00132*V*, EF	DOE 10 CFR Part 430
Storage water heaters, gas	≤ 75,000 Btu/h	≥ 20 gal and ≤ 55 gal	0.675 - 0.0015*V*, EF	DOE 10 CFR Part 430
		>55 gal and ≤100 gal	0.8012 – 0.00078*V*, EF	

	> 75,000 Btu/h	< 4,000 Btu/h/gal	80% E_t (Q/800 +110$\sqrt{V}$)SL, Btu/h	Section G.1 and G.2 of ANSI Z21.10.3
Instantaneous water heaters, gas	> 50,000 Btu/h and < 200,000 Btu/h	≥ 4,000 (Btu/h)/gal and < 2 gal	0.82 - 0.0019*V*, EF	DOE 10 CFR Part 430
	≥ 200,000 Btu/h[c]	≥ 4,000 Btu/h/gal and < 10 gal	80% E_t	Section G.1 and G.2 of ANSI Z21.10.3
	≥ 200,000 Btu/h	≥ 4,000 Btu/h/gal and ≥10 gal	80% E_t (Q/800 +110$\sqrt{V}$)SL, Btu/h	
Storage water heaters, oil	≤ 105,000 Btu/h	≥20 gal	0.68 - 0.0019*V*, EF	DOE 10 CFR Part 430
	> 105,000 Btu/h	< 4,000 Btu/h/gal	80% E_t (Q/800 +110$\sqrt{V}$)SL, Btu/h	Section G.1 and G.2 of ANSI Z21.10.3
Instantaneous water heaters, oil	≤ 210,000 Btu/h	≥ 4,000 Btu/h/gal and < 2 gal	0.59 - 0.0019V, EF	DOE 10 CFR Part 430
	> 210,000 Btu/h	≥ 4,000 Btu/h/gal and < 10 gal	80% E_t	Section G.1 and G.2 of ANSI Z21.10.3
	> 210,000 Btu/h	≥ 4,000 Btu/h/gal and ≥10 gal	78% E_t (Q/800 +110$\sqrt{V}$)SL, Btu/h	
Hot water supply boilers, gas and oil	≥ 300,000 Btu/h and < 12,500,000 Btu/h	≥ 4,000 Btu/h/gal and < 10 gal	80% E_t	Section G.1 and G.2 of ANSI Z21.10.3
Hot water supply boilers, gas	≥ 300,000 Btu/h and < 12,500,000 Btu/h	≥4,000 Btu/h/gal and ≥10 gal	80% E_t (Q/800 +110$\sqrt{V}$)SL, Btu/h	
Hot water supply boilers, oil	≥ 300,000 Btu/h and < 12,500,000 Btu/h	≥ 4,000 Btu/h/gal and > 10 gal	78% E_t (Q/800 +110$\sqrt{V}$)SL, Btu/h	
Pool heaters, gas and oil	All	—	82% E_t	ASHRAE 146
Heat pump pool heaters	All	—	4.0 COP	AHRI 1160
Unfired storage tanks[h]	All	—	Minimum insulation requirement R-12.5 (h x ft^2 x °F)/Btu	(none)

For SI: °C = [(°F) - 32]/1.8, 1 British thermal unit per hour = 0.2931 W, 1 gallon = 3.785 L, 1 British thermal unit per hour per gallon = 0.078 W/L.

a. Energy factor (EF) and thermal efficiency (*Et*) are minimum requirements. In the EF equation, *V* is the rated volume in gallons.

b. Standby loss (SL) is the maximum Btu/h based on a nominal 70°F temperature difference between stored water and ambient requirements. In the SL equation, *Q* is the nameplate input rate in Btu/h. In the SL equation for electric water heaters, *V* is the rated volume in gallons and V_m is the measured volume in gallons. In the SL equation for oil and gas water heaters and boilers, *V* is the rated volume in gallons.

c. Instantaneous water heaters with input rates below 200,000 Btu/h must comply with these requirements if the water heater is designed to heat water to temperatures 180°F or higher.

d. Electric water heaters with an input rating of 12kW (40,950 Btu/h) or less that are designed to heat water to temperatures of 180°F or greater shall comply with the requirements for electric water heaters that have an input rating greater than 12 kW.

e. A tabletop water heater is a water heater that is enclosed in a rectangular cabinet with a flat top surface not more than three feet (0.91 m) in height.

f. A grid-enabled water heater is an electric resistance water heater that meets all of the following:

1. Has a rated storage tank volume of more than 75 gallons.
2. Is manufactured on or after April 16, 2015.
3. Is equipped at the point of manufacture with an activation lock.
4. Bears a permanent label applied by the manufacturer that complies with all of the following:

   4.1 Is made of material not adversely affected by water.

   4.2 Is attached by means of non-water soluble adhesive.

   4.3 Advises purchasers and end-users of the intended and appropriate use of the product with the following notice printed in 16.5 point Arial Narrow Bold font: "IMPORTANT INFORMATION: This water heater is intended only for use as a part of an electric thermal storage or demand response program. It will not provide adequate hot water unless enrolled in such a program and activated by your utility company or another program operator. Confirm the availability of a program in your local area before purchasing or installing this product."

g. %/h is the energy consumed to replace the heat lost from the tank while on standby, expressed as a percentage of the total energy in the stored water per hour.

h. In accordance with Section C404.6.1

C404.2.1 High input-rated service water heating systems for other than Group R-1 and R-2 occupancies. In new buildings where the combined input rating of the water-heating equipment serving other than Group R-1 and R-2 occupancies installed in a building is equal to or greater than 1,000,000 Btu/h (293 kW), the combined input-capacity-weighted-average efficiency of water-heating equipment shall be no less than the following for each water heating fuel source:

1. Electric: A rated COP of not less than 2.0. For air-source heat pump equipment, the COP rating will be reported at the design leaving heat pump water temperature with an entering air temperature of 60°F (15.6°C) or less.
2. Fossil Fuel: A rated E_t of not less than 90 percent as determined by the applicable test procedures in Table C404.2.

[Jurisdiction] Informative Note. Section C404.2.1 will remain in force only until December 31, 2021.

Exceptions:

1. Permits applied for on or after January 1, 2022.

((~~1~~)) 2. Where not less than 25 percent of the annual service water-heating requirement is provided from any of the following sources:

((~~1.1~~)) 2.1. Renewable energy generated on site that is not being used to satisfy another requirement of this code; or

((~~1.2~~)) 2.2. Site recovered energy that is not being used to satisfy other requirements of this code.

((~~2~~)) 3. Redundant equipment intended to only operate during equipment failure or periods of extended maintenance.

((~~3~~)) 4. Electric resistance heated systems installed as part of an *alteration* where the water heating equipment is installed at the grade level in a building with a height of four stories or greater.

((~~4~~)) 5. Hot water heat exchangers used to provide service water heating from a district utility (steam, heating hot water).

((~~5~~)) 6. Water heaters provided as an integral part of equipment intended to only heat or boost the heat of water used by that equipment.

((~~6~~)) 7. For electric heat systems, supplemental water heaters not meeting this criteria that function as auxiliary heating only when the outdoor temperature is below 32°F (0°C) or when a defrost cycle is required are not required to have a rated COP of 2.0. Such systems shall be sized and configured to lock out electric resistance or fossil fuel heating from operation when the outdoor temperature is above 32°F (0°C) unless the system is in defrost operation.

8. Electric instantaneous water heaters that serve toilet room handwashing lavatory faucets or kitchenette sink faucets without service water heating circulation systems and without water storage.

C404.2.2 High input-rated service water heating system for Group R-1 and R-2 occupancies.

[Jurisdiction] Informative Note. Section C404.2.2 will remain in force only until December 31, 2021.

In new buildings with over 1,000,000 Btu/h installed service water heating capacity serving Group R-1 and R-2 occupancies, at least 25 percent of annual water heating energy shall be provided from any combination of the following water heating sources:

1. Renewable energy generated on site that is not being used to satisfy other requirements of this code; or

2. Site-recovered energy that is not being used to satisfy other requirements of this code.

Exceptions:

1. Permits applied for on or after January 1, 2022.

2. Compliance with this section is not required if the combined input-capacity-weighted average equipment rating for each service water heating fuel source type is not less than the following:

2.1. Electric Resistance: An electric resistance water heater water with a rating of 105% of the rated efficiency of Table C404.2.

2.2. Electric Heat Pump (10 CFR Part 430): A heat pump water heater rated in accordance with 10 CFR Part 430 with a rating of 105% of the rated efficiency of Table C404.2.

2.3. Electric Heat Pump (not listed in accordance with 10 CFR Part 430): A heat pump water heater not rated in accordance with 10 CFR Part 430 shall have a COP of not less than 2.0. For air-source heat pump equipment the COP rating will be reported at the design leaving heat pump water temperature with an entering air temperature of 60°F (15.6°C) or less. Supplemental water heaters not meeting the above criteria that function as auxiliary heating only when the outdoor temperature is below 32°F (0°) or when a defrost cycle is required are not required to have a rated COP of 2.0. Such systems shall be sized and configured to lock out electric resistance or fossil fuel heating from operation when the outdoor temperature is above 32°F (0°C) unless the system is in defrost operation.

2.4. Fossil Fuels: A rated E_t of not less than 90% as determined by the applicable test procedures in Table C404.2.

2.5. Hot water heat exchangers used to provide service water heating from a district utility (steam, heating hot water).

C404.2.3 Group R-1 and R-2 occupancies with central service water heating systems. In buildings with central service water heating systems serving four or more Group R-1 or R-2 dwelling or sleeping units, the primary water heating equipment shall not use fossil fuel combustion or electric resistance. Service hot water shall be provided by an air-source heat pump water heating (HPWH) system meeting the requirements of this section. Supplemental service water heating equipment is permitted to use electric resistance in compliance with Section C404.2.3.4.

Exceptions.

1. Permits applied for prior to January 1, 2022.
2. Solar thermal, wastewater heat recovery, other approved waste heat recovery, ground source heat pump, watersource heat pump system utilizing waste heat, and combinations thereof, are permitted to offset all or any portion of the required HPWH capacity where such systems comply with this code and the Uniform Plumbing Code.
3. Systems meeting the requirements of the Northwest Energy Efficiency Alliance (NEEA) Advanced Water Heater Specifications for central service water heating systems.

[Jurisdiction] Informative Note: As of the publication of this code, publication of the NEEA AWHS for central service water heating systems is still pending. See https://neea.org/resources/advanced-water-heating-specification for updated information.

C404.2.3.1 Primary heat pump system sizing. The system shall include a primary service minimum output at 40°F outdoor air temperature that provides sufficient hot water for R-1 and/or R-2 occupancy uses as calculated using the equipment manufacturer's selection criteria or another *approved* methodology. Air source heat pumps shall be sized to deliver no less than 50 percent of the calculated demand for hot water production during the peak demand period when entering air temperature is 24°F.

Exception. 50 percent sizing at 24°F is not required for heat pumps located in a below-grade enclosed parking structure or other ventilated and unconditioned space that is not anticipated to fall below 40°F at any time.

[Jurisdiction] Informative Note: Estimates of the appropriate heat pump system sizing and hot water storage volume for HPHW systems, calculated per bedroom or per occupant, vary widely, depending on type of use, output capacity of the heat pumps, and other factors.

C404.2.3.2 Primary hot water storage sizing. The system shall provide sufficient hot water, as calculated using a *approved* methodology, to satisfy peak demand period requirements.

C404.2.3.3. System Design. The service water heating system shall be configured to conform to one of the following provisions.

1. For *single-pass* HPWHs, *temperature maintenance* heating provided for reheating return water from the building's heated water circulation system shall be physically decoupled from the primary service water heating system storage tank(s) in a manner that prevents destratification of the primary system storage tanks. *Temperature maintenance* heating is permitted to be provided by electric resistance or a separate dedicated heat pump system.
2. For *multi-pass* HPWHs, recirculated *temperature maintenance* water is permitted to be returned to the primary water storage tanks for reheating.

C404.2.3.3.1 Mixing valve. A thermostatic mixing valve capable of supplying hot water to the building at the user temperature set point shall be provided, in compliance with requirements of the Uniform Plumbing Code and the HPWH manufacturer's installation guidelines. The mixing valve shall be sized and rated to deliver tempered water in a range from the minimum flow of the *temperature maintenance* recirculation system up to the maximum demand for the fixtures served.

C404.2.3.4. Supplemental Water Heaters. Total supplemental electric resistance water heating equipment shall not have an output capacity greater than the primary water heating equipment at

40°F entering air temperature. Supplemental electric resistance heating is permitted for the following uses:

1. *Temperature maintenance* of heated-water circulation systems, physically separate from the primary service water heating system. *Temperature maintenance* heating capacity shall be no greater than the primary water heating capacity at 40°F.
2. Defrost of compressor coils.
3. Heat tracing of piping for freeze protection or for *temperature maintenance* in lieu of recirculation of hot water.
4. Backup or low ambient temperature conditions, where all of the following are true:
    a. The supplemental heating capacity is no greater than the primary service water heating capacity at 40°F.
    b. During normal operations the supplemental heating is controlled to operate only when the entering air temperature at the air-source HPWH is below 40°F, and the primary HPWH compressor continues to operate together with the supplemental heating when the entering air temperature is between 17°F and 40°F.
    c. The primary water heating equipment cannot satisfy the system load due to equipment failure or entering air temperature below 40°F.
5. Supplemental heating downstream from a *multi-pass* HPWH system.
6. Stand-alone electric water heaters serving single zones not served by the central water heating system.

C404.2.3.5 Alarms. The control system shall be capable of and configured to send automatic error alarms to building or maintenance personnel upon detection of equipment faults, low leaving water temperature from primary storage tanks, or low hot water supply delivery temperature to building distribution system.

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TABLE C404.3.1

PIPING VOLUME AND MAXIMUM PIPING LENGTHS

NOMINAL PIPE SIZE (inches)	VOLUME (liquid ounces per foot length)	MAXIMUM PIPING LENGTH (feet)	
		Public lavatory faucets	Other fixtures and appliances
1/4	0.33	6	50
5/16	0.5	4	50
3/8	0.75	3	50
1/2	1.5	((~~2~~)) 8	43
5/8	2	((~~1~~)) 8	32
3/4	3	0.5	21
7/8	4	0.5	16
1	5	0.5	13
11/4	8	0.5	8
11/2	11	0.5	6
2 or larger	18	0.5	4

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C404.4 Heat traps for hot water storage tanks. Storage tank-type water heaters and hot water storage tanks that have vertical water pipes connecting to the inlet and outlet of the tank shall be provided with integral heat traps at ((~~those~~)) such vertical inlets and outlets or shall have pipe-configured heat traps in the piping connected to those inlets and outlets. Tank inlets and outlets associated with solar water heating system circulation loops shall not be required to have heat traps.

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C404.6.1 Storage tank insulation. Unfired storage tanks used to store service hot water at temperatures above 130°F shall be wrapped with an insulating product, installed in accordance with the insulation manufacturer's instructions and providing a minimum of R-2 additional insulation for every 10°F increase in stored water temperature above 130°F. Such additional insulation is also permitted to be integral to the tank. The insulation is permitted to be discontinuous at structural supports.

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C404.7.1 Circulation systems. Heated-water circulation systems shall be provided with a circulation pump. The system return pipe shall be a dedicated return pipe. Gravity and thermo-syphon circulation systems shall be prohibited. Controls shall start the pump based on the identification of a demand for hot water within the occupancy, according to the requirements of Sections C404.7.1.1 and C404.7.1.2.

***

C404.7.1.2 Multiple riser systems. Where the circulation system serves multiple domestic hot water risers or piping zones, controls shall be provided such that they can be set to switch off the pump during extended periods when hot water is not required. System shall include means for balancing the flow rate through each individual hot water supply riser or piping zone. For heated water circulation systems that have multiple risers and use a variable flow circulation pump, each riser shall have a self-actuating thermostatic balancing valve.

C404.7.1.3 Electronic thermostatic mixing valve (TMV). Where a heated water circulation system utilizes an electronic TMV to control the temperature of hot water supplied to the building, the TMV shall be configured so that it either reverts closed (fully COLD) or maintains its current valve position upon power failure or cessation of circulation flow.

***

C404.7.3.1 Pipe insulation. For heated water circulation systems, both supply and return pipe insulation shall be at minimum 1.0 inch thicker than that required by Table C403.10.3.

Exception. Where piping is centered within a wall, ceiling, or floor framing cavity with a depth at least 4" greater than the diameter of the pipe and that is completely filled with batt or blown-in insulation, additional pipe insulation is not required.

C404.8 Demand recirculation controls. *Demand recirculation water systems* are not permitted. ((~~shall have controls that comply with both of the following:~~

1. ~~The controls shall start the pump upon receiving a signal from the action of a user of a fixture or appliance, sensing the presence of a user of a fixture or sensing the flow of hot or tempered water to a fixture fitting or appliance.~~
2. ~~The controls shall limit the temperature of the water entering the cold water piping to not greater than 104°F (40°C)~~))

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C404.11.1 Heaters. Pool water heaters using electric resistance heating as the primary source of heat are prohibited for pools over 2,000 gallons. Heat pump pool heaters shall have a minimum COP of 4.0 at 50°F db, 44.2°F wb outdoor air and 80°F entering water, determined in accordance with ((~~ASHRAE Standard 146~~)) AHRI Standard 1160, Performance Rating of Heat Pump Pool Heaters. Other pool heating equipment shall comply with the applicable efficiencies in Section C404.2.

The electric power to all heaters shall be controlled by an on-off switch that is an integral part of the heater, mounted on the exterior of the heater, or external to and within 3 feet of the heater in a location with *ready access*. Operation of such switch shall not change the setting of the heater thermostat. Such switches shall be in addition to a circuit breaker for the power to the heater. Gas fired heaters shall not be equipped with constant burning pilot lights.

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SECTION C405

ELECTRICAL POWER AND LIGHTING SYSTEMS

C405.1 General. This section covers lighting system controls, the maximum lighting power for interior and exterior applications, electrical energy consumption, vertical and horizontal transportation systems, and minimum efficiencies for motors and transformers. Receptacles shall be controlled according to Section C405.10. *Controlled receptacles* and lighting systems shall be commissioned according to Section C405.12. Solar readiness shall be provided according to Section C411 and renewable energy shall be provided according to Section C412.

Dwelling units within multi-family buildings shall comply with Sections C405.1.1 and C405.7. All other *dwelling unit*s in dormitory, hotel and other residential occupancies that are not classified as multi-family residential occupancies shall comply with Section C405.2.5 and Section C405.1.1 or Section C405.4. *Sleeping units* shall comply with Section C405.2.5 and Section C405.1.1 or Section C405.4.

Lighting installed in *walk-in coolers*, *walk-in freezers*, *refrigerated warehouse coolers* and *refrigerated warehouse freezers* shall comply with the lighting requirements of Section C410.2.

Transformers, uninterruptable power supplies, motors and electrical power processing equipment in *data center systems* shall comply with Section 8 of ASHRAE Standard 90.4 in addition to this code.

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C405.2 Lighting controls. Lighting systems shall be provided with controls that comply with ((~~one~~)) item 1 or item 2 of the following:

1. Lighting controls as specified in Sections C405.2.1 through C405.2.7. In addition, any contiguous open office area larger than 5,000 square feet shall have its general lighting controlled by either:

   1.1. An enhanced digital lighting control system conforming to the requirements of Section C406.4; or

   1.2. Luminaire-level lighting controls (LLLC) conforming to the requirements in Item 2 of this subsection.

2. *Luminaire level lighting controls (LLLC)* for all areas and lighting controls specified in Sections C405.2.1, C405.2.3 and C405.2.5. The *LLLC luminaire*s shall be independently configured to:

   2.1. Monitor occupant activity to brighten or dim lighting when occupied or unoccupied, respectively.

2.2. Monitor ambient light, both electric and daylight, and brighten or dim artificial light to maintain desired light level. A maximum of 8 fixtures are permitted to be controlled together to maintain uniform light levels within a single *daylight zone*.

2.3. For each control strategy, be capable of configuration and re-configuration of performance parameters including: bright and dim set points, timeouts, dimming fade rates, sensor sensitivity adjustments, and wireless zoning configuration.

Exception to Section C405.2: Except for specific application controls required by Section C405.2.5, lighting controls are not required for the following:

1. Areas designated as security or emergency areas that are required to be continuously lighted.
2. Means of egress illumination serving the exit access that does not exceed ((~~0.02~~)) 0.01 watts per square foot of building area is exempt from this requirement.
3. Emergency egress lighting that is normally off.
4. Industrial or manufacturing process areas, as may be required for production and safety.

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C405.2.1.3 Occupant sensor control function in open plan office areas. Occupant sensor controls in open plan office spaces less than 300 square feet (28 m^2) in area shall comply with Section C405.2.1.1. Occupant sensor controls in all other open plan office spaces shall be configured to comply with all of the following:

1. General lighting is controlled separately in control zones with floor areas not greater than 600 square feet (55 m^2) within the open plan office space.
2. Automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the open plan office space.
3. General lighting power in each control zone is reduced by not less than 80 percent of the full zone general lighting power within 20 minutes of all occupants leaving that control zone. Control functions that switch control zone lights completely off when the zone is unoccupied meet this requirement.
4. *Daylight responsive control*s activate open plan office space general lighting or control zone general lighting only when occupancy for the same area is detected.
5. Lighting controls in open plan office areas larger than 5,000 square feet must also comply with Section C405.2(1).

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C405.2.2.1 Time switch control function. Time switch controls shall comply with the following:

1. Have a minimum 7 day clock.
2. Be capable of being set for 7 different day types per week.
3. Incorporate an *automatic* holiday "shut-off" feature, which turns off all controlled loads for at least 24 hours and then resumes normally scheduled operations.
4. Have program back-up capabilities, which prevent the loss of program and time settings for at least 10 hours, if power is interrupted.
5. Include an override switching device that complies with the following:
   1.1 The override switch shall be a manual control.
   1.2 The override switch, when initiated, shall permit the controlled lighting to remain on for not more than 2 hours.
   1.3 Any individual override switch shall control the lighting for an area not larger than ((~~5,000~~)) 2,500 square feet (((~~465~~)) 232 m^2).

2. Time switch controls are allowed to automatically turn on lighting to full power in corridors, lobbies, restrooms, storage rooms less than 50 square feet, and medical areas of healthcare facilities. In all other spaces, time switch controls are allowed to automatically turn on the lighting to not more than 50 percent power.

Exception: Within mall concourses, auditoriums, sales areas, manufacturing facilities, pools, gymnasiums, skating rinks and sports arenas:

1.1. The time limit shall be permitted to be greater than 2 hours provided the switch is a *captive key device*.

1.2. The area controlled by the override switch shall not be limited to 5,000 square feet (465 m^2) provided that such area is less than 20,000 square feet (1860 m^2).

C405.2.3 Manual controls. Stairwells and parking garages are not permitted to use manual switches. All other lighting shall have manual controls complying with the following:

1. They shall be in a location with *ready access* to occupants.
2. They shall be located where the controlled lights are visible, or shall identify the area served by the lights and indicate their status.
3. Each control device shall control an area no larger than a single room or 2,500 square feet, whichever is less, if the room area is less than or equal to 10,000 square feet; or one-quarter of the room or 10,000 square feet, whichever is less, if the room area is greater than 10,000 square feet.

Exceptions:

1. A manual control may be installed in a remote location for the purpose of safety or security provided each remote control device has an indicator pilot light as part of or next to the control device and the light is clearly labeled to identify the controlled lighting.
2. Restrooms.

C405.2.3.1 Light reduction controls. Manual controls shall be configured to provide light reduction control that allows the occupant to reduce the connected lighting load between 30 and 70 percent. Lighting reduction shall be achieved by one of the following *approved* methods:

1. Controlling all lamps or luminaires.
2. Dual switching of alternate rows of luminaires, alternate luminaires or alternate lamps.
3. Switching the middle lamp in three-lamp luminaires independently of the outer lamps.
4. Switching each luminaire or each lamp.

Exceptions:

1. Light reduction controls are not required in *daylight zone*s with *daylight responsive controls* complying with Section C405.2.4.
2. Where provided with manual control, the following areas are not required to have light reduction control:
   2.1. Spaces that have only one luminaire with a rated power of less than 100 watts.
   2.2. Spaces that use less than 0.6 watts per square foot (6.5 W/m^2).
   2.3. Lighting in corridors, lobbies, electrical rooms, restrooms, storage rooms, airport concourse baggage areas, dwelling and sleeping rooms and mechanical rooms.

C405.2.4 Daylight responsive controls. *Daylight responsive controls* complying with Section C405.2.4.1 shall be provided to control the lighting within *daylight zones* in the following spaces:

1. Sidelit zones as defined in Section C405.2.4.2 with more than two general lighting fixtures within the combined primary and secondary sidelit zones.

2. Toplit zones as defined in Section C405.2.4.3 with more than two general lighting fixtures within the *daylight zone*.

Exception: *Daylight responsive control*s are not required for the following:

1. Spaces in health care facilities where patient care is directly provided.
2. Lighting that is required to have specific application control in accordance with Section C405.2.5.
3. Sidelit zones on the first floor above grade in Group A-2 and Group M occupancies where the *fenestration* adjoins a sidewalk or other outdoor pedestrian area, provided that the light fixtures are controlled separately from the general area lighting.
4. *Daylight zone*s where the total proposed lighting power density is less than 35 percent of the lighting power allowance per Section C405.4.2.

C405.2.4.1 Daylight responsive controls function. Where required, *daylight responsive control*s shall be provided within each space for control of lights in that space and shall comply with all of the following:

1. Lights in primary sidelit t zones shall be controlled independently of lights in secondary sidelit zones in accordance with Section C405.2.4.2.

   Exception: Spaces enclosed by walls or ceiling height partitions with no more than three general lighting fixtures may have combined *daylight zone* control of primary and secondary *daylight zone*s provided *uniform illumination* can be achieved.

2. Lights in toplit zones in accordance with Section C405.2.4.3 shall be controlled independently of lights in sidelit zones in accordance with Section C405.2.4.2.
3. *Daylight responsive controls* within each space shall be configured so that they can be calibrated from within that space by authorized personnel.
4. Calibration mechanisms shall be in a location with *ready access*.
5. *Daylight responsive controls* shall be configured to completely shut off all controlled lights in that zone.
6. Lights in sidelit zones in accordance with Section C405.2.4.2 facing different cardinal orientations (i.e., within 45 degrees of due north, east, south, west) shall be controlled independently of each other.

   Exception: Up to two light fixtures in each space are permitted to be controlled together with lighting in a *daylight zone* facing a different cardinal orientation.

7. Incorporate time-delay circuits to prevent cycling of light level changes of less than three minutes.
8. The maximum area a single *daylight responsive control* device serves shall not exceed 2,500 square feet (232 m^2) and no more than 60 lineal feet (18.3 m) of facade.
9. Occupant override capability of daylight dimming controls is not permitted, other than a reduction of light output from the level established by the daylighting controls.
10. *Daylight responsive controls* shall be set initially to activate at 30 footcandles (323 lux) or not more than 110 percent of the illuminance level specified on the construction documents.

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C405.2.5 Additional lighting controls. Specific application lighting shall be provided with controls, in addition to controls required by other sections, for the following:

1. The following lighting shall be controlled by an occupant sensor complying with Section C405.2.1.1 or a time-switch control complying with Section C405.2.2.1 In addition, a manual control shall be provided to control such lighting separately from the general lighting in the space:

   1.1. Display and accent.

   1.2. Lighting in display cases.

   1.3. Supplemental task lighting, including permanently installed under-shelf or under-cabinet lighting.

   1.4. Lighting equipment that is for sale or demonstration in lighting education.

2. *Sleeping units* shall have control devices or systems configured to automatically switch off all permanently installed luminaires and switched receptacles, including those installed within furniture, within 20 minutes after all occupants have left the unit.

   Exceptions:
   1. Lighting and switched receptacles controlled by card key controls.
   2. Spaces where patient care is directly provided.

3. Permanently installed luminaires within *dwelling unit*s shall be provided with controls complying with either Section C405.2.1.1 or C405.2.3.1.

4. Lighting for nonvisual applications, such as plant growth and food warming, shall be controlled by a dedicated control that is independent of the controls for other lighting within the room or space. ((~~Each control zone shall be no greater than the area served by a single luminaire or 4,000 square feet, whichever is larger.~~))

5. Luminaires serving the exit access and providing means of egress illumination required by Section 1006.1 of the *International Building Code*, including luminaires that function as both normal and emergency means of egress illumination shall be controlled by a combination of listed emergency relay and occupancy sensors, or signal from another building control system, that automatically shuts off the lighting when the areas served by that illumination are unoccupied.

   Exception: Means of egress illumination serving the exit access that does not exceed ((~~0.02~~)) 0.01 watts per square foot of building area is exempt from this requirement.

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C405.2.6.2 Facade and landscape lighting shutoff. Building facade and landscape lighting shall be configured to automatically shut off ((~~for a minimum of 6 hours per night or from not later than one hour after business closing to not earlier than one hour before business opening, whichever is less~~)) between midnight or business/facility closing, whichever is later, and 6 a.m. or business/facility opening, whichever is earlier.

Exception: Areas where an *automatic* shutoff would endanger safety or security.

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C405.4.1 Total connected interior lighting power. The total connected interior lighting power shall be determined in accordance with Equation 4-10.

As an option, in areas of the building where all interior lighting equipment is fed from dedicated lighting branch circuits, the total connected interior lighting power is permitted to be calculated as the sum of the capacities of the lighting branch circuits serving those areas. For the purposes of this section, the connected interior lighting power of a 20-ampere circuit is considered to be 16 amperes,

and that of a 15-ampere circuit is 12 amperes. Use of this alternative and the boundaries of the applicable areas shall be clearly documented on the electrical construction documents.

(Equation 4-10)

$TCLP = [LVL + BLL + TRK + POE + \text{Other}]$

Where:

TCLP = Total connected lighting power (watts)

LVL = For luminaires with lamps connected directly to building power, such as line voltage lamps, the rated wattage of the lamp, which must be minimum 60 lumen/watt.

BLL = For luminaires incorporating a ballast or transformer, the rated input wattage of the ballast or transformer when operating the lamp.

TRK = For lighting track, cable conductor, rail conductor and plug-in busway systems that allow the addition and relocation of luminaires without rewiring, the wattage shall be one of the following:

1. The specified wattage of the luminaires, but not less than 16 W/lin. ft. (52 W/lin. m).
2. The wattage limit of the permanent current-limiting devices protecting the system.
3. The wattage limit of the transformer supplying the system.

POE = For other modular lighting systems served with power supplied by a driver, power supply or transformer, including but not limited to low-voltage lighting systems, the wattage of the system shall be the maximum rated input wattage of the driver, power supply or transformer published in the manufacturer's catalogs, as specified by UL 2108 or 8750. For power-over-Ethernet lighting systems, power provided to installed non-lighting devices may be subtracted from the total power rating of the power-over-Ethernet system.

Other = The wattage of all other luminaires and lighting, sources not covered above and associated with interior lighting verified by data supplied by the manufacturer or other *approved* sources.

The connected power associated with the following lighting equipment and applications is not included in calculating total connected lighting power

1. Television broadcast lighting for playing areas in sports arenas
2. Emergency lighting automatically off during normal building operation.
3. Lighting in spaces specifically designed for use by occupants with special lighting needs including those with visual impairment and other medical and age-related issues.
4. Casino gaming areas.
5. General area lighting power in industrial and manufacturing occupancies dedicated to the inspection or quality control of goods and products.
6. Mirror lighting in dressing rooms.

7. Task lighting for medical and dental purposes that is in addition to general lighting and controlled by an independent control device.
8. Display lighting for exhibits in galleries, museums and monuments that is in addition to general lighting and controlled by an independent control device.
9. Lighting for theatrical purposes, including performance, stage, film production and video production.
10. Lighting for photographic processes.
11. Lighting integral to equipment or instrumentation and installed by the manufacturer.
12. ((~~Task lighting~~)) Lighting for plant growth or maintenance where the lamp ((~~efficacy is not less than 90 lumens per watt~~)) has a tested photosynthetic photon efficacy (PPE) per watt of not less than 1.70 micromoles per joule for *greenhouses* and 1.90 micromoles per joule for indoor plant growth spaces.
13. Advertising signage or directional signage.
14. Lighting for food warming.
15. Lighting equipment that is for sale.
16. Lighting demonstration equipment in lighting education facilities.
17. Lighting *approved* because of safety considerations.
18. Lighting in retail display windows, provided the display area is enclosed by ceiling-height partitions.
19. Furniture mounted supplemental task lighting that is controlled by *automatic* shutoff.
20. Exit signs.
21. Lighting used for aircraft painting.
22. Germicidal lighting that is in addition to and controlled independently from the general lighting.

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C405.4.2.2 Space-by-space method. For the Space-by-Space Method, the interior lighting power allowance is determined by multiplying the floor area of each space times the value for the space type in Table C405.4.2(2) that most closely represents the proposed use of the space, and then summing the lighting power allowances for all spaces. Tradeoffs among spaces other than covered parking areas are permitted.

Each area enclosed by partitions that are 80 percent of the ceiling height or taller shall be considered a separate space and assigned the appropriate space type from Table C405.4.2(2). If a space has multiple functions where more than one space type is applicable, that space shall be broken up into smaller subspaces, each using their own space type. Any of these subspaces that are smaller in floor area than 20 percent of the *enclosed space* and less than 1,000 square feet need not be broken out separately.

TABLE C405.4.2(1)

INTERIOR LIGHTING POWER ALLOWANCES: BUILDING AREA METHOD

Building Area Type	((~~LPD (w/ft²)~~))	LPD (w/ft²)
Automotive facility	((~~0.64~~))	0.58
Convention center	((~~0.64~~))	0.58
Court house	((~~0.79~~))	0.71
Dining: Bar lounge/leisure	((~~0.79~~))	0.71
Dining: Cafeteria/fast food	((~~0.72~~))	0.65
Dining: Family	((~~0.71~~))	0.64
Dormitory[a,b]	((~~0.46~~))	0.41
Exercise center	((~~0.67~~))	0.60
Fire station[a]	((~~0.54~~))	0.49
Gymnasium	((~~0.75~~))	0.68
Health care clinic	((~~0.70~~))	0.63
Hospital[a]	((~~0.84~~))	0.84
Hotel/motel[a,b]	((~~0.56~~))	0.50
Library	((~~0.83~~))	0.75
Manufacturing facility	((~~0.82~~))	0.74
Motion picture theater	((~~0.44~~))	0.40
Multifamily[c]	((~~0.41~~))	0.37
Museum	((~~0.55~~))	0.50
Office	((~~0.64~~))	0.58
Parking garage	((~~0.14~~))	0.13
Penitentiary	((~~0.65~~))	0.65
Performing arts theater	((~~0.84~~))	0.76
Police station	((~~0.66~~))	0.60
Post office	((~~0.65~~))	0.59
Religious building	((~~0.67~~))	0.60
Retail	((~~0.84~~))	0.76
School/university	((~~0.70~~))	0.63

Building Area Type	**((~~LPD (w/ft^2)~~))**	**LPD (w/ft^2)**
Sports arena	((~~0.62~~))	0.54
Town hall	((~~0.69~~))	0.62
Transportation	((~~0.50~~))	0.45
Warehouse	((~~0.40~~))	0.36
Workshop	((~~0.91~~))	0.82

a. Where sleeping units are excluded from lighting power calculations by application of Section R404.1, neither the area of the sleeping units nor the wattage of lighting in the sleeping units is counted.

b. Where *dwelling unit*s are excluded from lighting power calculations by application of Section R404.1, neither the area of the *dwelling unit*s nor the wattage of lighting in the *dwelling unit*s is counted.

c. *Dwelling unit*s are excluded. Neither the area of the *dwelling unit*s nor the wattage of lighting in the dwelling units is counted.

TABLE C405.4.2(2)

INTERIOR LIGHTING POWER ALLOWANCES: SPACE-BY-SPACE METHOD

Common Space-by-Space Types[a]	**((~~LPD (w/ft2)~~))**	**LPD (w/ft2)**
Atrium - Less than 20 feet in height	((~~0.39~~))	0.35
Atrium - 20 to 40 feet in height	((~~0.48~~))	0.43
Atrium - Above 40 feet in height	((~~0.60~~))	0.54
Audience/seating area - Permanent		
In an auditorium	((~~0.61~~))	0.55
In a gymnasium	((~~0.23~~))	0.21
In a motion picture theater	((~~0.27~~))	0.24
In a penitentiary	((~~0.67~~))	0.67
In a performing arts theater	((~~1.16~~))	1.04
In a religious building	((~~0.72~~))	0.65
In a sports arena	((~~0.33~~))	0.30
Otherwise	((~~0.23~~))	0.21
Banking activity area	((~~0.61~~))	0.55
Breakroom (see lounge/breakroom)		
Classroom/lecture hall/training room		
In a penitentiary	((~~0.89~~))	0.89
Otherwise[m]	((~~0.71~~))	0.64
Computer room, data center	((~~0.94~~))	0.85
Conference/meeting/multipurpose	((~~0.97~~))	0.87
Confinement cell	((~~0.70~~))	0.63
Copy/print room	((~~0.31~~))	0.28
Corridor		
In a facility for the visually impaired (and not used primarily by the staff)[b]	((~~0.71~~))	0.71
In a hospital	((~~0.71~~))	0.71
In a manufacturing facility	((~~0.41~~))	0.37
Otherwise[c,q]	((~~0.41~~))	0.37
Courtroom[c]	((~~1.20~~))	1.08
Dining area		
In a penitentiary	((~~0.42~~))	0.42

In a facility for the visually impaired (and not used primarily by the staff)b	((~~1.27~~))	1.27
In a bar/lounge or leisure dining[n]	((~~0.86~~))	0.77
In cafeteria or fast food dining	((~~0.40~~))	0.36
In a family dining area[n]	((~~0.60~~))	0.54
Otherwise	((~~0.43~~))	0.39
Electrical/mechanical	((~~0.43~~))	0.39
Emergency vehicle garage	((~~0.52~~))	0.47
Food preparation	((~~1.09~~))	0.98
Guest room[a,b]	((~~0.41~~))	0.37
Laboratory	((~~1.11~~))	1.00
In or as a classroom	((~~1.33~~))	1.20
Otherwise		
Laundry/washing area	((~~0.53~~))	0.48
Loading dock, interior	((~~0.88~~))	0.79
Lobby[c]		
In a facility for the visually impaired (and not used primarily by the staff)[b]	((~~1.69~~))	1.69
For an elevator	((~~0.65~~))	0.59
In a hotel	((~~0.51~~))	0.46
In a motion picture theater	((~~0.23~~))	0.21
In a performing arts theater	((~~1.25~~))	1.13
Otherwise	((~~0.84~~))	0.76
Locker room	((~~0.52~~))	0.47
Lounge/breakroom[n]	((~~0.42~~))	0.42
In a health care facility	((~~0.59~~))	0.53
Otherwise		
Office		
Enclosed ≤ 250	((~~0.74~~))	0.67
Enclosed > 250	((~~0.66~~))	0.59
Open plan	((~~0.61~~))	0.55
Parking area, interior	((~~0.15~~))	0.14
Pharmacy area	((~~1.66~~))	1.66
Restroom		
In a facility for the visually impaired (and not used primarily by the staff)[b]	((~~1.26~~))	1.26
Otherwise[n]	((~~0.63~~))	0.57

Sales area	((~~1.05~~))	0.95
Seating area, general	((~~0.23~~))	0.21
((~~Stairway (see space containing stairway)~~))		
Stairwell[n]	((~~0.49~~))	0.44
Storage room		
< 50 ft2	((~~0.51~~))	0.46
50-100 ft2	((~~0.38~~))	0.34
All other storage	((~~0.38~~))	0.34
Vehicular maintenance	((~~0.60~~))	0.54
Workshop	((~~1.26~~))	1.13

TABLE C405.4.2(2) (continued)

INTERIOR LIGHTING POWER ALLOWANCES: SPACE-BY-SPACE METHOD

Building Specific Space-by-Space Types[a]	**((~~LPD (w/ft2)~~))**	**LPD (w/ft2)**
Automotive (see vehicular maintenance)	((~~0.60~~))	
Convention center - Exhibit space	((~~0.61~~))	0.55
Dormitory living quarters[a,b]	((~~0.50~~))	0.45
Facility for the visually impaired[b]		
In a chapel (and not used primarily by the staff)	((~~0.70~~))	0.70
In a recreation room (and not used primarily by the staff)	((~~1.77~~))	1.77
Fire stations[g]		
Sleeping quarters	((~~0.23~~))	0.21
Gymnasium/fitness center		
In an exercise area	((~~0.90~~))	0.83
In a playing area	((~~0.85~~))	0.77
Health care facility		
In an exam/treatment room	((~~1.40~~))	1.40
In an imaging room	((~~0.94~~))	0.94
In a medical supply room	((~~0.62~~))	0.62
In a nursery	((~~0.92~~))	0.92
In a nurse's station	((~~1.17~~))	1.17
In an operating room	((~~2.26~~))	2.26
In a patient room[g]	((~~0.68~~))	0.68
In a physical therapy room	((~~0.91~~))	0.91
In a recovery room	((~~1.25~~))	1.25
Library[f]		
In a reading area[n]	((~~0.96~~))	0.86
In the stacks	((~~1.10~~))	0.99
Manufacturing facility		

In a detailed manufacturing area	((~~0.80~~))	0.72
In an equipment room	((~~0.76~~))	0.68
In an extra high bay area (greater than 50-foot floor-to-ceiling height)	((~~1.42~~))	1.28
In a high bay area (25 - 50-foot floor-to-ceiling height)	((~~1.24~~))	1.12
In a low bay (< 25-foot floor-to-ceiling height)	((~~0.86~~))	0.77
Museum		
In a general exhibition area	((~~0.31~~))	0.28
In a restoration room	((~~1.10~~))	0.99
Performing arts theater dressing/fitting room	((~~0.41~~))	0.37
Post office - Sorting area	((~~0.76~~))	0.69
Religious buildings		
In a fellowship hall[n]	((~~0.54~~))	0.49
In a worship/pulpit/choir area[n]	((~~0.85~~))	0.77
Retail facilities		
In a dressing/fitting room	((~~0.51~~))	0.46
In a mall concourse	((~~0.82~~))	0.74
Sports arena - Playing area		
For a Class 1 facility[i]	((~~2.94~~))	2.94
For a Class 2 facility[j]	((~~2.01~~))	2.01
For a Class 3 facility[k]	((~~1.30~~))	1.30
For a Class 4 facility[l]	((~~0.86~~))	0.86
Transportation		
In a baggage/carousel area	((~~0.39~~))	0.35
In an airport concourse	((~~0.25~~))	0.23
At a terminal ticket counter[n]	((~~0.51~~))	0.46
Warehouse - Storage area		
For medium to bulky palletized items	((~~0.33~~))	0.30

For smaller, hand-carried items	((~~0.69~~))	0.62

Keys to Table C405.4.2(2)

For SI: 1 foot = 304.8 mm, 1 watt per square foot = 11 W/m^2.

Footnotes to Table C405.4.2(2)

a. In cases where both a common space type and a building area specific space type are listed, the building area specific space type shall apply.
b. A facility for the visually impaired is a facility that is licensed or will be licensed by local or state authorities for senior long-term care, adult daycare, senior support or people with special visual needs.
c. For spaces in which lighting is specified to be installed in addition to, and controlled separately from, the general lighting for the purposed of highlighting art or exhibits, provided that the additional lighting power shall not exceed 0.5 W/ft^2 of such spaces.
d. RESERVED.
e. RESERVED.
f. RESERVED.
g. Where sleeping units are excluded from lighting power calculations by application of Section R404.1, neither the area of the sleeping units nor the wattage of lighting in the sleeping units is counted.
h. Where *dwelling unit*s are excluded from lighting power calculations by application of Section R404.1, neither the area of the *dwelling unit*s nor the wattage of lighting in the *dwelling unit*s is counted.
i. Class I facilities consist of professional facilities; and semi-professional, collegiate or club facilities with seating for 5,000 or more spectators.
j. Class II facilities consist of collegiate and semi-professional facilities with seating for fewer than 5,000 spectators; club facilities with seating between 2,000 and 5,000 spectators; and amateur league and high school facilities with seating for more than 2,000 spectators.
k. Class III facilities consist of club, amateur league and high school facilities with seating for 2,000 or fewer spectators.
l. Class IV facilities consist of elementary school and recreational facilities; and amateur league and high school facilities without provisions for spectators.
m. For classrooms, additional lighting power allowance of 4.50 W/lineal foot of white or chalk boards for directional lighting dedicated to white or chalk boards.
n. Additional lighting power allowance of 0.30 W/square foot for ornamental lighting. Qualifying ornamental lighting includes luminaires such as chandeliers, sconces, lanterns, neon and cold cathode, light emitting diodes, theatrical projectors, moving lights and light color panels when any of those lights are used in a decorative manner that does not serve as display lighting or general lighting.
o. For scientific laboratories, additional lighting power allowance of 0.35 Watts per square foot for specialized task work – lighting that provides for small-scale, cognitive or fast performance visual tasks; lighting required for operating specialized equipment associated with pharmaceutical/laboratorial activities.
p. For offices, additional lighting power allowance of 0.20 W/square foot for portable lighting, which includes under shelf or furniture-mounted supplemental task lighting qualifies when controlled by a time clock or an occupancy sensor.
q. For corridors, additional lighting power allowance of 0.25 W/square foot for display lighting and decorative lighting where provided for aesthetic purposes. Decorative lighting fixtures in corridors are also permitted to provide general lighting. This additional allowance is not permitted to be used together with the allowance in footnote c for highlighting art or exhibits.

C405.4.2.2.1 Additional interior lighting power. Where using the Space-by-Space Method, an increase in the interior lighting power allowance is permitted for specific lighting functions. Additional power shall be permitted only where the specified lighting is installed and automatically controlled separately from the general lighting, to be turned off during nonbusiness hours. This additional power shall be used only for the specified luminaires and shall not be used for any other purpose. An increase in the interior lighting power allowance is permitted for lighting equipment to be installed in sales areas specifically to highlight merchandise. The additional lighting power shall be determined in accordance with Equation 4-11:

Additional interior lighting power allowance = 500 watts + (Retail Area 1 x 0.45 W/ft^2) + (Retail Area 2 x 0.45 W/ft^2) + (Retail Area 3 x 1.05 W/ft^2) + (Retail Area 4 x 1.87 W/ft^2)

(Equation 4-11)

Where:

Retail Area 1	=	The floor area for all products not listed in Retail Area 2, 3 or 4.
Retail Area 2	=	The floor area used for the sale of vehicles, sporting goods and small electronics.
Retail Area 3	=	The floor area used for the sale of furniture, clothing, cosmetics and artwork.
Retail Area 4	=	The floor area used for the sale of jewelry, crystal and china.

Exception: Other merchandise categories are permitted to be included in Retail Areas 2 through 4, provided that justification documenting the need for additional lighting power based on visual inspection, contrast, or other critical display requirement is *approved* by the *code official*.

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C405.5.2 Total connected exterior building lighting power. The total exterior connected lighting power shall be the total maximum rated wattage of all exterior lighting that is powered through the energy service for the building.

Exception: Lighting used for the following applications shall not be included:

1. Lighting *approved* because of safety considerations.
2. Emergency lighting automatically off during normal business operation.
3. Exit signs.
4. Specialized signal, directional and marker lighting associated with transportation.
5. Advertising signage or directional signage.
6. Integral to equipment or instrumentation and is installed by its manufacturer.
7. Theatrical purposes, including performance, stage, film production and video production.
8. Athletic playing areas.
9. Temporary lighting.
10. Industrial production, material handling, transportation sites and associated storage areas.
11. Theme elements in theme/amusement parks.
12. Lighting integrated within or used to highlight features of art, public monuments and the national flag.
13. Lighting for water features and swimming pools.
14. Lighting that is controlled from within *dwelling unit*s, where the lighting complies with Section R404.1.

C405.5.3 Exterior lighting power allowance. The total exterior lighting power allowance is the sum of the base site allowance plus the individual allowances for areas that are to be illuminated by lighting that is powered through the energy service for the building. Covered parking garage lighting is not considered exterior lighting for the purposes of this calculation. Lighting power allowances are

as specified in Table C405.5.3(2). The lighting zone for the building exterior is determined in accordance with Table C405.5.3(1) unless otherwise specified by the *code official*.

TABLE C405.5.3(1)

EXTERIOR LIGHTING ZONES

LIGHTING ZONE	DESCRIPTION
1	Developed areas of national parks, state parks, forest land, and rural areas
2	Areas predominantly consisting of residential zoning, neighborhood business districts, light industrial with limited nighttime use and residential mixed use areas
3	All other areas not classified as lighting zone 1, 2 or 4
((4)) Not used	((~~High-activity commercial districts in major metropolitan areas as designated by the local land use planning authority~~))

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C405.5.5 Full cutoff luminaires. For open parking and outdoor areas and roadways, luminaires mounted more than 15 feet above the ground shall have a luminaire light distribution in which zero candela intensity occurs at an angle of 90 degrees above nadir, and all greater angles from nadir.

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C405.7.1 Electric receptacles at dwelling unit gas appliances. Where *dwelling unit* appliances are served by natural gas, an electrical receptacle and circuit shall be provided at each gas appliance with sufficient capacity to serve a future electric appliance in the same location. The receptacles and circuits shall be included in the electrical service load calculation and shall meet the requirements of items 1 through 3 below. The receptacle for each gas appliance shall be located within 12 inches of the appliance and without obstructions between the appliance and the outlet. An electric receptacle is not required for a decorative gas fireplace.

1. Each gas range, cooktop, or oven, or combination appliance, location shall be served by a dedicated 240/208-volt, 40-amp receptacle connected to the *dwelling unit* electric panel with a 3-conductor branch circuit complying with 210.19(A)(3) of the electrical code and a minimum included load of 9600 VA for 240-volt systems or 8000 VA for 208-volt systems.
2. Each gas clothes dryer location shall be served by a dedicated 240/208-volt, 30-amp receptacle connected to the *dwelling unit* electric panel with a 3-conductor branch circuit and a minimum included load of 5000 VA.
3. Each gas domestic water heater location shall be served by a dedicated 240/208 volt, 30-amp outlet connected to the *dwelling unit* electrical panel with a 3-conductor branch circuit and a minimum included load of 4500 VA.

C405.8 Electric motor efficiency. All electric motors, fractional or otherwise, shall meet the minimum efficiency requirements of Tables C405.8(1) through C405.8(4) when tested and rated in accordance with DOE 10 CFR. The efficiency shall be verified through certification under an *approved* certification program, or, where no certification program exists, the equipment efficiency rating shall be supported by data furnished by the motor manufacturer.

Exception: The standards in this section shall not apply to the following exempt electric motors.

1. Air-over electric motors.
2. Component sets of an electric motor.
3. Liquid-cooled electric motors.
4. Submersible electric motors.
5. Inverter-only electric motors.

Fractional hp fan motors that are 1/12 hp or greater and less than 1 hp (based on output power) which are not covered by Tables C405.8(3) and C405.8(4) shall be electronically commutated motors or shall have a minimum motor efficiency of 70 percent when rated in accordance with DOE 10 CFR 431. These motors shall also have the means to adjust motor speed for either balancing or remote control. Belt-driven fans may use sheave adjustment for airflow balancing in lieu of a varying motor speed.

Exceptions:

1. Motors that are an integral part of specialized process equipment.
2. Where the motor is integral to a listed piece of equipment for which no complying motor has been *approved*.

3. Motors used as a component of the equipment meeting the minimum efficiency requirements of Section C403.3.2 and Tables C403.3.2(1) through ((~~C403.3.2(12)~~)) C403.3.2(13), provided that the motor input is included when determining the equipment efficiency.
4. Motors in the airstream within fan coils and terminal units that operate only when providing heating to the space served.
5. Fan motors that are not covered by Tables C405.8(1) through C405.8(4) and are used to power heat recovery ventilators, energy recovery ventilators, or local exhaust fans in Group R subject to the efficacy requirements of Section C403.8.4.
6. Domestic clothes dryer booster fans, range hood exhaust fans, and domestic range booster fans that operate intermittently.
7. Radon and contaminated soil exhaust fans.
8. Group R heat recovery ventilator and energy recovery ventilator fans that are less than 400 cfm.

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C405.9.2 Escalators and moving walks. Escalators and moving walks shall comply with ASME A17.1/CSA B44 and shall have *automatic* controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.

Exception: A variable voltage drive system that reduces operating voltage in response to light loading conditions ((~~may~~)) is permitted to be provided in ((~~place~~)) lieu of the variable speed function.

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C405.10 Controlled receptacles. At least 50 percent of all 125 volt 15- and 20-ampere receptacles installed in private offices, open offices, conference rooms, rooms used primarily for printing and/or copying functions, break rooms, individual workstations and classrooms, including those installed in modular partitions and modular office workstation systems, shall be controlled as required by this section. ((~~In rooms larger than 200 square feet (19 m^2),~~)) Either split receptacles shall be provided, with the top receptacle(s) controlled, or a *controlled receptacle* shall be located within ((~~72~~)) 12 inches (((~~1.8~~)) 0.3 m) of each uncontrolled receptacle. *Controlled receptacles* shall be visibly differentiated from standard receptacles using the standard symbol required by the Electrical Code and shall be controlled by one of the following *automatic control devices*:

1. An occupant sensor that turns receptacle power off when no occupants have been detected for a maximum of 20 minutes.
2. A time-of-day operated control device that turns receptacle power off at specific programmed times and can be programmed separately for each day of the week. The control device shall be configured to provide an independent schedule for each portion of the building not to exceed 5,000 square feet (465 m^2) and not to exceed one full floor. The device shall be capable of being overridden for periods of up to two hours by a timer in a location with *access* to occupants. Any individual override switch shall control the *controlled receptacles* for a maximum area of 5,000 square feet (465 m^2). Override switches *for controlled receptacles* are permitted to control the lighting within the same area.

Exceptions:

1. Receptacles designated for specific equipment requiring 24-hour operation, for building maintenance functions, or for specific safety or security equipment are not required to be controlled by an *automatic control device* and are not required to be located within ((~~72~~)) 12 inches of a *controlled receptacle*.
2. Within a single modular office workstation, non-*controlled receptacles* are permitted to be located more than 12 inches, but not more than 72 inches, from the *controlled receptacles* serving that workstation.

[Jurisdiction] Informative Note: The requirements of this section also apply to rooms and spaces that have substantially similar functions to those listed even when they are labeled with different names. For example, an area designed for office functions that is labeled “work room,” or a room used as a classroom that is labeled “student learning” would each be required to provide *controlled receptacles*.

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SECTION C406

EFFICIENCY PACKAGES

C406.1 Additional energy efficiency credit requirements. New buildings and changes in space conditioning, *change of occupancy* and building *addition*s in accordance with Chapter 5 shall comply with sufficient packages from Table C406.1 so as to achieve a minimum number of ((~~six~~)) 8 credits. Each area shall be permitted to apply for different packages provided all areas in the building comply with the requirement for ((~~six~~)) 8 credits. Areas included in the same permit within mixed use buildings shall be permitted to demonstrate compliance by an area weighted average number of credits by building occupancy achieving a minimum number of ((~~six~~)) 8 credits.

Exceptions:

1. Low energy spaces in accordance with Section C402.1.1.1 and equipment buildings in accordance with Section C402.1.2 shall comply with sufficient packages from Table C406.1 to achieve a minimum number of ((~~three~~)) 4 credits.
2. Building additions that have less than 1,000 square feet of *conditioned floor area* shall comply with sufficient packages from Table C406.1 to achieve a minimum number of ((~~three~~)) 4 credits.

C406.1.1 Tenant spaces. Initial tenant improvement shall comply with sufficient packages from Table C406.1 to achieve a minimum number of ((~~six~~)) 8 credits when the space is fully built out. In buildings with multiple tenant spaces, each tenant space is permitted to apply for different packages provided all areas in the building comply with the requirement for ((~~six~~)) 8 credits when the space is fully built-out. This provision only applies to the initial buildout of a tenant space.

[Jurisdiction] Informative Note: In this section “tenant space” means any conditioned area within a new building that is constructed for first occupancy under a separate permit from the shell and core permits.

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TABLE C406.1

EFFICIENCY PACKAGE CREDITS

Code Section	Commercial Building Occupancy					
	Group R-1	Group R-2	Group B	Group E	Group M	All Other
	Additional Efficiency Credits					
1. More efficient HVAC performance in accordance with Section C406.2	2.0	3.0	3.0	2.0	1.0	2.0
2. Reduced lighting power: Option 1 in accordance with Section C406.3.1	1.0	1.0	2.0	2.0	3.0	2.0
3. Reduced lighting power: Option 2 in accordance with Section C406.3.2[a]	2.0	3.0	4.0	4.0	6.0	4.0
4. Enhanced lighting controls in accordance with Section C406.4	NA	NA	1.0	1.0	1.0	1.0
5. On-site supply of renewable energy in accordance with C406.5	3.0	3.0	3.0	3.0	3.0	3.0
5.1. 1/3 of renewable energy required by C406.5	1.0	1.0	1.0	1.0	1.0	1.0
5.2. 2/3 of renewable energy required by C406.5	2.0	2.0	2.0	2.0	2.0	2.0
6. Dedicated outdoor air system in accordance with Section C406.6[b]	4.0	((~~4.0~~)) 2.0[d]	4.0	NA	NA	4.0
7. High performance dedicated outdoor air system in accordance with Section C406.7	4.0	4.0	4.0	4.0	4.0	4.0
8. High-efficiency service water heating in accordance with Sections C406.8.1 and C406.8.2	4.0 NA after 1/1/2022	5.0 NA after 1/1/2022	NA	NA	NA	8.0
9. High performance service water heating in ((~~multi-family~~)) R-1 and R-2 buildings in accordance with Section C406.9	7.0 prior to 1/1/2022 5.0 after 1/1/2022	8.0 prior to 1/1/2022 5.0 after 1/1/2022	NA	NA	NA	NA
10. Enhanced envelope performance in accordance with Section C406.10[c]	3.0	6.0	3.0	3.0	3.0	4.0
11. Reduced air infiltration in accordance with Section C406.11[c]	1.0	2.0	1.0	1.0	1.0	1.0
((~~12. Enhanced commercial kitchen equipment in accordance with Section C406.12~~))	((~~5.0~~))	((~~NA~~))	((~~NA~~))	((~~NA~~))	((~~5.0~~))	((~~5.0 (Group A-2 only)~~))

a. Projects using this option may not use Item 2.

b. This option is not available to buildings subject to the prescriptive requirements of Section C403.3.5 or C403.6.

c. Buildings or building areas that are exempt from thermal envelope requirements in accordance with Sections C402.1.1 and C402.1.2 do not qualify for this package.

d. 4.0 credits, instead of 2.0 credits, are permitted to be applied to areas of R-2 occupancy buildings other than *dwelling unit*s, including corridors, lobbies and tenant amenity spaces, where those areas comply with the requirements for this credit.

***

C406.2 More efficient HVAC equipment and fan performance. No less than 90 percent of the total HVAC capacity serving the total *conditioned floor area* of the entire building, building *addition*, building area, occupancy type, or tenant space in accordance with Section C406.1.1, shall comply with Sections C406.2.1 through C406.2.3. ((~~For~~)) In addition, systems required to comply with Section C403.1.1, HVAC total system performance ratio, shall exceed the ((~~minimum requirement~~)) HVAC TSPR of the *standard reference design* by 10 percent. This credit shall not be utilized for low energy or semi-heated *space conditioning categories*.

((~~**Exception:** In low energy spaces complying with Section C402.1.1 and semi-heated spaces complying with Section C402.1.1.2, no less than 90 percent of the installed heating capacity is provided by electric infrared or gas-fired radiant heating equipment for localized heating applications. Stand-alone supply, return and exhaust fans shall comply with Section C406.2.3.~~))

C406.2.1 HVAC system selection. Equipment installed shall be types that are listed in Tables C403.3.2(1) through ((~~C403.3.2(12)~~)) C403.3.2(13) or a combination thereof. Electric resistance heating does not meet this requirement. No HVAC systems incorporating fossil fuel-fired equipment, or heat from district energy systems that are primarily heated by fossil fuel combustion, are permitted to utilize this credit.

((~~**Exception:** Allowed equipment not listed in Tables C403.3.2(1) through ((C403.3.2(12))) C403.3.2(13):~~

1. ~~Air-to-water heat pumps.~~
2. ~~Heat recovery chillers.~~))

C406.2.2 Minimum equipment efficiency. Equipment shall exceed the minimum efficiency requirements listed in Tables C403.3.2(1) through ((~~C403.3.2(12)~~)) C403.3.2(13) by 15 percent, in addition to the requirements of Section C403. Where multiple performance requirements are provided, the equipment shall exceed all requirements by 15 percent.

Exceptions:

1. Equipment that is larger than the maximum capacity range indicated in Tables C403.3.2(1) through ((~~C403.3.2(12)~~)) C403.3.2(13) shall utilize the values listed for the largest capacity equipment for the associated equipment type shown in the table.
2. Equipment complying with the exception to Section C406.2.1 is not required to comply with the minimum equipment efficiency requirement.
3. Compliance may be demonstrated by calculating a total weighted average percentage for all heating and cooling equipment combined. All equipment shall have efficiency that is no less than 5 percent better than the minimum required efficiency in Tables C403.3.2(1) through ((~~C403.3.2(12)~~)) C403.3.2(13), and the resulting weighted average percentage for all equipment performance requirements shall exceed 15 percent. Calculation shall include heating and cooling capacities for all equipment, percentage better or worse than minimum required efficiency per Tables C403.3.2(1) through ((~~C403.3.2(12)~~)) C403.3.2(13) for each performance requirement (SEER, EER/IEER, COP, HSPF, E_t, E_c and AFUE), and the total weighted average efficiency percentage.
4. ((~~Hot water boilers with input capacity greater than 2,500,000 Btu/h shall be considered to comply with this section with a minimum thermal efficiency of 95 percent E_t per the test procedure in 10 CFR Part 431.~~))

***

C406.3 Reduced lighting power. Interior lighting within the whole building, building area, occupancy type, building *addition* or tenant space shall comply with Section C406.3.1 or C406.3.2. *Dwelling unit*s and sleeping units within the building shall comply with Section C406.3.3.

***

C406.3.3 Lamp fraction. No less than 95 percent of the permanently installed light fixtures in *dwelling unit*s and sleeping units shall be provided by high efficacy lamps with a minimum efficacy of 65 lumens per watt. Where the conditioned floor area of residential dwelling units or sleeping units is separated from other building occupancies or building areas for the purposes of the C406 area weighted credit calculation, these dwelling or sleeping unit areas receive the credit weighting for reduced lighting power Option 1, referencing Section C406.3.1, in Table C406.1.

C406.4 Enhanced digital lighting controls. ((~~No~~)) Not less than 90 percent of the total installed interior lighting power within the whole building, building *addition* or tenant space shall comply with Section C406.4.1. Open office areas subject to Section C405.2, item 1 are not permitted to take credit for this option.

C406.4.1 Lighting controls function. Interior lighting shall be located, scheduled and operated in accordance with Section C405.2, and shall be configured with the following enhanced control functions:

1. Luminaires shall be configured for continuous dimming.
2. Each luminaire shall be individually addressed.

   Exceptions to Item 2:

   1. Multiple luminaires mounted on no more than 12 linear feet of a single lighting track and addressed as a single luminaire.
   2. Multiple linear luminaires that are ganged together to create the appearance of a single longer fixture and addressed as a single luminaire, where the total length of the combined luminaires is not more than 12 feet.
3. No more than eight luminaires within a *daylight zone* are permitted to be controlled by a single *daylight responsive control*.
4. Luminaires shall be controlled by a digital control system configured with the following capabilities:
   4.1. Scheduling and illumination levels of individual luminaires and groups of luminaires are capable of being reconfigured through the system.
   4.2. Load shedding.
   4.3. In open and enclosed offices, the illumination level of overhead general illumination luminaires are configured to be individually adjusted by occupants.
   4.4. Occupancy sensors and *daylight responsive control*s are capable of being reconfigured through the system.
5. Construction documents shall include submittal of a Sequence of Operations, including a specification outlining each of the functions required by this section.
6. These control functions shall be commissioned in accordance with Sections C408.1 and C408.3.

C406.5 On-site renewable energy. ((~~A~~)) In addition to the renewable energy required by Section C412 and to renewable energy used to comply with any other requirement of this code, a whole building, building *addition*, building area, occupancy type, or tenant space shall be provided with on-site renewable energy systems with a rated peak renewable energy generating capacity ((~~an annual production per square foot~~)) of no less than ((~~the value specified in Table C406.5~~)) 0.25 watts (or 0.85 BTU/h) per square foot of *conditioned floor area* based on the total *conditioned floor area* of the whole building, building *addition* or tenant space. The on-site renewable energy ((~~used in~~)) provided to

comply with this option shall be separate from on-site renewables ((~~used as part of Section C406.7~~)) provided to comply with C406.8 or used to qualify for any exception in this code.

((~~TABLE C406.5~~

~~ON-SITE RENEWABLE ENERGY SYSTEM RATING~~

~~(PER SQUARE FOOT)~~

~~Building Area Type~~	~~kBTU per year~~	~~kWh per year~~
~~Assembly~~	~~1.8~~	~~0.53~~
~~Dining~~	~~10.7~~	~~3.14~~
~~Hospital~~	~~3.6~~	~~1.06~~
~~Hotel/Motel~~	~~2.0~~	~~0.59~~
~~Multi-family residential~~	~~0.50~~	~~0.15~~
~~Office~~	~~0.82~~	~~0.24~~
~~Other~~	~~2.02~~	~~0.59~~
~~Retail~~	~~1.31~~	~~0.38~~
~~School/University~~	~~1.17~~	~~0.34~~
~~Supermarket~~	~~5.0~~	~~1.47~~
~~Warehouse~~	~~0.43~~	~~0.13))~~

C406.6 Dedicated outdoor air system (DOAS). No less than 90 percent of the total *conditioned floor area* of the whole building, building area, occupancy type, building *addition* or tenant space, excluding floor area of unoccupied spaces that do not require ventilation per the *International Mechanical Code*, shall be served by DOAS installed in accordance with Section C403.3.5. This option is not available to buildings subject to the prescriptive requirements of Section C403.3.5. No HVAC systems incorporating fossil fuel-fired equipment, or heat from district energy systems that are primarily heated by fossil fuel combustion, are permitted to utilize this credit.

C406.7 High performance dedicated outdoor air system (DOAS). A whole building, building area, occupancy type, building *addition* or tenant space which includes a DOAS complying with Section C406.6 shall also provide minimum sensible effectiveness of heat recovery of 80 percent and DOAS total combined fan power less than 0.5 W/cfm of outdoor air. For the purposes of this section, total combined fan power includes all supply, exhaust, recirculation and other fans utilized for the purpose of ventilation. No HVAC systems incorporating fossil fuel-fired equipment, or heat from district energy systems that are primarily heated by fossil fuel combustion, are permitted to utilize this credit.

C406.8 Reduced energy use in service water heating. Buildings with service hot water heating equipment that serves the whole building, building *addition* or tenant space shall comply with Sections C406.8.1 and C406.8.2. No service water heating systems incorporating fossil fuel-fired equipment, or heat from district energy systems that are primarily heated by fossil fuel combustion, are permitted to utilize this credit.

C406.8.1 Building type. Not less than 90 percent of the *conditioned floor area* of the whole building, building area, occupancy type, building *addition* or tenant space shall be of the following types:

1. Group R-1: Boarding houses, hotels or motels. (Not applicable after 1/1/2022)
2. Group I-2: Hospitals, psychiatric hospitals and nursing homes.
3. Group A-2: Restaurants and banquet halls or buildings containing food preparation areas.
4. Group F: Laundries.
5. Group R-2. (Not applicable after 1/1/2022)
6. Group A-3: Health clubs and spas.
7. Buildings with a service hot water load of 10 percent or more of total building energy loads, as shown with an energy analysis as described in Section C407 or as shown through alternate service hot water load calculations showing a minimum service water energy use of 15 k/Btu per square foot per year, as *approved* by the building official..

C406.8.2 Load fraction. Not less than 60 percent of the annual service hot water heating energy use, or not less than 100 percent of the annual service hot water heating energy use in buildings with water-cooled systems subject to the requirements of Section C403.9.5 or qualifying for one of its exceptions, shall be provided by one or more of the following:

1. Service hot water system delivering heating requirements using heat pump technology with a minimum COP of 3.0. For air-source equipment, the COP rating will be reported at the design leaving heat pump water temperature with an entering air temperature of 60°F (15.6°C) or lower. For water-source equipment, the COP rating will be reported at the design leaving load water temperature with an entering water temperature of 74°F (23.3°C) or lower.
2. Waste heat recovery from service hot water, heat recovery chillers, building equipment, process equipment, or other *approved* system. Qualifying heat recovery must be above and beyond heat recovery required by other sections of this code.
3. On site renewable energy water-heating systems, where those systems are in addition to the renewable energy required by Section C412 and any renewable energy used to comply with other requirements of this code.

C406.9 High performance service water heating in hotel and multifamily buildings. For a whole building, building area, occupancy type, building *addition*, or tenant space with not less than 90 percent of the *conditioned floor area* being Group R-1 or R-2 occupancy, not less than 90 percent of the annual building service hot water energy use shall be provided by a heat pump system ((~~with a minimum COP 3.0.~~)) meeting the requirements of Section C404.2.3 plus the following:

1. The refrigerant used in the heat pump system shall have a global warming potential (GWP) no greater than 675.
2. No electric resistance heating capacity shall be provided.
   Exceptions to item 2.
   1. Electric resistance heating is permitted for circulating system *temperature maintenance* and heat tracing of service hot water supply and return piping.
   2. On-demand electric resistance water heaters for hand washing facilities are permitted in public toilet rooms.

((~~This~~)) Prior to January 1, 2022, this efficiency package is allowed to be taken in addition to Section ((~~C406.8.2~~)) C406.8.

C406.10 Enhanced envelope performance. The Proposed Total UA of the thermal envelope of the whole building, building area, occupancy type, or building *addition* shall be 15 percent lower than the Allowable Total UA for an area of identical configuration and fenestration area in accordance with Section C402.1.5 and Equation 4-2. Where exception 3 for Section C412 is also being used, the Proposed Total UA shall be 30 percent lower than the Allowable Total UA as defined in Section C402.1.5.

C406.11 Reduced air ((~~infiltration~~)) leakage. Measured air infiltration of the total *conditioned floor area* of the whole building, fully isolated building *addition*, ((~~or tenant space~~)) building area, or occupancy type shall comply with Section C406.11.1.

C406.11.1 Air leakage testing and verification. Air ((~~infiltration~~)) leakage shall be verified by whole building pressurization testing conducted in accordance with ASTM E779 or ASTM E1827, or an equivalent method *approved* by the *code official*, by an independent third party. The measured air leakage rate of the *building envelope* shall not exceed 0.17 cfm/ft^2 under a pressure differential of 0.3 in. water (75 Pa), with the calculated surface area being the sum of the above and below grade building envelope. A report that includes the tested surface area, floor area, air by volume, stories above grade, and leakage rates shall be submitted to the *code official* and the building owner.

~~((**Exception:** Where the *conditioned floor area* of the building is not less than 250,000 ft^2 (25,000 m^2), air leakage testing shall be permitted to be conducted on representative above-grade sections of the building provided the *conditioned floor area* of tested areas is no less than 25 percent of the *conditioned floor area* of the building and are tested in accordance with this section.))~~

~~((**C406.12 Enhanced commercial kitchen equipment.** For buildings and spaces designated as Group A-2, or facilities whose primary business type involves the use of a commercial kitchen with at least one gas or electric fryer, all fryers, dishwashers, steam cookers and ovens shall comply with all of the following:~~

~~1. Achieve the ENERGY STAR label in accordance with the specifications current as of January 1, 2018.~~
~~2. Be installed prior to the issuance of the certificate of occupancy.~~
~~3. Have the ENERGY STAR qualified model number listed on the construction documents submitted for permitting.~~))

[Jurisdiction] Informative Note: Energy Star commercial kitchen equipment is required for all commercial kitchen projects by Section C403.15.

SECTION C407

TOTAL BUILDING PERFORMANCE

****

C407.2 Mandatory requirements. Compliance with ((~~this section~~)) Section C407 also requires compliance with those sections shown in Table C407.2.

The building permit application for projects utilizing this method shall include in one submittal all building and mechanical drawings and all information necessary to verify that the building envelope and mechanical design for the project corresponds with the annual energy analysis. If credit is proposed to be taken for lighting energy savings, then an electrical permit application shall also be submitted and *approved* prior to the issuance of the building permit. If credit is proposed to be taken for energy savings from other components, then the corresponding permit application (e.g., plumbing, boiler, etc.) shall also be submitted and *approved* prior to the building permit application. Otherwise, components of the project that would not be *approved* as part of a building permit application shall be modeled the same in both the proposed building and the *standard reference design* and shall comply with the requirements of this code.

C407.3 Performance-based compliance. Compliance with this section requires compliance with ASHRAE Standard 90.1 Appendix G, Performance Rating Method, in accordance with Standard 90.1 Section 4.2.1 with the following modifications.

1. The mandatory requirements of Section G1.2.1a of Standard 90.1 are not required to be met.
2. The reduction in annual carbon emissions of the proposed building design associated with on-site renewable energy shall not be more than 3 percent of the total carbon emissions of the baseline building design. This limitation only applies to onsite renewable energy provided in excess of the renewable energy required by Section C412.
    a. The equation PCI + [(PBP_{nre} – PBP)/BBP] – 0.05 < PCIt in Section 4.2.1.1 shall be modified to read PCI + [(PBP_{nre} – PBP)/BBP] – 0.03 < PCIt.
    b. The term PBP_{nre} shall be defined as the proposed building performance without credit for reduced annual energy emissions from on-site renewable energy generation system capacity in excess of that installed to satisfy the requirements of Section C412.
3. References to energy cost in Section 4.2.1.1 and Appendix G shall be replaced by carbon emissions calculated by multiplying site energy consumption by the carbon emission factor from Table C407.3(1).
4. The building performance factors in Table C4.2.1.1 shall be replaced with those in Table C407.3(2).
5. Schedules and plug and process loads shall be modeled using the default values listed in Appendix B or in the ASHRAE 90.1 User's Manual and shall be assumed to be identical in the proposed design and baseline building design.

    Exception to item 5. Alternative schedules and plug and process loads shall be permitted where *approved* by the *code official*.
6. Documentation requirements in Section G1.3.2.d shall be replaced by a list showing compliance with the mandatory provisions of Table C407.2.
7. Documentation requirements in Section G1.3.2.e shall be replaced by a list of aspects of the proposed design that are less stringent than the prescriptive requirements of the Energy Code.
8. References to yet-to-be-designed future building components in the Proposed Building Performance column of Table G3.1 shall be modified to reference the corresponding sections of the Energy Code in lieu of the requirements of Standard 90.1, in the following sections of the table:

    1. Design Model, subclause c.
    6. Lighting, subclause c
    11. Service Water-Heating Systems, subclause c.
    12. Receptacle and Other Loads, subclause b.

9. HVAC Systems, subclauses c and d of Table G3.1, shall meet the following requirements:
    a. For yet-to-be-designed systems in office, retail, library, education, and multifamily buildings and occupancies subject to the TSPR requirements of Section C403.1.1, the system type and efficiency parameters shall meet but not exceed those shown in Table D602.11 Standard Reference Design HVAC Systems.
    b. For all other buildings and occupancies, the system type shall be the same as the system modeled in the baseline design and shall comply with but not exceed the requirements of Section C403 in lieu of Standard 90.1.

c. For HVAC systems serving future tenant spaces, where the current building permit applies to only a portion of an HVAC system, and future components will receive HVAC services from systems included in the current building permit, those future components shall be modeled as the type required to complete the HVAC system portions under the current permit and shall meet but not exceed the requirements found in SectionC403.

[Jurisdiction] Informative Note. The permit applicant is encouraged to schedule a pre-application meeting to discuss the modeling approach for any yet-to-be designed areas that are not included in the C407 permit submissions. In general, future permit submissions should not contribute energy savings to the C407 submission beyond prescriptive code requirements, assuming use of the base building HVAC systems. Future systems must be modeled for the base building permit as being no better than the current prescriptive code, because plans often change and [the Jurisdiction] the City does not have a mechanism for ensuring that future tenant projects meet any beyond-code performance modeled in the original C407 submission.

TABLE C407.2

MANDATORY COMPLIANCE MEASURES FOR TOTAL BUILDING PERFORMANCE METHOD[a]

Section	Title	Comments
	Envelope	
C402.5	Air Leakage	
	Mechanical	
C403.1.2	Calculation of heating and cooling loads	
C403.1.3	*Data center*s	
C403.1.4	Use of electric resistance and fossil fuel-fired heating equipment	
C403.2	System design	
C403.3.1	Equipment and system sizing	
C403.3.2	HVAC equipment performance requirements	
C403.3.6	Ventilation for Group R occupancy	
C403.3.7	Hydronic system flow rate	
C403.4	HVAC system controls	
C403.4.1	Thermostatic controls	Except for C403.4.1.4
C403.4.2	Off-hour controls	Except for Group R
C403.4.7	Combustion heating equipment controls	
C403.4.8	Group R-1 hotel/motel guestrooms	See Section C403.7.4
C403.4.9	Group R-2 and R-3 *dwelling unit*s	
C403.4.10	Group R-2 sleeping units	
C403.4.11	Direct digital control systems,	
C403.4.12	Pressure independent control valves	
C403.5.5	Economizer fault detection and diagnostics (FDD)	
C403.7	Ventilation and exhaust systems	Except for C403.7.6
C403.8	Fan and fan controls	
C403.9.1	Heat rejection equipment (partial)	Only the prohibition on single-pass water cooling systems is mandatory
C403.9.1.1	Variable flow controls	For cooling tower fans ≥ 7.5 hp
C403.9.1.2	Limitation on centrifugal fan cooling towers	For open cooling towers
C403.10	Construction of HVAC elements	
C403.11	Mechanical systems located outside of the *building thermal envelope*	
C403.15	Commercial food service	
	Service Water Heating	
C404	Service Water Heating	
	Lighting and Electrical	
C405.1	General	
C405.2	Lighting controls	
C405.3	Exit signs	
C405.4	Interior lighting power	
C405.5	Exterior building lighting power	
C405.6	Electrical transformers	
C405.7	*Dwelling unit* energy consumption	

C405.8	Electric motor efficiency	
C405.9	Vertical and horizontal transportation	
C405.10	*Controlled receptacles*	
C405.11	Voltage drop in feeders	
Other Requirements		
Section	**Title**	**Comments**
C407	Total Building Performance	
C408	System commissioning	
C409	Energy metering	
C410	Refrigeration requirements	
C411	Solar readiness	
C412	Renewable energy	All on-site renewable energy production is included in the proposed building performance, but not in the baseline building performance.

a. Compliance with any of these sections includes compliance with any exception to that section.

TABLE C407.3(1)

CARBON EMISSIONS FACTORS

	CO2e (lb/unit)	Unit
Electricity	0.70	kWh
Natural Gas	11.7	Therm
Oil	19.2	Gallon
Propane	10.5	Gallon
Other[a]	195.00	mmBtu
On-site renewable energy[b]	0.00	

a. District energy systems may use alternative emission factors supported by calculations approved by the code official.

b. The TSPR calculation does not separately account for the use of renewable energy.

TABLE C407.3(2)

BUILDING PERFORMANCE FACTORS (BPF) TO BE USED FOR COMPLIANCE WITH SECTION C407.3

Building Area Type	Building Performance Factor
Multifamily	((~~0.58~~)) 0.52

Healthcare/hospital	((~~0.54~~)) 0.49
Hotel/motel	((~~0.64~~)) 0.58
Office	((~~0.56~~)) 0.51
Restaurant	((~~0.70~~)) 0.63
Retail	((~~0.47~~)) 0.43
School	((~~0.36~~)) 0.32
Warehouse	((~~0.48~~)) 0.43
All Others	((~~0.54~~)) 0.49

C407.3.1 Limits on ((~~nonmandatory measures~~)) substandard building envelopes. The Proposed Total UA of the proposed building shall be no more than ((~~20~~ 10)) percent higher than the Allowable Total UA as defined in Section C402.1.5. Where either Section C402.4.1.1.1 or C402.4.1.1.2 is used to establish the maximum allowable fenestration area for compliance with this section, all of the requirements of the selected section shall be met.

SECTION C408

SYSTEM COMMISSIONING

C408.1 General. A *building commissioning* process led by a *certified commissioning professional* and functional testing requirements shall be completed for mechanical systems in Section C403; service water heating systems in Section C404; *controlled receptacle* and lighting control systems in Section C405; equipment, appliance and systems installed to comply with Section C406 or C407; ((~~senergy~~)) energy metering in Section C409; and refrigeration systems in Section C410.

Exception: Buildings, or portions thereof, which are exempt from Sections C408.2 through C408.7 may be excluded from the commissioning process.

1. Mechanical systems are exempt from the commissioning process where the building's installed total mechanical equipment capacity is less than 240.000 Btu/h cooling capacity and less than 300,000 Btu/h heating capacity.
2. Service water heating systems are exempt from the commissioning process in buildings where the largest service water heating system capacity is less than 200,000 Btu/h and where there are no pools or permanent spas.
3. Lighting control systems are exempt from the commissioning process in buildings where both the total installed lighting load is less than 20 kW and the lighting load controlled by occupancy sensors or *automatic* daylighting controls is less than 10 kW.
4. Refrigeration systems are exempt from the commissioning process if they are limited to self-contained units.

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C408.4 Controlled receptacle and lighting control system commissioning. *Controlled receptacles* and lighting control systems subject to Section C405 shall be included in the commissioning process required by Section C408.1. The configuration and function of *controlled*

receptacles and lighting control systems required by this code shall be tested and shall comply with Section C408.4.1.

Exception: Lighting control systems and *controlled receptacles* are exempt from the commissioning process in buildings where:

1. The total installed lighting load is less than 20 kW, and
2. The lighting load controlled by occupancy sensors or *automatic* daylighting controls is less than 10 kW.

***

SECTION C409

ENERGY METERING AND ENERGY CONSUMPTION MANAGEMENT

C409.1 General. All new buildings and *additions* shall have the capability of metering source energy for on-site renewable energy production in accordance with Section C409.2.4 and the end-use energy usage for electric vehicle charging in accordance with Section C409.3.4. New buildings and *additions* with a gross *conditioned floor area* over ((~~50,000~~)) 20,000 square feet shall comply with Section C409. Buildings shall be equipped to measure, monitor, record and display energy consumption data for each energy source and end use category per the provisions of this section, to enable effective energy management. For Group R-2 buildings, the floor area of *dwelling unit*s and sleeping units shall be excluded from the total *conditioned floor area* for the purposes of determining the 20,000 square foot threshold. *Alterations* and *additions* to existing buildings shall conform to Section C506.

Exceptions:

1. Tenant spaces smaller than ((~~50,000~~)) 20,000 ft^2 within buildings if the tenant space has its own utility service and utility meters.
2. Buildings in which there is no gross *conditioned floor area* over ((~~25,000~~)) 10,000 square feet, including building common area, that is served by its own utility services and meters.

***

C409.1.2 Conversion factor. Any threshold stated in kW or kVA shall include the equivalent BTU/h heating and cooling capacity of installed equipment at a conversion factor of 3,412 Btu per kW ((~~at 50 percent demand~~)) or 2,730 Btu per kVA.

***

C409.2.1 Electrical energy. This category shall include all electrical energy supplied to the building and its associated site, including site lighting, parking, recreational facilities, and other areas that serve the building and its occupants.

Exception: Where site lighting and other exterior non-building electrical loads are served by an electrical service and meter that are separate from the building service and meter, the metering data from those loads is permitted to be either combined with the building's electrical service load data or delivered to a separate *data acquisition system.*

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C409.2.4 Site-generated renewable energy. This category shall include all net energy generated from on-site solar, wind, geothermal, tidal or other natural sources, and waste heat reclaimed from sewers or other off-site sources. For buildings exempt from data collection systems, the data from these meters is permitted to either be stored locally using a manual totalizing meter or other means at the meter or fed into a central data collection system.

C409.3 End-use metering. Meters shall be provided to collect energy use data for each end-use category listed in Sections C409.3.1 through C409.3.7. These meters shall collect data for the whole building or for each separately metered portion of the building where not exempted by the exception to Section C409.1. Not more than 10 percent of the total connected load of any of the end-use metering categories in Sections C409.3.1 through C409.3.6 is permitted to be excluded from that end-use data collection. Not more than 10 percent of the total connected load of any of the end-use metering categories in Sections C409.3.1 through C409.3.6 is permitted to consist of loads not part of that category. Multiple meters may be used for any end-use category, provided that the *data acquisition system* totals all of the energy used by that category. Full-floor tenant space submetering data shall be provided to the tenant in accordance with Section C409.7, and the data shall not be required to be included in other end-use categories.

Exceptions:

1. HVAC and service water heating equipment serving only an individual *dwelling unit* or sleeping unit does not require end-use metering.
2. Separate metering is not required for fire pumps, stairwell pressurization fans or other life safety systems that operate only during testing or emergency.
3. End use metering is not required for individual tenant spaces not exceeding 2,500 square feet in floor area when a dedicated source meter meeting the requirements of Section C409.4.1 is provided for the tenant space.
4. Healthcare facilities with loads in excess of 150 kVA are permitted to have submetering that measures electrical energy usage in accordance with the normal and essential electrical systems except that submetering is required for the following load categories:

   4.1. HVAC system energy use in accordance with the requirements of Section C409.3.1.

   4.2. Service water heating energy use in accordance with the requirements of Section C409.3.2.

   4.3. Process load system energy in accordance with the requirements of Section ((~~C409.3.5~~)) C409.3.6 for each significant facility not used in direct patient care, including but not limited to, food service, laundry and sterile processing facilities, where the total connected load of the facility exceeds 100 kVA.
5. End-use metering is not required for electrical circuits serving only Iand guest suites within Group R-1 occupancies. This exception does not apply to common areas or to equipment serving multiple sleeping rooms.

C409.3.1 HVAC system energy use. This category shall include all energy including electrical, gas,

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C409.4.3 Energy display. For each building subject to Section C409.2 and C409.3, either a visible display in a location with *ready access*, or a single web page or other electronic document available for *access* to building management or to a third-party energy data analysis service shall be provided in the building available for access to building operation and management personnel. The display shall graphically provide the current energy consumption rate for each whole building energy source, plus each end use category, as well as the total and ((~~peak~~)) maximum hourly consumption values for any day, week, month and year.

The display shall ((~~graphically provide the current energy consumption rate for each whole building energy source, plus each end-use category, as well as the total and peak values for any day, week, month and year~~)) be capable of and configured to graphically display the energy use data for any source or end use category or any combination of sources and end uses for any selected daily, weekly, monthly or annual time period, and to view the selected time period

simultaneously with another selected time period or a reference benchmark time period. The display shall be capable of weather-normalizing data in the comparison time periods and facilitate display of energy use trends and identification of anomalies.

C409.4.4 Commissioning. Energy metering and energy consumption management systems shall be commissioned in accordance with Section ((~~C408~~)) C408.6.

((~~C409.5 Metering for existing buildings.~~

~~C409.5.1 Existing buildings that were constructed subject to the requirements of this section.~~ ~~Where new or replacement systems or equipment are installed in an existing building that was constructed subject to the requirements of this section, metering shall be provided for such new or replacement systems or equipment so that their energy use is included in the corresponding end-use category defined in Section C409.3. This includes systems or equipment added in conjunction with additions or alterations to existing buildings.~~

~~C409.5.1.1 Small existing buildings.~~ ~~Metering and data acquisition systems shall be provided for additions over 25,000 square feet to buildings that were constructed subject to the requirements of this section, in accordance with the requirements of Sections C409.2 and C409.3.~~))

[Jurisdiction] Informative Note: Section C409.5 regarding metering for existing buildings is relocated to Section 506.1.

SECTION C410

REFRIGERATION SYSTEM REQUIREMENTS

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C410.2 Walk-in coolers, walk-in freezers, refrigerated warehouse coolers and refrigerated warehouse freezers. *Refrigerated warehouse coolers, refrigerated warehouse freezers,* and all *walk-in coolers* and *walk-in freezers* including site assembled, site constructed and prefabricated units shall comply with the following. ((:)) Where they comprise any portion of the thermal envelope of the building, they shall comply with the requirements of Section C402, using the R-values or U-values listed in this Section C410.2. Section C402.1.5 component performance alternative is permitted to be used where *approved* by the *code official*.

1. *Automatic* door-closers shall be provided that fully close walk-in doors that have been closed to within 1 inch (25 mm) of full closure.

   Exception: *Automatic* closers are not required for doors more than 45 inches (1143 mm) in width or more than 7 feet (2134 mm) in height.
2. Doorways shall be provided with strip doors, curtains, spring-hinged doors or other method of minimizing infiltration when doors are open.
3. *Walk-in coolers* and *refrigerated warehouse coolers* shall be provided with wall, ceiling, and door insulation of not less than R-25 or have wall, ceiling and door assembly *U*-factors no greater than *U*-0.039. *Walk-in freezers* and *refrigerated warehouse freezers* shall be provided with wall, ceiling and door insulation of not less than R-32 or have wall, ceiling and door assembly *U*-factors no greater than *U*-0.030.

   Exception: Insulation is not required for glazed portions of doors or at structural members associated with the walls, ceiling or door frame.
4. The floor of *walk-in coolers* shall be provided with floor insulation of not less than R-25 or have a floor assembly *U*-factor no greater than *U*-0.040. The floor of *walk-in freezers* shall be provided with floor insulation of not less than R-28 or have a floor assembly *U*-factor no greater than *U*-0.035.

Exception: Insulation is not required in the floor of a *walk-in cooler* that is mounted directly on a slab on grade.

5. Transparent fixed windows and reach-in doors for *walk-in freezers* and windows in *walk-in freezer* doors shall be provided with triple-pane glass, with the interstitial spaces filled with inert gas, or be provided with heat-reflective treated glass.
6. Transparent fixed windows and reach-in doors for *walk-in coolers* and windows for *walk-in cooler* doors shall be provided with double-pane or triple-pane glass, with interstitial spaces filled with inert gas, or be provided with heat-reflective treated glass.
7. Evaporator fan motors that are less than 1 hp (0.746 kW) and less than 460 volts shall be provided with electronically commutated motors, brushless direct-current motors, or 3-phase motors.
8. Condenser fan motors that are less than 1 hp (0.746 kW) shall use electronically commutated motors, permanent split capacitor-type motors or 3-phase motors.
9. Antisweat heaters that are not provided with antisweat heater controls shall have a total door rail, glass and frame heater power draw of not greater than 7.1 W/ft^2 (76 W/m2) of door opening for *walk-in freezers* and not greater than 3.0 W/ft2 (32 W/m2) of door opening for *walk-in coolers*.
10. Where antisweat heater controls are provided, they shall be capable of reducing the energy use of the antisweat heater as a function of the relative humidity in the air outside the door or to the condensation on the inner glass pane.
11. Lights in *walk-in coolers*, *walk-in freezers*, *refrigerated warehouse coolers* and *refrigerated warehouse freezers* shall either be provided with light sources with an efficacy of not less than 40 lumens per watt, including ballast losses, or shall be provided with a device that turns off the lights within 15 minutes of when the *walk-in cooler* or *walk-in freezer* space is not occupied.
12. Evaporator fans in refrigerated warehouses shall be variable speed, and the speed shall be controlled in response to space conditions.

EXCEPTION: Evaporators served by a single compressor without unloading capability.

C410.2.1 Performance standards. Site-assembled and site-constructed walk-in coolers and walk-in freezers shall meet the requirements of Tables C410.2.1.1(1), C410.2.1.1(2) and C410.2.1.1(3).

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C410.3 Refrigeration systems. Refrigerated display cases, *walk-in coolers* or *walk-in freezers* that are served by remote compressors and remote condensers not located in a *condensing unit*, shall comply with Sections C410.3.1, C410.3.2, and C403.9.2.3.

Exception: Systems where the working fluid in the refrigeration cycle goes through both subcritical and supercritical states (transcritical) or that use ammonia refrigerant are exempt.

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C410.3.2 Compressor systems. Refrigeration compressor systems shall comply with the following:

1. Compressors and multiple-compressor system suction groups shall include control systems that use floating suction pressure control logic to reset the target suction pressure temperature based on the temperature requirements of the attached refrigeration display cases or walk-ins.

   Exception: Controls are not required for the following:

   1. Single-compressor systems that do not have variable capacity capability.
   2. Suction groups that have a design saturated suction temperature of 30°F (-1.1°C) or higher, suction groups that comprise the high stage of a two-stage or cascade system, or suction groups that primarily serve chillers for secondary cooling fluids.

2. Liquid subcooling shall be provided for all low-temperature compressor systems with a design cooling capacity equal to or greater than 100,000 Btu/hr (29.3 kW) with a design-saturated suction temperature of -10°F (-23°C) or lower. The subcooled liquid temperature shall be controlled at a maximum temperature set point of 50°F (10°C) at the exit of the subcooler using either compressor economizer (interstage) ports or a separate compressor suction group operating at a saturated suction temperature of 18°F (-7.8°C) or higher.

2.1. Insulation for liquid lines with a fluid operating temperature less than 60°F (15.6°C) shall comply with Table ((~~C403.2.10~~)) C403.10.3.

3. Compressors that incorporate internal or external crankcase heaters shall provide a means to cycle the heaters off during compressor operation.

4. Compressor systems utilized in refrigerated warehouses shall conform to the following:

4.1. Compressors shall be designed to operate at a minimum condensing temperature of 70°F or less.

4.2. The compressor speed of a screw compressor greater than 50 hp shall be controllable in response to the refrigeration load or the input power to the compressor shall be controlled to use no more than 60 percent of full load input power when operated at 50 percent of full refrigeration capacity.

EXCEPTION. Refrigeration plants with more than one dedicated compressor per suction group.

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SECTION C411
SOLAR READINESS

C411.1 General. ((~~A~~)) In addition to the requirements of Section C412, a *solar zone* shall be provided on ((~~non-residential~~)) buildings that are 20 stories or less in height above grade plane. The *solar zone* shall be located on the roof of the building or on another structure elsewhere on the site. The *solar zone* shall be in accordance with Sections C411.2 through C411.8 and the *International Fire Code*.

Exception. A *solar zone* is not required where the solar exposure of the building's roof area is less than 75 percent of that of an unshaded area, as defined in Section C411.5, in the same location, as measured by one of the following:

1. Incident solar radiation expressed in kWh/ft^2-yr using typical meteorological year (TMY) data;
2. Annual sunlight exposure expressed in cumulative hours per year using TMY data;
3. Shadow studies indicating that the roof area is more than 25 percent in shadow, on September 21 at 10am, 11am, 12pm, 1pm, and 2pm solar time.

C411.2 Minimum area. The minimum area of the *solar zone* shall be determined by one of the following methods, whichever results in the smaller area:

1. 40 percent of roof area. The roof area shall be calculated as the horizontally-projected gross roof area less the area covered by skylights, occupied roof decks, mechanical equipment, and planted areas.
2. 20 percent of electrical service size. The electrical service size is the rated capacity of the total of all electrical services to the building, and the required *solar zone* size shall be based upon 10 peak watts of photovoltaic per square foot.

Exception. Subject to the approval of the *code official*, buildings with extensive rooftop equipment that would make full compliance with this section impractical shall be permitted to reduce the size of the *solar zone* required by Section C411.2 to the maximum practicable area.

Example: A building with a 10,000 SF total roof area, 1,000 SF skylight area, and a 400 Amp, 240 volt single phase electrical service is required to provide a solar zone area of the smaller of the following:

1. [40% x (10,000 SF roof area – 1,000 SF skylights)] = 3,600 SF; or
2. [400 Amp x 240 Volts x 20% / 10 watts per SF] = 1,920 SF

Therefore, a *solar zone* of 1,920 square feet is required.

C411.3 Contiguous area. The *solar zone* is permitted to be comprised of separated sub-zones. Each sub-zone shall be at least 5 feet wide in the narrowest dimension.

C411.4 Obstructions. The *solar zone* shall be free of pipes, vents, ducts, HVAC equipment, skylights and other obstructions, except those serving photovoltaic systems within the *solar zone*. The *solar zone* is permitted to be located above any such obstructions, provided that the racking for support of the future system is installed at the time of construction, the elevated *solar zone* does not shade other portions of the solar zone, and its height is permitted by the *International Building Code* and the [Jurisdiction] Land Use Code. Photovoltaic or solar water heating systems are permitted to be installed within the solar zone.

C411.5 Shading. The *solar zone* shall be set back from any existing or new object on the building or site that is located south, east, or west of the *solar zone* a distance at least two times the object's height above the nearest point on the roof surface. Such objects include but are not limited to taller portions of the building itself, parapets, chimneys, antennas, signage, rooftop equipment, trees and roof plantings. No portion of the *solar zone* shall be located on a roof slope greater than 2:12 that faces within 45 degrees of true north.

C411.6 Access. Areas contiguous to the *solar zone* shall provide access pathways and provisions for emergency smoke ventilation as required by the *International Fire Code*.

C411.7 Structural integrity. The as-designed dead load and live load for the *solar zone* shall be clearly marked on the record drawings and shall accommodate future photovoltaic system arrays at an assumed dead load of 4 pounds per square foot in addition to other required live and dead loads. A location for future inverters shall be designated either within or adjacent to the *solar zone,* with a minimum area of 2 square feet for each 1000 square feet of *solar zone* area, and shall accommodate an assumed dead load of 175 pounds per square foot. Where photovoltaic systems are installed in the *solar zone,* structural analysis shall be based upon calculated loads, not upon these assumed loads.

C411.8 Photovoltaic interconnection. A minimum 2-inch diameter roof penetration conduit shall be provided, with threaded caps above and below the roof deck and minimum R-10 insulation wrapping the lower portion, within each 2,500 square foot section of the required *solar zone* area. Interconnection of the future photovoltaic system shall be provided for at the main service panel, either ahead of the service disconnecting means or at the end of the bus opposite the service disconnecting means, in one of the following forms:

1. A space for the mounting of a future overcurrent device, sized to accommodate the largest standard rated overcurrent device that is less than 20 percent of the bus rating.
2. Lugs sized to accommodate conductors with an ampacity of at least 20 percent of the bus rating, to enable the mounting of an external overcurrent device for interconnection.

The electrical construction documents shall indicate the following:

1. *Solar zone* boundaries and access pathways;
2. Location for future inverters and metering equipment; and
3. Route for future wiring between the photovoltaic panels and the inverter, and between the inverter and the main service panel.

SECTION C412
RENEWABLE ENERGY

C412.1 On-site renewable energy systems. Each new building or *addition* larger than 5,000 square feet of gross *conditioned floor area* shall include a renewable energy generation system consisting of not less than 0.25 watts rated peak photovoltaic energy production per square foot of *conditioned space*.

Exceptions:

1. Increased additional energy credits. Where 3.0 additional energy credits from Table C406.1 are provided in addition to those required by other sections of this code, the on-site renewable energy generation system is not required.

1.1. Where 1.0 additional energy credits from Table C406.1 is provided in addition to those required by other sections of this code, the size of the on-site renewable energy generation system is permitted to be reduced by 1/3.

1.2. Where 2.0 additional energy credits from Table C406.1 are provided in addition to those required by other sections of this code, the size of the on-site renewable energy generation system is permitted to be reduced by 2/3.

1.3 Where approved by [the Jurisdiction], interpolation between exceptions 1, 1.1, and 1.2 is permitted.

Commented [PK9]: Note to RCC: Please note the places across this code that say "[Jurisdiction]" where your department of jurisdiction name needs to be inserted

2. Reduced Building Performance Factor. For projects utilizing the Section C407 Total Building Performance compliance path, the on-site renewable energy generation system is not required where the building performance factor (BPF) is not less than 3 percent lower than the maximum BPF permitted cumulatively by all other sections of this code.

Example: To use this exception, a building with a required BPF of 50 would be required to provide a BPF of (50 x 0.97 =) 48.5 instead.

2.1 Where the BPF is not less than 1 percent lower than the BPF required cumulatively by other sections of this code, the size of the on-site renewable energy generation system is permitted to be reduced by 1/3.

2.1 Where the BPF is not less than 2 percent lower than the BPF required cumulatively by other sections of this code, the size of the on-site renewable energy generation system is permitted to be reduced by 2/3.

3.Transfer to an *affordable housing* project. Where *approved* by [the Jurisdiction], all or part of the required on-site renewable energy generation system is permitted to be replaced by construction of a system that is 50 percent of the required system size when located on an existing *affordable housing* project within [the Jurisdiction], or 75 percent of the required system size when located on a new construction *affordable housing* project within [the Jurisdiction]. Documentation demonstrating that the renewable energy generation system has been installed on the *affordable housing* project site, the system is fully operational, and ownership has been transferred to the owner of the *affordable housing* project, must be submitted prior to issuance of the certificate of occupancy.

[Jurisdiction] Informative Note: Option 3 will only be available if an affordable housing project is available to accept the renewable energy system. There is no assurance that such a project location will be available. It is the owner's responsibility to locate and coordinate with the affordable housing project, and to ensure that the installation is completed in a timely manner.

4. Transfer to a Washington state agency program. Where *approved* by [the Jurisdiction], all or part of the required renewable energy generation system is permitted to be replaced by a contribution of $2.50 for each required watt of installed capacity, to a solar energy fund managed by a Washington state agency that will provide solar energy installations for *affordable housing* projects. Documentation demonstrating that the contribution has been received by the state agency must be submitted prior to issuance of the certificate of occupancy.

[Jurisdiction] Informative Note: Option 4 will only be available if a solar energy fund for affordable housing is created by the Housing Trust Fund, Washington State Housing Finance Commission, or another state agency program for which the project is qualified to participate. There is no assurance that such a program will be available.

5. *Affordable housing*. The on-site renewable energy generation system is not required for *affordable housing* projects.

CHAPTER 5

EXISTING BUILDINGS

***

SECTION C502

ADDITIONS

C502.1 General. Additions to an existing building, building system or portion thereof shall conform to the provisions of this code as they relate to new construction without requiring the unaltered portion of the existing building or building system to comply with this code. *Additions* shall not create an unsafe or hazardous condition or overload existing building systems. An *addition* shall be deemed to comply with this code if the addition alone complies or if the existing building and *addition* comply with this code as a single building. *Additions* using the prescriptive path in Section C401.2, item 1, shall also comply with Sections C402, C403, C404, C405, C406, C409.5, C410 and C502.2.

C502.1.1 Additional efficiency package options. *Additions* shall comply with Section C406, either for the *addition* only or for the total of the existing building plus *addition*.

Exception: *Additions* smaller than 500 square feet of *conditioned floor area* are not required to comply with Section C406.

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C502.2.2 Skylight area. *Additions* with *skylights* that result in a total building skylight area less than or equal to that specified in Section C402.4.1 shall comply with Section ((~~C402.4~~)) C402. *Additions* with skylights that result in a total building skylight area greater than that specified in Section C402.4.1 shall comply with one of the following:

1. ((~~Vertical fenestration alternate per Section C402.4.1.1 or C402.4.1.3 for the addition area of the building only~~))
2. ~~2.~~)) Component performance alternative with the target area adjustment per Section C402.1.5 for the *addition* area of the building only.
3. ((~~3~~)) 2. Existing building and *addition* area combined to demonstrate compliance with the component performance alternative for the whole building.
4. ((~~4~~)) 3. Total building performance in accordance with Section C407 for the *addition* area of the building only.
5. ((~~5~~)) 4. Total building performance for the whole building.

***

C502.2.6.2 Exterior lighting power. The total exterior lighting power for the *addition* shall comply with Section ((~~C405.5.1~~)) C405.5.2 for the *addition* alone, or the existing building and the *addition* shall comply as a single building.

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SECTION C503

ALTERATIONS

C503.1 General. *Alterations* to any building or structure shall comply with the requirements of Section C503 and the code for new construction. *Alterations* to an existing building, building system or portion thereof shall conform to the provisions of this code as they relate to new

construction without requiring the unaltered portions of the existing building or building system to comply with this code. *Alterations* shall be such that the existing building or structure is no less conforming to the provisions of this code than the existing building or structure was prior to the *alteration*.

Exceptions:

1. The following *alterations* need not comply with the requirements for new construction provided the energy use of the building is not increased:
   - ((~~1~~)) a. Storm windows installed over existing fenestration.
   - ((~~2~~)) b. Surface applied window film installed on existing single pane fenestration assemblies to reduce solar heat gain provided the code does not require the glazing fenestration to be replaced.
   - ((~~3~~)) c. Existing ceiling, wall or floor cavities exposed during construction provided that these cavities are insulated to full depth with insulation having a minimum nominal value of R-3.0 per inch installed per Section C402.
   - ((~~4~~)) d. Construction where the existing roof, wall or floor cavity is not exposed.
   - ((~~5~~)) e. *Roof recover*.
   - ((~~6~~)) f. *Air barriers* shall not be required for roof recover and roof replacement where the *alterations* or renovations to the building do not include *alterations*, renovations or repairs to the remainder of the building envelope.
   - ((~~7~~)) g. Replacement of existing doors that separate *conditioned space* from the exterior shall not require the installation of a vestibule or revolving door, provided however that an existing vestibule that separates a *conditioned space* from the exterior shall not be removed.
2. *Alterations* are not required to comply with Section C406 except where specifically noted in Sections C503.2, C503.8.3 and C505.1.

Commented [PK10]: Note to RCC: Only add this text if you recognize "Substantial Alterations" per C503.8

C503.2 Change in space conditioning. Any low energy space in accordance with Section C402.1.1.1 that is altered to become *conditioned space* or *semi-heated* space shall be brought into full compliance with this code. Any *semi-heated* space in accordance with Section C402.1.1.2 that is altered to become *conditioned space,* or any heated but not cooled space that is altered to become both heated and cooled, shall be brought into full compliance with this code. Compliance shall include the provisions of Section C406, applied only to the portion of the building undergoing a change in space conditioning.

For buildings with more than one space conditioning category, the interior partition walls, ceilings, floors and fenestration that separate space conditioning areas shall comply with the thermal envelope requirements per the area with the highest level of space conditioning.

A change in space conditioning project shall be deemed to comply with this code if the project area alone complies or if the existing building and the project area combined comply with this code as a whole building.

Exception: Buildings or spaces that were permitted prior to the 2009 WSEC, or were originally permitted as unconditioned, may comply with this section as follows:

1. Where the component performance alternative in Section C402.1.5 is used to demonstrate compliance with this section, the Proposed Total UA is allowed to be up to 110 percent of the Allowable Total UA. This exception may be applied to the project area alone, or to the existing building and project area combined as a whole building.
2. Where total building performance in Section C407 is used to demonstrate compliance with this section, the total annual carbon emissions from energy consumption of the proposed design is allowed to be up to 110 percent of the annual carbon emissions from energy consumption allowed by Section C407.3. This exception may be applied to the

project area alone, or to the existing building and project area combined as a whole building.

3. The addition of cooling equipment serving rooms or spaces totaling less than 2000 square feet in floor area does not trigger the requirement to comply with this section.

C503.3 Building envelope. New building envelope assemblies that are part of the *alteration* shall comply with Sections C402.1 through C402.5 as applicable. Where an opaque envelope assembly is altered or replaced, the new assembly shall in no case have a higher overall U-value than the existing.

Exception: Air leakage testing is not required for *alterations* and repairs, unless the project includes a change in space conditioning according to Section C503.2 or a *change of occupancy* or use according to Section C505.1.

C503.3.1 Roof replacement. *Roof replacements* shall comply with Table C402.1.3 or C402.1.4 where the existing roof assembly is part of the *building thermal envelope* and contains no insulation or contains insulation entirely above the roof deck.

C503.3.2 Vertical fenestration. The addition of *vertical fenestration* that results in a total building vertical fenestration area less than or equal to that specified in Section C402.4.1 shall comply with Section C402.4. *Alterations* that result in a total building vertical fenestration area greater than specified in Section C402.4.1 shall comply with one of the following:

1. Vertical fenestration alternate in accordance with Section C402.4.1.3 for the new vertical fenestration added, where the calculation of vertical fenestration area and gross *above-grade wall* area shall include either the entire building or, where *approved*, only those areas ((~~in the addition~~)) of the building involved in the *alteration*.
2. ((~~Vertical fenestration alternate in accordance with Section C402.4.1.1 for the area adjacent to the new vertical fenestration added.~~)) (Reserved)
3. Existing building and ((~~alternation~~)) *alteration* area are combined to demonstrate compliance with the component performance alternative with target area adjustment in accordance with Section C402.1.5 for the whole building. The Proposed Total UA is allowed to be up to 110 percent of the Allowed Total UA.
4. Total building performance in accordance with Section C407 for the whole building. The total annual carbon emissions from energy consumption of the proposed design is allowed to be up to 110 percent of the annual carbon emissions from energy consumption allowed in accordance with Section C407.3.

Exception: ((~~Additional~~)) Where *approved* by the *code official*, additional fenestration is permitted where sufficient envelope upgrades beyond those required by other sections of this code are included in the project so that the addition of vertical fenestration does not cause ((~~a reduction in overall building energy efficiency, as approved by the *code official*~~)) an increase in the overall energy use of the building.

C503.3.2.1 Application to replacement fenestration products. Where some or all of an existing *fenestration* unit is replaced with a new *fenestration* product, including sash and glazing, the replacement *fenestration* unit shall meet the applicable requirements for *U*-factor and *SHGC* in Table C402.4. In addition, the area-weighted U-value of the new fenestration shall be equal to or lower than the U-value of the existing fenestration.

Exception: An area-weighted average of the *U*-factor of replacement fenestration products being installed in the building for each fenestration product category listed in Table C402.4 shall be permitted to satisfy the *U*-factor requirements for each fenestration product category listed in Table C402.4. Individual fenestration products from different product categories listed in Table C402.4 shall not be combined in calculating the area-weighted average *U*-factor.

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C503.4 Mechanical systems. Those parts of systems which are altered or replaced shall comply with Section C403. Additions or *alterations* shall not be made to an existing mechanical system that will cause the existing mechanical system to become out of compliance.

Exceptions:

1. Existing mechanical systems which are altered or where parts of the system are replaced are not required to be modified to comply with Section C403.3.5 as long as mechanical cooling capacity is not added to a system that did not have cooling capacity prior to the *alteration*.
2. Alternate mechanical system designs that are not in full compliance with this code may be *approved* when the *code official* determines that existing building constraints including, but not limited to, available mechanical space, limitations of the existing structure, or proximity to adjacent air intakes or exhausts make full compliance impractical. Alternate designs shall include additional energy saving strategies not prescriptively required by this code for the scope of the project including, but not limited to, demand control ventilation, energy recovery, or increased mechanical cooling or heating equipment efficiency above that required by Tables C403.3.2(1) through ((~~C403.3.2(12)~~)) C403.3.2(13).
3. Only those components of existing HVAC systems that are altered or replaced shall be required to meet the requirements of Section C403.8.1, Allowable fan motor horsepower. Components replaced or altered shall not exceed the fan power limitation pressure drop adjustment values in Table C403.8.1(2) at design conditions. Section C403.8.1 does not require the removal and replacement of existing system ductwork.

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C503.4.2 Addition of cooling capacity. Where mechanical cooling is added to a space that was not previously cooled, the mechanical system shall comply with either Section C403.3.5 or C403.5.

Exceptions:

1. Qualifying small equipment: Economizers are not required for cooling units and split systems serving one *zone* with a total cooling capacity rated in accordance with Section C403.3.2 of less than 33,000 Btu/h (hereafter referred to as qualifying small systems) provided that these are high-efficiency cooling equipment with SEER and EER values more than 15 percent higher than minimum efficiencies listed in Tables C403.3.2 (1) through (3), in the appropriate size category, using the same test procedures. Equipment shall be listed in the appropriate certification program to qualify for this exception. The total capacity of all qualifying small equipment without economizers shall not exceed 72,000 Btu/h per building, or 5 percent of the building total *air economizer* capacity, whichever is greater.

   Notes and exclusions for Exception 1:

   1.1. The portion of the equipment serving Group R occupancies is not included in determining the total capacity of all units without economizers in a building.
   1.2. Redundant units are not counted in the capacity limitations.
   1.3. This exception shall not be used for the initial tenant improvement of a shell-and-core building or space, or for total building performance.in accordance with Section C407.
   1.4. This exception shall not be used for unitary cooling equipment installed outdoors or in a mechanical room adjacent to the outdoors.

2. Chilled water terminal units connected to systems with chilled water generation equipment with IPLV values more than 25 percent higher than minimum part load equipment efficiencies listed in Table C403.3.2(7), in the appropriate size category, using the same test procedures. Equipment shall be listed in the appropriate certification program to qualify for this exception. The total capacity of all systems without economizers shall not exceed ((~~480,000~~)) 72,000 Btu/h (141 kW) per building, or 20 percent of the building total *air economizer* capacity, whichever is greater.
   Notes and exclusions for Exception ((~~1~~)) 2:
   2.1. The portion of the equipment serving Group R occupancy is not included in determining the total capacity of all units without economizers in a building.
   2.2. This exception shall not be used for the initial tenant improvement of a shell-and-core building or space, or for total building performance in accordance with Section C407.

C503.4.3 *Alterations* or replacement of existing cooling systems. *Alterations* to, or replacement of, existing mechanical cooling systems shall not decrease the building total economizer capacity unless the system complies with either Section C403.3.5 or C403.5. System *alterations* or replacement shall comply with Table C503.4 when either the individual cooling unit capacity ((~~and~~)) or the building total capacity of all cooling equipment without economizer ((~~do~~)) does not comply with Sections C403.3.5 or C403.5.

TABLE C503.4

ECONOMIZER COMPLIANCE OPTIONS FOR MECHANICAL *ALTERATIONS*

Unit Type	Option A Any *alteration* with new or replacement equipment	Option B (alternate to A) Replacement unit of the same type with the same or smaller output capacity	Option C (alternate to A) Replacement unit of the same type with a larger output capacity	Option D (alternate to A) New equipment added to existing system or replacement unit of a different type
1. Packaged Units	Efficiency: min.[a] Economizer: C403.5[b]	Efficiency: min.[a] Economizer: C403.5[b]	Efficiency: min.[a] Economizer: CC403.5[b]	Efficiency: min.[a] Economizer: C403.5[b]
2. Split Systems	Efficiency: min.[a] Economizer: C403.5[b]	For units ≤ 60,000 Btuh, comply with two of two measures: 1. Efficiency: + 10%[e] 2. Economizer: shall not decrease existing economizer capability For all other capacities: Efficiency: min.[a] Economizer: C403.5[b]	For units ≤ 60,000 Btuh replacing unit installed prior to 1991, comply with at least one of two measures: 1. Efficiency: + 10%[e] 2. Economizer: 50%[f] For all other capacities: Efficiency: min.[a] Economizer: C403.5[b]	Efficiency: min.[a] Economizer: C403.5[b]
3. Water Source Heat Pump	Efficiency: min.[a] Economizer: C403.5[b]	For units ≤72,000 Btuh, comply with at least two of three measures: 1. Efficiency: + 10%[e] 2. Flow control valve[g] 3. Economizer: 50%[f] For all other capacities: Efficiency: min.[a] Economizer: C403.5[b]	For units ≤72,000 Btuh, comply with at least two of three measures: 1. Efficiency: + 10%[e] 2. Flow control valve[g] 3. Economizer: 50%[f] (except for certain pre-1991 systems[h]) For all other capacities: Efficiency: min.[a] Economizer: C403.5[b]	Efficiency: min.[a] Economizer: C403.5[b] (except for certain pre-1991 systems[q])
4. *Water Economizer* using Air-Cooled Heat Rejection Equipment (Dry Cooler)	Efficiency: min.[a] Economizer: C403.5[b]	Efficiency: +5%[d] Economizer: shall not decrease existing economizer capacity	Efficiency: min.[a] Economizer: C403.5[b]	Efficiency: min.[a] Economizer: C403.5[b]
5. Air-Handling Unit (including fan coil units) where the system has an air-cooled chiller	Efficiency: min.[a] Economizer: C403.5[b]	Economizer: shall not decrease existing economizer capacity	Efficiency: min.[a] Economizer: C403.5[b] (except for certain pre-1991 systems[q])	Efficiency: min.[a] Economizer: C403.5[b] (except for certain pre-1991 systems[q])
6. Air- Handling Unit (including fan coil units) and Water-	Efficiency: min.[a] Economizer: C403.5[b]	Economizer: shall not decrease existing economizer capacity	Efficiency: min.[a] Economizer: C403.5[b] (except for certain	Efficiency: min.[a] Economizer: C403.5[b] (except for certain

Unit Type	Option A Any *alteration* with new or replacement equipment	Option B (alternate to A) Replacement unit of the same type with the same or smaller output capacity	Option C (alternate to A) Replacement unit of the same type with a larger output capacity	Option D (alternate to A) New equipment added to existing system or replacement unit of a different type
cooled Process Equipment, where the system has a water-cooled chiller[j]			pre-1991 systems[h] and certain 1991-2016 systems[i].)	pre-1991 systems[h] and certain 1991-2016 systems[i])

TABLE C503.4 (continued)

ECONOMIZER COMPLIANCE OPTIONS FOR MECHANICAL *ALTERATIONS*

Unit Type	Option A Any *alteration* with new or replacement equipment	Option B (alternate to A) Replacement unit of the same type with the same or smaller output capacity	Option C (alternate to A) Replacement unit of the same type with a larger output capacity	Option D (alternate to A) New equipment added to existing system or replacement unit of a different type
7. Cooling Tower	Efficiency: min.[a] Economizer: C403.5[b]	No requirements	Efficiency: min.[a] Economizer: C403.5[b]	Efficiency: min.[a] Economizer: C403.5[b]
8. Air-Cooled Chiller	Efficiency: min.[a] Economizer: C403.5[b]	Efficiency: + 10%[k] Economizer: shall not decrease existing economizer capacity	Efficiency: Comply with two of two measures: 1. + 10%[k,l] 2. Multistage Economizer: shall not decrease existing economizer capacity	Efficiency: min.[a] Economizer: C403.5[b]
9. Water-Cooled Chiller	Efficiency: min.[a] Economizer: C403.5[b]	Efficiency: Comply with at least one of two measures: 1. Part load IPLV + 15%[n] 2. Plate frame heat exchanger[o] Economizer: shall not decrease existing economizer capacity	Efficiency: Comply with two of two measures: 1. Part load IPLV + 15%[n] 2. Plate frame heat exchanger[o] Economizer: shall not decrease existing economizer capacity	Efficiency: min.[a] Economizer: C403.5[b]

a. Minimum equipment efficiency shall comply with Section C403.3.2 and Tables C403.3.2(1) through ((~~C403.3.2(12)~~)) C403.3.2(13).

b. All separate new equipment and replacement equipment shall have *air economizer* complying with Section C403.5 including both the individual unit size limits and the total building capacity limits on units without economizer. It is acceptable to comply using one of the exceptions to Section C403.5.

c. Reserved.

d. Equipment shall have a capacity-weighted average cooling system efficiency that is 5 percent better than the requirements in Tables C403.3.2(1) and C403.3.2(2) (1.05 x values in Tables C403.3.2(1) and C403.3.2(2)).

e. Equipment shall have a capacity-weighted average cooling system efficiency that is 10 percent better than the requirements in Tables C403.3.2(1)A and C403.3.2(2) (1.10 x values in Tables C403.3.2(1)A and C403.3.2(2)).

f. Minimum of 50 percent *air economizer* that is ducted in a fully enclosed path directly to every heat pump unit in each *zone*, except that ducts may terminate within 12 inches of the intake to an HVAC unit provided that they are physically fastened so that the outside air duct is directed into the unit intake. If this is an increase in the amount of outside air supplied to this unit, the outside air supply system shall be configured to provide this additional outside air and be equipped with economizer control.

g. Water-source heat pump systems shall have a flow control valve to eliminate flow through the heat pumps that are not in operation and variable speed pumping control complying with Section C403.4.3 for that heat pump.

- When the total capacity of all units with flow control valves exceeds 15 percent of the total system capacity, a variable frequency drive shall be installed on the main loop pump.
- As an alternate to this requirement, the capacity-weighted average cooling system efficiency shall be 5 percent better than the requirements in footnote e for water-source heat pumps (i.e. a minimum of 15 percent better than the requirements in Table C403.3.2(2) (1.15 x values in Table C403.3.2(2)).

h. *Water economizer* equipment shall have a capacity-weighted average cooling system efficiency that is 10 percent better than the requirements in Tables C403.3.2(8) and C403.3.2(9) (1.10 x values in Tables C403.3.2(8) and C403.3.2(9)).

i. *Air economizer* is not required for systems installed with *water economizer* plate and frame heat exchanger complying with previous codes between 1991 and June 2016, provided that the total fan coil load does not exceed the existing or added capacity of the heat exchangers.

j. For water-cooled process equipment where the manufacturers specifications require colder temperatures than available with water-side economizer, that portion of the load is exempt from the economizer requirements.

k. The air-cooled chiller shall have an IPLV efficiency that is a minimum of 10 percent greater than the IPLV requirements in EER in Table C403.3.2(7) (1.10 x IPLV values in EER in Table C403.3.2(7)).

l. The air-cooled chiller shall be multistage with a minimum of two compressors.

m. ((~~The water-cooled chiller shall have full load and part load IPLV efficiency that is a minimum of 5 percent greater than the IPLV requirements in Table C403.3.2(7) (1.05 x IPLV values in Table C403.3.2(7))~~)) Reserved.

n. The water-cooled chiller shall have an IPLV value that is a minimum of 15 percent lower than the IPLV requirements in Table C403.3.2(7), (((~~1.15~~)) 0.85 x IPLV values in Table C403.3.2(7)). Water-cooled centrifugal chillers designed for non-standard conditions shall have an NPLV value that is at least 15 percent lower than the adjusted maximum NPLV rating in kW per ton defined in Section C403.3.2.1 (((~~1.15~~)) 0.85 x NPLV).

o. Economizer cooling shall be provided by adding a plate-frame heat exchanger on the water-side with a capacity that is a minimum of 20% of the chiller capacity at standard AHRI rating conditions.

p. Reserved.

q. Systems installed prior to 1991 without fully utilized capacity are allowed to comply with Option B, provided that the individual unit cooling capacity does not exceed 90,000 Btuh.

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C503.4.6 New and replacement HVAC heating system equipment. For substantial alterations as defined in Section C503.8.1, or where a building's central HVAC heating system equipment is augmented or replaced, the building shall comply with Section C403.1.4.

Exception. Where only one heating appliance is failing and is replaced by another having the same or lesser heating capacity and the same or higher efficiency, no other alterations

are made to the central HVAC system, and this exception has not been used within the same building in the previous 24-month period, this provision does not apply.

[Jurisdiction] Informative Note: The term "central HVAC heating system" for the purposes of this section means a heating system that provides heating to multiple spaces or multiple dwelling or sleeping units (as opposed to a distributed heating system such as a baseboard heater or PTHP that provides heating to only a single space). A central heating system may include multiple pieces of heating equipment.
The exception permits like-for-like replacement of a single boiler, furnace or heat pump, where no other HVAC work is planned, so that a failed heating appliance can be expediently replaced.

Commented [PK11]: Note to RCC: Only insert if you have something comparable to Seattle's "Substantial Alterations" concept.

If used, this item is a part of the decarbonization package

C503.5 Service hot water systems. New service hot water systems that are part of the *alteration* shall comply with Section C404.

Exception. Where only one service hot water appliance is failing and is replaced by another having the same or lesser heating capacity and the same or higher efficiency, no other alterations are made to the central service hot water system, and this exception has not been used within the same building in the previous 24-month period, this provision does not apply.

C503.6 Lighting, ((~~controlled~~)) receptacles and motors. *Alterations* or the addition of lighting, ((~~controlled~~)) receptacles and motors shall comply with Sections C503.6.1 through C503.6.6.

C503.6.1 Luminaire additions and *alterations*. *Alterations* that add, alter or replace ((~~50~~)) 20 percent or more of the luminaires or of the lamps plus ballasts alone in a space enclosed by walls or ceiling-height partitions, replace ((~~50~~)) 20 percent or more of parking garage luminaires, or replace ((~~50~~)) 20 percent or more of the total installed wattage of exterior luminaires shall comply with Sections C405.4 and C405.5. Where less than ((~~50~~)) 20 percent of the fixtures in an interior space enclosed by walls or ceiling-height partitions or in a parking garage are added or replaced, or less than ((~~50~~)) 20 percent of the installed exterior wattage is replaced, the installed lighting wattage shall be maintained or reduced.

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C503.6.3 New or moved lighting panel. Where a new lighting panel (or a moved lighting panel) with all new raceway and conductor wiring from the panel to the fixtures is being installed, controls shall also comply with, in addition to the requirements of Section C503.6.2, all ((~~remaining~~)) requirements in Sections C405.2 and C408.3.

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C503.6.5 Motors. Those motors which are altered or replaced shall comply with Section C405.8. In no case shall the energy efficiency of the building be decreased.

C503.6.6 Controlled receptacles. Where electric receptacles are added or replaced, *controlled receptacle*s shall be provided in accordance with Section C405.10.

Exceptions:

1. Where an *alteration* project impacts an area smaller than 5,000 square feet, *controlled receptacle*s are not required.

2. Where existing systems furniture or partial-height relocatable office cubicle partitions are reconfigured or relocated within the same area, *controlled receptacle*s are not required in the existing systems furniture or office cubicle partitions.
3. Where new or altered receptacles meet ((~~the~~)) exception 1 to Section C405.10, they are not required to be *controlled receptacle*s or be located within 12 inches of non-*controlled receptacle*s.

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C503.8 Substantial alterations or repairs. In addition to meeting the requirements of this code, any building or structure to which substantial alterations or repairs are made shall comply with the requirements of this section.

Exceptions:

1. *Alterations* and repairs to *landmark* buildings shall comply with this section to the extent that the *code official* determines that such compliance does not have an adverse effect on the designated historic features of the building. The energy use allowed by subsections 2 or 3 of Section C503.8.3 is permitted to be increased in proportion to the additional energy use required for preservation of such designated features.
2. A project that is defined as a substantial alteration primarily due to the seismic retrofitting of a building's unreinforced masonry walls is exempt from the requirements of this section.
3. A building constructed in compliance with the 2003 or more recent edition of the Seattle Building Code that would be classified as a substantial alteration only due to being reoccupied after being substantially vacant for more than 24 months is exempt from the requirements of this section.

C503.8.1 Definition. For the purposes of this section, substantial alterations or repairs means items 1, 2 or 4, or any combination thereof, of the definition of substantial alterations or repairs in Chapter 3 of the Seattle amendments to the IEBC, as determined by the *code official.*

[Jurisdiction] Informative Note: Definitions 1, 2 and 4 of "substantial alterations or repairs" in the Seattle Existing Building Code are as follows:

1. Repair of a building with a damage ratio of 60 percent or more.
2. Remodeling or *additions* that substantially extend the useful physical and/or economic life of the building or a significant portion of the building, other than typical tenant remodeling.
4. Re-occupancy of a building that has been substantially vacant for more than 24 months in occupancies other than Group R-3.

C503.8.2 Pre-submittal conference. The applicant shall attend a pre-submittal conference to discuss the selected compliance path. Prior to this conference, the applicant shall meet with each energy utility serving the building to determine whether technical assistance or financial incentives are available for energy efficiency upgrades,and shall submit documentation of these meetings at the pre-submittal conference.

C503.8.3 Energy Efficiency. Buildings undergoing substantial alterations shall comply with Section C503.4.6 and one of the following:

1. **Full code compliance.** Fully comply with the requirements of this code for new construction, including Section C406.

2. **Envelope thermal performance within 15 percent of code.** Demonstrate that heat loss through the building envelope is no more than 15 percent greater than allowed by the Seattle Energy Code, using the Component Performance Building Envelope Option in Section C402.1.5, and meet all other prescriptive requirements of the Seattle Energy Code for new construction, including Section C406.

   2.1. **Default U-values.** The values listed in Appendix A and Section C303 shall be used as the default U-values for existing building envelope components. For buildings whose original construction permits were applied for after January 1, 1992, existing building envelope components are deemed to meet the minimum U-values required by the edition of the Seattle Energy Code in effect at the time of permit application, where visual inspection by the *code official* reveals that those components appear to be equal to or better than code-compliant components.

   2.2. **Disproportionality.** Where *approved* by the *code official*, the cost of required thermal improvements to the building envelope are not required to exceed 20 percent of the valuation of the substantial alterations project, determined in accordance with the Fee Subtitle, when using this envelope thermal performance compliance method. Envelope improvement costs shall be documented using standard cost estimating software and methodology.

3. **Total building performance within 10 percent of code.** Demonstrate that the Building Performance Factor is no more than 10 percent higher than that permitted by Table C407.3.2.

C503.8.4 Impracticality. In cases where full compliance with all the requirements of Section C503.8 is impractical, the applicant is permitted to arrange a pre-design conference with the design team and the *code official* to seek modifications. The applicant shall identify specific requirements that are impractical, and shall identify design solutions and modifications that achieve a comparable level of energy efficiency. The *code official* is authorized to waive specific requirements in this code to the extent that the *code official* determines those requirements to be impractical.

Commented [PK12]: Note to RCC: Only insert if you have something comparable to Seattle's "Substantial Alterations" concept, and modify references to Seattle

SECTION C504

REPAIRS

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C504.2 Application. For the purposes of this code, the following shall be considered repairs.

1. Glass only replacements in an existing sash and frame.
2. *Roof repairs*.

((~~3. Air barriers shall not be required for *roof repair* where the repairs to the building do not include *alterations*, renovations or *repairs* to the remainder of the building envelope.~~

~~4. Replacement of existing doors that separate conditioned space from the exterior shall not require the installation of a vestibule or revolving door, provided however that an existing vestibule that separates a conditioned space from the exterior shall not be removed.~~))

[Jurisdiction] Informative Note: Exceptions 3 and 4 appear in the exceptions to Section C503.1.

5. ((*Repairs* where only the bulb and/or ballast within the existing luminaires in a space are replaced provided that the replacement does not increase the installed interior lighting power.))

[Jurisdiction] Informative Note: For exception 5, see Section C503.6.1.

SECTION C505
CHANGE OF OCCUPANCY OR USE

C505.1 General. Spaces undergoing a change in occupancy shall be brought up to full compliance with this code in the following cases:

1. Any space that is converted from an F, S or U occupancy to an occupancy other than F, S or U.
2. Any space that is converted to a Group R *dwelling unit* or portion thereof, from another use or occupancy.
3. Any Group R *dwelling unit* or portion thereof permitted prior to July 1, 2002, that is converted to a commercial use or occupancy.

Exception: Buildings or spaces that were permitted prior to the 2009 WSEC, or were originally permitted as unconditioned, may comply with this section as follows:

1. Where the component performance alternative in Section C402.1.5 is used to demonstrate compliance with this section, the Proposed Total UA is allowed to be up to 110 percent of the Allowable Total UA. This exception may be applied to the project area alone, or to the existing building and project area combined as a whole building.
2. Where total building performance in Section C407 is used to demonstrate compliance with this section, the total annual carbon emissions from energy consumption of the proposed design is allowed to be 110 percent of the annual carbon emissions from energy consumption allowed by Section C407.3. This exception may be applied to the project area alone, or to the existing building and project area combined as a whole building.
3. Where the building or space is altered to become a bakery, commercial kitchen or commercial laundry, and the proposed design uses only all-electric Energy Star–rated process equipment and code compliant all-electric HVAC equipment, improvements to the building envelope immediately adjoining the spaces containing that use shall not be required. For the purposes of this exception, no fossil fuel burning equipment of any kind may be installed within the building or space undergoing the *change of occupancy*.

Compliance shall include the provisions of Section C406, applied only to the portion of the building undergoing a *change of occupancy* or use. Where the use in a space changes from one use in Table C405.4.2(1) or (2) to another use in Table C405.4.2(1) or (2), the installed lighting wattage shall comply with Section C405.4.

SECTION C506
METERING FOR EXISTING BUILDINGS

[Jurisdiction] Informative Note: Section C506.1 was relocated from Section C409.5.

C506.1 Existing buildings that were constructed subject to the requirements of this section. Where new or replacement systems or equipment are installed in an existing building that was constructed subject to the requirements of this section, metering shall be provided for

such new or replacement systems or equipment so that their energy use is included in the corresponding end-use category defined in Section C409.3. This includes systems or equipment added in conjunction with *additions* or *alterations* to existing buildings.

C506.1.1 Small existing buildings. In buildings that were constructed subject to Section C409, metering and *data acquisition system*s shall be provided for *additions* over 10,000 square feet in accordance with the requirements of sections C409.2, C409.3 and C409.4.

C506.2 Metering for the addition or replacement of HVAC equipment in existing buildings. Where HVAC equipment is added or replaced, metering shall be provided according to Sections C506.2.1 or C506.2.2, as applicable.

C506.2.1 Addition or replacement of individual HVAC equipment pieces. Where HVAC equipment is added or replaced, but compliance with Section C506.2.2 is not required, metering shall be provided as follows, and the data from these meters is permitted to either be stored locally using a manual totalizing meter or other means at the meter or fed into a central data collection system.

1. Electrical metering shall be provided for all of the following:
    a. Each new or existing branch circuit serving a new piece of HVAC equipment with minimum circuit ampacity (MCA) that equates to 50 kVA or more. A single meter is permitted to serve multiple circuits of the same submetering category from Section C409.3.
    b. Each new or existing branch circuit supplied by a new electrical panel that is dedicated to serving HVAC equipment. It shall be permitted to meter the circuits individually or in aggregate.
    c. Each new HVAC fan or pump on a variable speed drive, where the fan, pump, or variable speed drive are new, unless the variable speed drive is integral to a packaged HVAC unit or the existing variable speed drive does not have the capability to provide electric metering output.
2. Natural gas metering shall be provided for each new natural gas connection that is rated at 1,000 kBTU or higher. A single meter is permitted to serve multiple equipment pieces of the same sub-metering category from Section C409.3; HVAC, water heating or process.

C506.2.2 Addition or replacement of the majority of HVAC equipment in a building. Where permits are issued for new or replacement HVAC equipment that has a total heating and cooling capacity greater than 1,200 kBTU/hour and greater than 50 percent of the building's existing HVAC heating and cooling capacity, within any 12-month period, the following shall be provided for the building:

1. Energy source metering required by Section C409.2.
2. HVAC system end-use metering required by Section C409.3.1
3. Data acquisition and display system per the requirements of Section C409.4.

Each of the building's existing HVAC chillers, boilers, cooling towers, air handlers, packaged units and heat pumps that has a capacity larger than 5 tons or that represents more than 10 percent of the total heating and cooling capacity of the building shall be included in the calculation of the existing heating and cooling capacity of the building. Where heat pumps are configured to deliver both heating and cooling, the heating and cooling capacities shall both be included in the calculation of the total capacity.

Each of the building's existing and new HVAC chillers, boilers, cooling towers, air handlers, packaged units and heat pumps that has a heating or cooling capacity larger than 5 tons or that represents more than 10 percent of the total heating and cooling capacity of the building shall be included in the HVAC system end-use metering.

Construction documents for new or replacement heating and cooling equipment projects shall indicate the total heating and cooling capacity of the building's existing HVAC equipment and the total heating and cooling capacity of the new or replacement equipment. Where permits have been issued for new or replacement heating and cooling equipment within the 12-month period prior to the permit application date, the heating and cooling capacity of that equipment shall also be indicated. For the purpose of this tabulation, heating and cooling capacities of all equipment shall be expressed in kBTU / hour.

C506.3 Tenant space electrical sub-metering for existing buildings. For tenant improvements in which a single tenant will occupy a full floor or multiple floors of a building, the electrical consumption for the tenant space on that floor shall be separately metered, and the metering data provided to the tenant with a display system per the requirements of Section C409.4.3. For the purposes of this section, separate end use categories need not be segregated.

EXCEPTION: Where an existing branch circuit electrical panel serves tenant spaces on multiple full floors of a building, the floors served by that panel are not required to comply with this section.

C506.4 Metering for complete electrical system replacement. If all, or substantially all, of the existing electrical system is replaced under a single electrical permit or within a 12-month period, all of the provisions of Section C409 shall be met.

CHAPTER 6

REFERENCED STANDARDS

***

ASHRAE

American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
1791 Tullie Circle, NE
Atlanta, GA 30329-2305

Standard reference number	Title	Referenced in code section number
ANSI/ASHRAE/ACCA		
Standard 127-2007	Method of Testing for Rating Computer and Data Processing Room Unitary Air Conditioners	C403.4.1
Standard 183—2007	Peak Cooling and Heating Load Calculations in Buildings, Except Low-rise Residential Buildings	C403.1.2
ANSI/ASHRAE/ASHE		
Standard 170-2017	Ventilation of Health Care Facilities	C403.1.1
ASHRAE—2016	ASHRAE HVAC Systems and Equipment Handbook—2004	C403..1.2
ISO/AHRI/ASHRAE		
13256-1 (2011)	Water-source Heat Pumps—Testing and Rating for Performance— Part 1: Water-to-air and Brine-to-air Heat Pumps	Table C403.3.2(2)
ISO/AHRI/ASHRAE		
13256-2 (2011)	Water-source Heat Pumps—Testing and Rating for Performance— Part 2: Water-to-water and Brine-to-water Heat Pumps	Table C403.3.2(2)

ASHRAE --continued

90.1—((~~2016~~)) 2019	Energy Standard for Buildings Except Low-rise Residential Buildings	C402.1.5.1, C407.3
90.4—((~~2016~~)) 2019	Energy Standard for Data Centers	C403.1.3
146—2011	Testing and Rating Pool Heaters	Table C404.2

***

HVI

Home Ventilating Institute
1740 Dell Range Blvd., Ste H.450
Cheyenne, WY 82009

Standard reference number	Title	Referenced in code section number
HVI 916—2015	Home Ventilating Institute Airflow Test Procedure 916-2015	C403.8.4
HVI 920—2020	Product Performance Certification Procedure Including Verification and Challenge 920-2020	C403.3.6

***

APPENDIX A
DEFAULT HEAT LOSS COEFFICIENTS

***

TABLE A102.2.6(1)
ASSEMBLY U-FACTORS FOR ROOFS WITH TAPERED INSULATION ENTIRELY ABOVE DECK
SINGLE SLOPE RECTANGULAR TO ONE-SIDE((d,f,g,h,i)) a,d,g,h,i,j
(UNINTERRUPTED BY FRAMING)

[The remainder of the table is not shown]

***

TABLE A102.2.6(2)
ASSEMBLY U-FACTORS FOR ROOFS WITH TAPERED INSULATION ENTIRELY ABOVE DECK
SLOPED TRIANGLE (ROOF WITH CENTER DRAIN)((e,f,g,h,i)) a,b,e,g,h,i,j
(UNINTERRUPTED BY FRAMING)

[The remainder of the table is not shown]

***

TABLE A102.2.6(3)
ASSEMBLY U-FACTORS FOR ROOFS WITH TAPERED INSULATION ENTIRELY ABOVE DECK
SLOPED TRIANGLE (ROOF WITH PERIMETER DRAINS)((e,f,g,h,i)) a,c,f,g,h,i,j
(UNINTERRUPTED BY FRAMING)

[The remainder of the table is not shown]

Footnotes to Tables A102.2.6.1, A102.2.6.2, and A102.2.6.3:

a. Rmax and Rmin are determined along the linearly tapered cross section for the respective ((minimum and)) maximum and minimum thickness values for the roof section being analyzed.
b. For triangular roof sections with insulation sloping to the center, Rmax refers to the insulation value along the long edge of the triangle and Rmin to the insulation at the point of the triangle ((which assumes that the insulation slopes to the center)).
c. For triangular roof sections with insulation sloping to the perimeter, Rmax refers to the insulation value at the point of the triangle and Rmin to the insulation along the long edge of the triangle which assumes that the insulation slopes to the perimeter.
d. Effective ((U-factor for)) R-value of rectangular tapered insulation is calculated as follows:

$$R_{eff} = (R_{max} - R_{min}) / \ln\left[\frac{R_{max}}{R_{min}}\right]$$

e. Effective ((U-factor for)) R-value of triangular tapered insulation sloping to the center is calculated as follows:

$$R_{eff} = \left[\frac{2}{R_{max} - R_{min}}\left[1 + \frac{R_{min}}{R_{max} - R_{min}} \ln\left[\frac{R_{min}}{R_{max}}\right]\right]\right]^{-1}$$

f. Effective R-value of triangular tapered insulation sloping to the perimeter is calculated as follows:

$$\boldsymbol{R_{eff} = \left[\frac{2}{R_{min} - R_{max}}\left[1 + \frac{R_{max}}{R_{min} - R_{max}} \ln\left[\frac{R_{max}}{R_{min}}\right]\right]\right]^{-1}}$$

((f)) g. Assembly U-factors include the effective R-value of the tapered insulation, an exterior air film (R=0.17) and an interior air film, horizontal with heat flow

up (R=0.61).
((g)) h. For effective U-factors of roof assemblies with different Rmax or Rmin values not listed in the tables interpolation is allowed. For effective U-factors of roof assemblies with Rmax greater than the values listed in the tables, the effective U-factor must be calculated using the effective R-value calculations above.
((h)) i. This table shall only be applied to tapered insulation that is tapered along only one axis.
((i)) j. In areas of differing insulation slopes/configurations, individual ((U-values)) U-factors shall be calculated and an area weighted ((U-value)) U-factor calculation shall be used to determine the effective value of the roof.

***

APPENDIX D
CALCULATION OF HVAC TOTAL SYSTEM PERFORMANCE RATIO

D101 Scope. This appendix establishes criteria for demonstrating compliance using the *HVAC total system performance ratio (HVAC TSPR)* for systems serving office, retail, library and education occupancies and buildings, which are subject to the requirements of Section C403.3.5 without exceptions and *dwelling unit*s and common areas within multifamily buildings. Those HVAC systems shall comply with Section C403 and this appendix as required by Section C403.1.1.

***

TABLE C407.3(1)

CARBON EMISSIONS FACTORS

Type	CO2e (lb/unit)	Unit
Electricity	0.70	kWh
Natural Gas	11.7	Therm
Oil	19.2	Gallon
Propane	10.5	Gallon
Other[a]	195.00	mmBtu
On-site renewable energy[b]	0.00	

a. District energy systems may use alternative emission factors supported by calculations *approved* by the *code official*
b. The TSPR calculation does not separately account for the use of renewable energy.

***

D601.2.1 Number of blocks. One or more *blocks* may be required per building based on the following restrictions:

1. Each *block* can have only one occupancy type (multifamily *dwelling unit*, multifamily common area, office, library, education or retail). Therefore, at least one single *block* shall be created for each unique use type.

***

D601.4.1 Occupancy type. The occupancy type for each *block* shall be consistent with the building area type as determined in accordance with Section C405.4.2.1. Portions of the building that are building area types other than multifamily, office, school (education), library, or retail shall not be included in the simulation.

D601.4.2 Occupancy schedule, density, and heat gain. The occupant density, heat gain, and schedule shall be for multifamily, office, retail, library, or school as specified by ASHRAE Standard 90.1 Normative Appendix C.

***

D601.6 Lighting. Interior lighting power density shall be equal to the allowance in Table C405.4.2(1) for multifamily, office, retail, library, or school. The lighting schedule shall be for multifamily, office, retail, library, or school as specified by ASHRAE Standard 90.1 Normative Appendix C. The impact of lighting controls is assumed to be captured by the lighting schedule and no explicit controls shall be modeled. Exterior lighting shall not be modeled.

D601.7 Miscellaneous equipment. The miscellaneous equipment schedule and power shall be for multifamily, office, retail, library, or school as specified by ASHRAE Standard 90.1 Normative Appendix C. The impact of miscellaneous equipment controls is assumed to be captured by the equipment schedule and no explicit controls shall be modeled.

Exceptions.

1. Multifamily dwelling units shall have a miscellaneous load density of 0.42 W/ft^2
2. Multifamily common areas shall have a miscellaneous load density of 0 W/ft^2

***

TABLE D601.11.2

PROPOSED BUILDING SYSTEM PARAMETERS

Category	Parameter	Fixed or User Defined	Required	Applicable Systems
HVAC System Type	System Type	User Defined	Selected from Table D601.11.1	All
System Sizing	Design Day Information	Fixed	99.6% heating design and 1% dry-bulb and 1% wet-bulb cooling design	All
	Zone Coil Capacity	Fixed	Sizing factors used are 1.25 for heating equipment and 1.15 for cooling equipment	All
	Supply Airflow	Fixed	Based on a supply-air-to-room-air temperature set-point difference of 20°F	1-11

		Fixed	Equal to required outdoor air ventilation	12
Outdoor Ventilation Air	Outdoor Ventilation Air Flow Rate	Fixed	As specified in ASHRAE Standard 90.1 Normative Appendix C, adjusted for proposed DCV control	All
System Operation	Space Temperature Setpoints	Fixed	As specified in ASHRAE Standard 90.1 Normative Appendix C, except multifamily which shall use 68°F heating and 76°F cooling setpoints	1-11
	Fan Operation – Occupied	User Defined	Runs continuously during occupied hours or cycled to meet load	1-11
	Fan Operation – Occupied	Fixed	Fan runs continuously during occupied hours	12
	Fan Operation – Night Cycle	Fixed	Fan cycles on to meet setback temperatures	1-11
Packaged Equipment Efficiency	DX Cooling Efficiency	User Defined	Cooling COP without fan energy calculated in accordance with ASHRAE Standard 90.1 Section 11.5.2c[b]	1, 2, 3, 4, 5, 7, 8, 9, 11, 12
	Heat Pump Efficiency	User Defined	Heating COP without fan energy calculated in accordance with ASHRAE Standard 90.1 Section 11.5.2c[c]	2, 4, 5, 7, 8
	Furnace Efficiency	User Defined	Furnace thermal efficiency[c]	3, 11
Heat Pump Supplemental Heat	Control	Fixed	Supplemental electric heat locked out above 40°F. Runs In conjunction with compressor between 40°F and 0°F.	2, 4
System Fan Power	Design Fan Power (W/cfm)	User Defined	Input electric power for all fans in required to operate at *fan system design conditions* divided by the supply airflow rate	All
	Single Zone System Fan Power During Dead band (W/cfm)	User Defined	W/cfm during dead band for VAV or multispeed single zone fans	3, 4, 5, 6, 7, 8
Variable Air Volume Systems	Part Load Fan Controls	User Defined	VFD included. User specifies presence of static pressure reset.	9, 10, 11
	Supply Air Temperature Controls	User Defined	If not SAT reset constant at 55°F. SAT reset results in 60°F SAT during low load conditions 9, 10, 11	9, 10, 11
	Minimum Terminal Unit airflow percentage	User Defined	Average minimum terminal unit airflow percentage for *block* weighted by cfm	9, 10, 11
	Terminal Unit Heating Source	User Defined	Electric or hydronic	9, 10, 11
	Fan Powered Terminal Unit (FPTU) Type	User Defined	Series or parallel FPTU	11
	Parallel FPTU Fan	Fixed	Sized for 50% peak primary air at 0.35 W/cfm	11
	Series FPTU Fan	Fixed	Sized for 50% peak primary air at 0.35 W/cfm	11
Economizer	Economizer Presence	User Defined	Yes or No	3, 4, 9, 10, 11

	Economizer ((~~High Limit~~)) Control Type	Fixed	((~~75°F fixed~~)) Differential dry-bulb	3, 4, 9, 10, 11

[The remainder of the table is not shown]

***

Table D602.11

Standard Reference Design HVAC Systems

Parameter	**Building Type**				
	Large Office[a]	**Small Office and Libraries[a]**	**Retail**	**School**	**Multifamily**
System Type	Water-source Heat Pump	Packaged air-source Heat Pump	Packaged air-source Heat Pump	Packaged air-source Heat Pump	Packaged air-source Heat Pump
Fan control[b]	Cycle on load	Cycle on load	Cycle on load	Cycle on load	Cycle on load
Space condition fan power (W/cfm)	0.528	0.528	0.522	0.528	0.528
Heating/Cooling sizing factor[c]	1.25/1.15	1.25/1.15	1.25/1.15	1.25/1.15	1.25/1.15
Supplemental heating availability	NA	<40°F	<40°F	<40°F	<40°F
Modeled cooling COP (Net of fan)[d]	4.46	3.83	4.25	3.83	3.83
Modeled heating COP (Net of fan)[d]	4.61	3.81	3.57	3.81	3.86
Cooling Source	DX (heat pump)	DX (heat pump)	DX (heat pump)	DX (heat pump)	DX (heat pump)
Heat source	Heat Pump	Heat Pump	Heat Pump	Heat Pump	Heat Pump
OSA Economizere[e]	No	No	Yes	Yes	Yes
Occupied ventilation source[f]	DOAS	DOAS	DOAS	DOAS	DOAS
DOAS Fan Power (W/cfm of outside air)	0.819	0.819	0.730	0.742	0.78
DOAS temperature control[g, h]	Bypass	Wild	Bypass	Bypass	Wild
ERV efficiency (sensible only)	70%	70%	70%	70%	70%
WSHP Loop Heat Rejection	Cooling Tower[i]	NA	NA	NA	NA
WSHP Loop Heat Source	Gas Boiler[j]	NA	NA	NA	NA
WSHP Loop Temperature Control[k]	50°F to 70°F	NA	NA	NA	NA
WSHP circulation Pump W/gpm[l]	16	NA	NA	NA	NA
WSHP Loop Pumping Control[m]	HP Valves & pump VSD	NA	NA	NA	NA

a. Offices <50,000 ft2 use "Small Office" parameters; otherwise use "Large Office" parameters.

b. Space conditioning system shall cycle on to meet heating and cooling set point schedules as specified in ASHRAE Standard 90.1 Normative Appendix C. One space conditioning system is modeled in each zone. Conditioning system fan operation is not necessary for ventilation delivery.

c. The equipment capacities (i.e. system coil capacities) for the *standard reference design* building design shall be based on design day sizing runs and shall be oversized by 15% for cooling and 25% for heating.

d. COPs shown are direct heating or cooling performance and do not include fan energy use. See 90.1 appendix G (G3.1.2.1) for separation of fan from COP in packaged equipment for units where the efficiency rating includes fan energy (e.g., SEER, EER, HSPF, COP).
e. Economizer on space conditioning systems shall be simulated when outdoor air conditions allow free cooling. Economizer high limit shall be based on differential dry-bulb control. DOAS system continues to operate during economizer mode.
f. Airflow equal to the outside air ventilation requirements is supplied and exhausted through a separate DOAS system including a supply fan, exhaust fan, and sensible only heat exchanger. No additional heating or cooling shall be provided by the DOAS. A single DOAS system will be provided for each *block.* The DOAS supply and return fans shall run whenever the HVAC system is scheduled to operate in accordance with ASHRAE Standard 90.1 Normative Appendix C.
g. "Wild" DOAS control indicates no active control of the supply air temperature leaving the DOAS system. Temperature will fluctuate based only on entering and leaving conditions and the effectiveness of ERV.

WA STATE INTERNATIONAL RESIDENTIAL CODE

APPENDIX T SOLAR-READY PROVISIONSDETACHED ONE-AND TWO-FAMILY DWELLINGS, MULTIPLE SINGLEFAMILY DWELLINGS (TOWNHOUSES)

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance

SECTION AW101
SCOPE

AW101.1 General. These provisions shall be applicable for new construction where solar-ready provisions are required.

SECTION AT102
GENERAL DEFINITIONS

SOLAR-READY ZONE. A section or sections of the roof or building overhang designated and reserved for the future installation of a solar photovoltaic or solar water-heating system.

SECTION AU103
SOLAR READY ZONE

AT103.1 General. New detached one- and two-family dwellings, and multiple single-family dwellings (townhouses) with not less than 600 square feet (55.74 m2) of roof area oriented between 90 degrees and 270 degrees of true north shall comply with Sections AT103.2 through AT103.10.

Exceptions:

1. New residential buildings with a permanently installed on-site renewable energy system.
2. A building where all areas of the roof that would otherwise meet the requirements of Section AT103 are in full or partial shade for more than 70 percent of daylight hours annually.

AT103.2 Construction document requirements for solar ready zone. Construction documents shall indicate the solar ready zone.

AT103.3 Solar-ready zone area. The total solar-ready zone area shall be not less than 300 square feet (27.87 m2) exclusive of mandatory access or set back areas as required by this code. New multiple single-family dwellings (townhouses) three stories or less in height above grade plane and with a total floor area less than or equal to 2,000 square feet (185.8 m2) per dwelling shall have a solar-ready zone area of not less than 150 square feet (13.94 m2). The solar-ready zone shall be composed of areas not less than 5 feet (1.52 m) in width and not less than 80 square feet (7.44 m2) exclusive of access or set back areas as required in this code or the applicable provisions of the International Fire Code. No portion of the solar zone shall be located on a roof slope greater than 2:12 that faces within 45 degrees of true north.

AT103.4 Obstructions. Solar-ready zones shall be free from obstructions including, but not limited to, vents, chimneys, and roof-mounted equipment.

AT103.5 Shading. The solar-ready zone shall be set back from any existing or new permanently affixed object on the building or site that is located south, east, or west of the solar zone a distance at least two times the object's height above the nearest point on the roof surface. Such objects include, but are not limited to, taller portions of the building itself, parapets, chimneys, antennas, signage, rooftop equipment, trees and roof plantings.

AT103.6 Capped roof penetration sleeve. A capped roof penetration sleeve shall be provided adjacent to a solar-ready zone when the solar-ready zone has a roof slope of 2:12 or less. The capped roof penetration sleeve shall be sized to accommodate the future photovoltaic system conduit, but shall have an inside diameter not less than 1 1/4 inches.

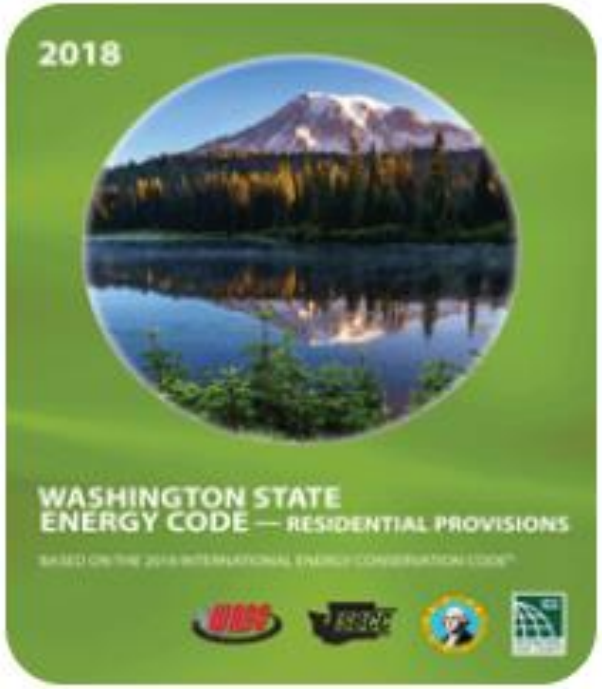
AT103.7 Roof load documentation. The structural design loads for roof dead load and roof live load shall be clearly indicated on the construction documents.

AT103.8 Interconnection pathway. Construction documents shall indicate pathways for routing of conduit or plumbing from the solar-ready zone to the electrical service panel or service hot water system.

AT103.9 Electrical service reserved space. The main electrical service or feeder panel for each dwelling unit shall have a reserved space to allow installation of a dual pole circuit breaker for future solar electric installation and shall be labeled "For Future Solar Electric." The reserved space shall be positioned at the opposite (load) end from the input feeder location or main circuit location.

AT103.10 Construction documentation certificate. A permanent certificate, indicating the solar-ready zone and other requirements of this section, shall be posted near the electrical distribution panel, water heater or other conspicuous location by the builder or registered design professional.

RCC Recommended Local Amendments to the 2018 WA State Energy Code



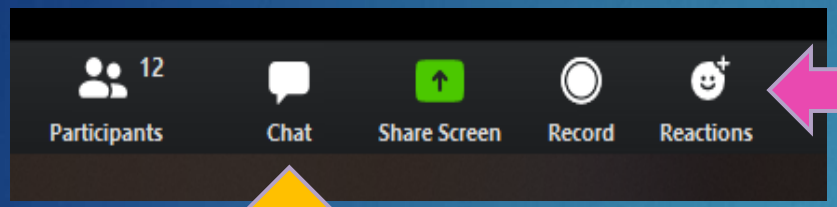
Regional Code Collaboration

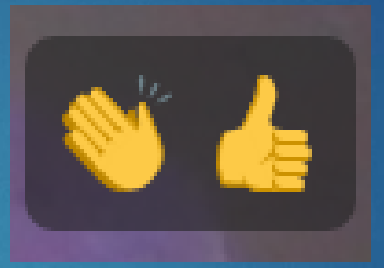
February 18, 2021

Kathleen Petrie
Project Program Manager, Green Building Communitywide
kpetrie@kingcounty.gov

King County Green Tools
Powered by the Solid Waste Division

Communication Methods Today…





If you wish to speak, please "give a clap"

…Or feel free to enter comments and questions in the chat box

** Please know today's session will be recorded. Public & private chats will **all** show in the resulting transcript*

Guiding Policies for this Work

Washington state Targets:

- 70% less building energy use by 2030
- Statewide GHG emission reduction:
  - 45% reduction by 2030, 95% reduction by 2050

King County Strategic Climate Action Plan:

- 50% reduction by 2030, 80% reduction by 2050

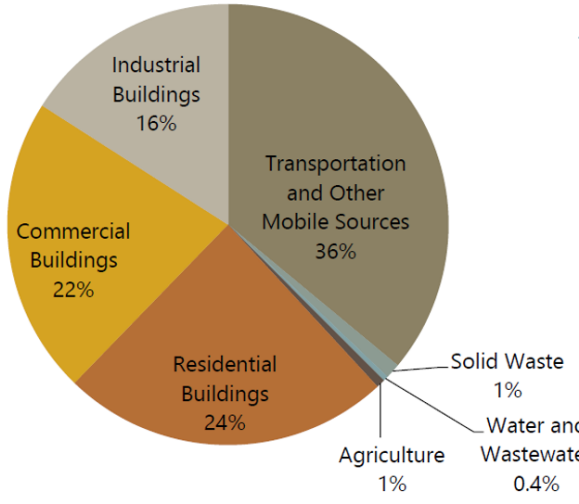
K4C Policy Commitments:

- Adopt codes that lead the way to “net-zero carbon” buildings
- Develop energy codes that support the transition to highly efficient/low carbon non-residential and multifamily buildings through reduced fossil fuels, renewable natural gas, and electrification

Why Us?

- The State will always be more conservative than we need to meet our carbon goals
- If your neighbor adopts these provisions, it will be easier to substantiate local adoption to your Council
- Broader adoptions build the case for State adoption
- More of us adopting these provisions removes the fear that development will move to somewhere else
- Equitable Action
- It's doable

Emissions from the built environment are **nearly half of countywide emissions**



Why Base the RCC Amendments on Seattle's?

Seattle established guiding principles

- Build great envelope
- Eliminate combustion
- Use electricity wisely
- Generate power

Conducted an extremely comprehensive stakeholder process

- Technical expertise (5 E/M Review Staff + Duane Jonlin)
- Public feedback sessions
- Presentations
- High industry participation & co-development

Bits n' Bobs

- 2018 WA State Energy Code was published February 2021
- Seattle Energy Code Adoption: March 2021
- King County Ordinance transmittal: July 2021
- These proposed amendments only apply to multifamily and nonresidential buildings
- In this PPT, "*" means the amendment is merely a change in value or a modest tweak from 2015 WSEC

RCC Recommended 2018 Energy Code Amendments

King County is currently proposing to adopt all of Seattle's amendments

Local amendments only apply to multifamily & nonresidential buildings

Amendment Highlights include:

- *Heat Pump Space Heating*
- *Hot Water Heat Pumps*
- *Identified C406 Credits*
- *Electrical Outlets at Gas Appliances*
- *Multi Family Solar Readiness*
- *Renewable Energy Requirement*
- Reduce allowable fenestration U-values
- Total System Performance Ratio (TSPR)
- Lighting Power Allowance
- Heat Recovery
- Demand Control Ventilation
- Cooling System Alterations
- Sub-Standard Envelopes
- Total Building Performance (BPF)
- Thermal Bridging
- Efficiency Package Credits
- Envelope Exemption for Kitchens
- Metering for Existing Buildings
- Service Hot Water
- DOAS

These focus on decarbonization

These Are current WSEC requirements where only values have been modified

Amendment Highlights Focusing Specifically on Decarbonization

WA State's Clean Energy Transformation Act (CETA)

- ***By 2025,*** *utilities must eliminate coal-fired electricity from their state portfolios*
- ***By 2030,*** *utilities can use limited amounts of electricity from natural gas if it is offset by other actions*
- ***By 2045,*** *utilities must supply electricity that is 100% renewable or non-emitting*

Heat Pump Space Heating

No electric resistance or fossil fuel combustion for space heating in MF/Comm bldgs

=

Heat Pump

Installed Costs vary by equipment type

- *Variable Refrigerant Package: $11,500/unit*
- *Air-to-water heat pump: $19,000/unit*

Table 3-1: Greenhouse gas savings achieved in an all-electric home relative to a natural gas-fueled home, tonnes of CO_2e annually saved, and percent reduction relative to gas

	2020	2030	2050
Single family	1.0-2.6 (33%-56%)	1.2-2.7 (52%-72%)	1.4-2.9 (76%-88%)
Low-rise multifamily	0.4-1.4 (25%-46%)	0.6-1.5 (49%-65%)	0.7-1.7 (74%-85%)

Percentages show the percent reduction of GHG emissions achieved in an all-electric home relative to a natural gas-fueled home. Ranges represent the spread across climate zones and across vintages. Homes without AC in the mixed fuel case (new construction in climate zone 3) are excluded.

Heat Pump Water Heating (HPWH)

- Required for multifamily
- delayed implementation until 1/1/2022

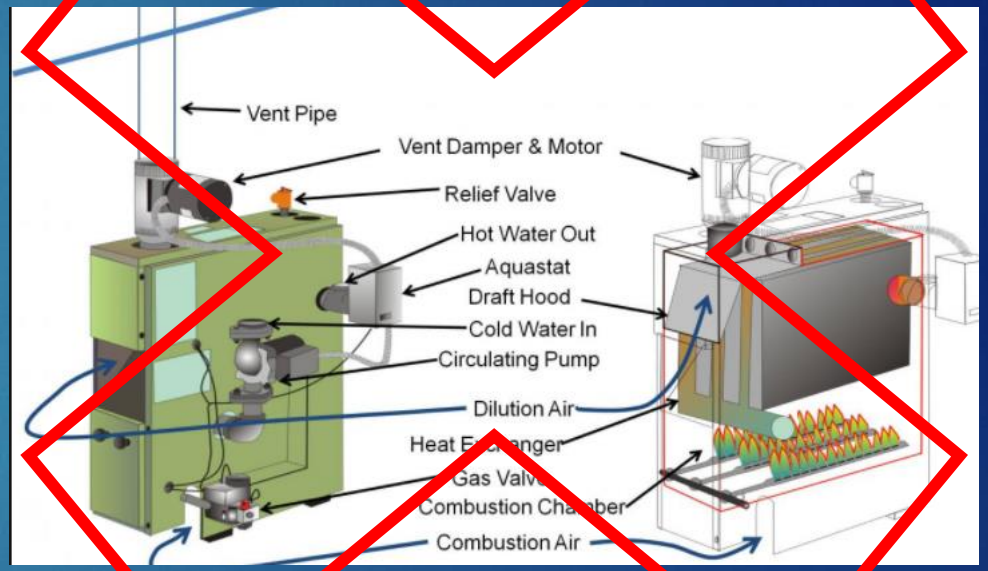
Cost to change from gas boiler to HWHP (delta)

- *Installed reverse cycle chiller system = $1,900/unit*
- *Installed modular CO2 refrigerant system. = $900/unit*

Disallow C406 Credit Achievement for Fossil Fuel Fired Equipment

Associated with:

- Dedicated outdoor air system (DOAS)
- HVAC system selection
- Service water heating



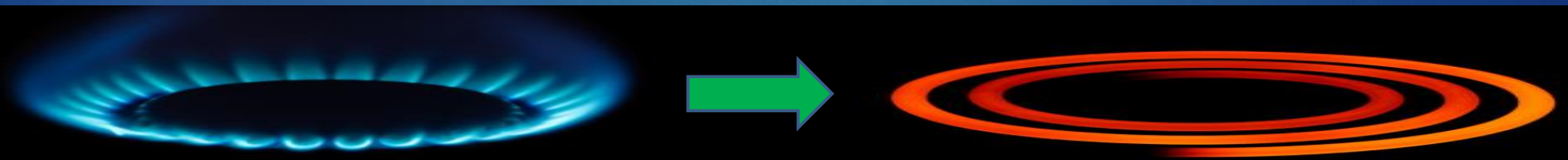
Attachment B

Electrical Outlets at Gas Appliances

- “Where dwelling unit appliances are served by natural gas, an electrical receptacle and circuit shall be provided at each gas appliance with sufficient capacity to serve a future electric appliance in the same location”

- Applies to multifamily only

Cost: $250/receptacle



Onsite Solar Requirements

- Applies only to multifamily & commercial buildings
- New buildings/additions >$5,000
- Required 0.25 W/sf, based on area of all floors
- Affordable housing exempted

Cost: 10,000 sf building = $6,500 after tax credits

How much space does this take up?

Building Stories	Roof Area Required
1	1.8%
2	3.6%
4	7.2%
6	10.9%
8	14.5%
10	18.1%
12	21.7%

Content Credit: Duane Jonlin, City of Seattle & FSI Engineers

Solar-ready Requirements in 2 Codes…

Energy Code Requirement

- Now applies to both commercial and multifamily < 20 stories
- Designate an unobstructed solar zone equal to:
  - 40 percent of roof area
  - 20 percent of electrical service size

Cost: $100

Also adopt Appendix T in the Residential Code

- Requires a solar zone for one- and two-family residential buildings:
- 300 sf for single-family
- 150 sf for duplexes

Cost: $75

Other Amendment Highlights

Total Building Performance *

Attachment B

Seattle's Building performance values are 10% less than WA State

TABLE C407.3(2)

BUILDING PERFORMANCE FACTORS (BPF) TO BE USED FOR COMPLIANCE WITH SECTION C407.3

Building Area Type	Building Performance Factor
Multifamily	((~~0.58~~)) 0.52
Healthcare/hospital	((~~0.54~~)) 0.49
Hotel/motel	((~~0.64~~)) 0.58
Office	((~~0.56~~)) 0.51
Restaurant	((~~0.70~~)) 0.63
Retail	((~~0.47~~)) 0.43
School	((~~0.36~~)) 0.32
Warehouse	((~~0.48~~)) 0.43
All Others	((~~0.54~~)) 0.49

Substandard Building Envelope Limits *

Seattle: Modeled envelope UA cannot be more than 10% worse than prescriptive

*WA State: Modeled envelope UA cannot be more than **20% worse** than prescriptive (allowable total UA)*

Allowable Vertical Glazing *

Maximum total building vertical fenestration area allowed = 35%

Reduced U-Values

Attachment B

Additional energy efficiency credit requirements *

C406: Must achieve 8 credits – an increase from WA State's 6 credits

EFFICIENCY PACKAGE CREDITS

Code Section	Commercial Building Occupancy					
	Group R-1	Group R-2	Group B	Group E	Group M	All Other
	Additional Efficiency Credits					
1. More efficient HVAC performance in accordance with Section C406.2	2.0	3.0	3.0	2.0	1.0	2.0
2. Reduced lighting power: Option 1 in accordance with Section C406.3.1	1.0	1.0	2.0	2.0	3.0	2.0
3. Reduced lighting power: Option 2 in accordance with Section C406.3.2[a]	2.0	3.0	4.0	4.0	6.0	4.0
4. Enhanced lighting controls in accordance with Section C406.4	NA	NA	1.0	1.0	1.0	
5. On-site supply of renewable energy in accordance with C406.5	3.0	3.0	3.0	3.0	3.0	
5.1 1/3 of renewable energy required by C406.5	1.0	1.0	1.0	1.0	1.0	
5.2 2/3 of renewable energy required by C406.5	2.0	2.0	2.0	2.0	2.0	

For an Apartment…

Credit: Duane Jonlin

Getting to 8 Credits (after 1/1/22)		
No.	**Credits**	**Description**
#2	1	Lighting
#9	5	Advanced HPWH
#11	2	Reduced air leakage
	8	Total

Lighting Power Allowance *

Reduce all interior lighting table values by 10% (from State)

- Except health care facilities, penitentiaries, & facilities for the visually impaired

Change of Occupancy

Where a building/space (permitted prior to 2009) is altered to become a bakery or commercial kitchen/laundry, improvements to the building envelope immediately adjoining the spaces containing that use shall not be required if the proposed design uses only:

- All-electric Energy Star-rated process equipment, and
- code compliant all-electric HVAC equipment

Metering for Existing Buildings

Metering required when:

- Area greater than 10,000 SF
- Select individual HVAC parts are added or replaced
  - Electrical meters for certain branch circuits or fan/pump on a variable speed drive
  - Natural gas meters for each new natural gas connection that is rated at 1,000+ kBTU
- Adding/replacing the majority of HVAC equipment in a building
- Tenant space electrical sub-metering for existing buildings

Amendment Highlights Continued

- Clarify that cooling system alterations must comply with the economizer compliance table, both at the individual equipment level and the total system level.
- Use ASHRAE minimum efficiency requirements table for heat pump/recovery chiller packages *
- The Demand Control Ventilation (DCV) shall now include energy recovery ventilation for spaces > 650 sf, and the threshold reduced from 25 to 15 occupants/1000 sf
- Require service hot water circulation controls and pipe/tank insulation
- Thermal bridging: Provide relaxed requirement for cantilevered concrete decks & add requirements for control of thermal bridging around glazing perimeter
- Increase the scope of the Total System Performance Ratio (TSPR) to include R-2 MF, medical office, and exempt other service areas

How Local Adoption Can be Supported

- Sharing of technical knowledge
- Ordinance language preparation
- Sharing of research/resources/findings
- Pairing jurisdictions with partners willing to provide letters/testimony of support to local Councils

Thank You!

Regional Code Collaboration

Kathleen Petrie
kpetrie@kingcounty.gov

King County Green Tools
Powered by the Solid Waste Division

Council Meeting Date: August 16, 2021 **Agenda Item:** 8(b)

CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Discussion of Ordinance No. 942 - Amending Shoreline Municipal Code Chapter 15.20 Landmark Preservation
DEPARTMENT:	City Attorney's Office
PRESENTED BY:	Margaret King, City Attorney
ACTION:	____ Ordinance ____ Resolution ____ Motion _X__ Discussion ____ Public Hearing

PROBLEM/ISSUE STATEMENT:

Since the City's incorporation in 1995, the King County Landmarks Commission has been serving as the Shoreline Landmarks Commission. Chapter 15.20 of the Shoreline Municipal Code (SMC) incorporates by reference Chapter 20.62 of the King County Code. This incorporation, which occurred in 2003, is based on the provisions as they were then constituted rather than as they have subsequently been amended. This results in inconsistency between the regulations the King County Landmarks Commission is operating under and the City's.

Tonight, Council will discuss proposed Ordinance No. 942, which would amend SMC Chapter 15.10 to align this SMC Chapter with the King County Code and to update provisions consistent with City practices. Proposed Ordinance No. 942 is currently scheduled to return to Council for potential action on September 13, 2021.

RESOURCE/FINANCIAL IMPACT:

One of the primary amendments in proposed Ordinance No. 942 is to transfer appeal authority from the City Council to the City Hearing Examiner. If any Landmarks Commission appeal is filed, the City will be impacted by the fees for the Hearing Examiner. While staff would still be needed with an appeal, since the Hearing Examiner is an independent entity under contract with the City, support of staff would not be needed, thereby reducing staff resources. Otherwise, the proposed amendments are not anticipated to have a financial impact.

RECOMMENDATION

This is a discussion item; no action is required. Staff is seeking the City Council's comments and suggestions on proposed Ordinance No. 942. This item is scheduled to return to the City Council for potential action on September 13, 2021.

Approved By: City Manager ***DT*** City Attorney ***JA-T***

BACKGROUND

In 1995, shortly after incorporation, the City entered into an interlocal agreement with King County to have the King County Landmarks Commission serve as Shoreline's Landmarks Commission. Ordinance No. 53 established Chapter 15.20 in the Shoreline Municipal Code (SMC) but this new chapter only designated the King County Landmarks Commission as Shoreline's Landmarks Commission and set forth a process for appointing a Special Member. In 2003, Chapter 15.20 SMC was amended to incorporate by reference King County Code (KCC) Chapter 20.62, Protection and Preservation of Landmarks, Landmark Sites and Districts, so as to be consistent with the requirements of the interlocal agreement.

To accomplish this, Shoreline incorporated these provisions of the KCC "as they are presently constituted." Unfortunately, this phrase results in the provisions of Chapter 15.20 SMC being the KCC provisions as they existed in 2003, rather than as they exist today.

In May 2021, the City Council was served with an appeal of a landmark designation. It was at this time that it was discovered the current provisions of SMC Chapter 15.20 Landmark Preservation are not parallel to the King County Code. And, unlike the KCC, which has appeals going to the Hearing Examiner, for the City, it is the City Council that serves as the appellate body. This resulted in the appellate authority for this most recent appeal being the City Council instead of the Hearing Examiner. Other minor amendments have occurred as well since 2003, including the name of the Landmarks Commission changing from the "Landmarks and Heritage Commission" to just "Landmarks Commission."

DISCUSSION

Tonight, the Council will discuss proposed Ordinance No. 942 (Attachment A), which would amend SMC Chapter 15.10 to ensure that the SMC and the KCC are consistent by automatically incorporating any amendments to the KCC. The most substantial change in proposed Ordinance No. 942 is to transfer appeal authority from the City Council to the City Hearing Examiner. The proposed amendments also align the appointment process and term for the Special Member to be the same as for the members of the Planning Commission. Finally, in addition to 'housekeeping' and other 'clean-up' amendments, proposed Ordinance No. 942 would also amend SMC Chapter 15.10 to identify all currently designated landmarks in Shoreline.

Proposed Ordinance No. 942 is currently scheduled to return to Council for potential action on September 13, 2021.

RESOURCE/FINANCIAL IMPACT

One of the primary amendments in proposed Ordinance No. 942 is to transfer appeal authority from the City Council to the City Hearing Examiner. If any Landmarks Commission appeal is filed, the City will be impacted by the fees for the Hearing Examiner. While staff would still be needed with an appeal, since the Hearing Examiner is an independent entity under contract with the City, support of staff would not be

needed, thereby reducing staff resources. Otherwise, the proposed amendments are not anticipated to have a financial impact.

RECOMMENDATION

This is a discussion item only. Staff is seeking the City Council's comments and suggestions on proposed Ordinance No. 942. This item is scheduled to return to the City Council for potential action on September 13, 2021.

ATTACHMENTS

Attachment A: Proposed Ordinance No. 942
Attachment A, Exhibit A: Proposed Amendments to SMC 15.20

ORDINANCE NO. 942

AN ORDINANCE OF THE CITY OF SHORELINE, WASHINGTON AMENDING CHAPTER 15.20 LANDMARK PRESERVATION OF THE SHORELINE MUNICIPAL CODE.

WHEREAS, Pursuant to an Interlocal Agreement with King County and the City of Shoreline, since 1995, the King County Landmarks Commission has served as the Shoreline Landmarks Commission to provide historic landmark designation and protection for the City; and

WHEREAS, consistent with the Interlocal Agreement, the City adopted Ordinance No. 53, establishing Chapter 15.20 SMC Landmark Preservation to protect and preserve landmarks; and

WHEREAS, with the adoption of Ordinance No. 323, Chapter 15.20 SMC incorporated King County Code Chapter 20.62 by reference, however when this was done, the incorporation was as the provisions were "presently constituted" as opposed to "as amended," resulting in inconsistency between Chapter 15.20 SMC and the King County Code as that code has subsequently been amended; and

WHEREAS, amendments are necessary to ensure that the City's regulations parallel those of King County and will automatically amend when King County Code Chapter 20.62 is amended; and

WHEREAS, on August 16, 2021, the City Council held a study session to discuss the proposed amendments; and

WHEREAS, the City Council has determined that the proposed amendments serve the purpose of Chapter 15.20 SMC and the Interlocal Agreement and are in the best interest and welfare of the City of Shoreline by providing for the designation, protection, and preservation of historic landmarks;

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF SHORELINE, WASHINGTON DO ORDAIN AS FOLLOWS:

Section 1. Amendment to Chapter 15.20 SMC Landmark Preservation. Chapter 15.20 Landmark Preservation of the Shoreline Municipal Code is amended as set forth in Exhibit A to this Ordinance.

Section 2. Corrections by City Clerk. Upon approval of the City Attorney, the City Clerk is authorized to make necessary corrections to this Ordinance, including the corrections of scrivener or clerical errors; references to other local, state, or federal laws, codes, rules, or regulations; or ordinance numbering and section/subsection numbering and references.

Section 3. Severability. Should any section, subsection, paragraph, sentence, clause, or phrase of this Ordinance or its application to any person or situation be declared unconstitutional or invalid for any reason, such decision shall not affect the validity of the remaining portions of this Ordinance or its application to any person or situation.

Section 4. Publication and Effective Date. A summary of this Ordinance consisting of the title shall be published in the official newspaper. This Ordinance shall take effect five days after publication.

PASSED BY THE CITY COUNCIL ON SEPTEMBER 13, 2021.

_____
Mayor Will Hall

ATTEST:

_____
Jessica Simulcik Smith
City Clerk

APPROVED AS TO FORM:

_____
Julie Ainsworth-Taylor, Assistant City Attorney
On Behalf of Margaret King, City Attorney

Date of Publication: , 2021
Effective Date: , 2021

Chapter 15.20

LANDMARKS PRESERVATION

Sections:

15.20.010 Findings – Purpose.

The city council finds that:

A. The protection, enhancement, perpetuation, and use of buildings, sites, districts, structures and objects of historical, cultural, architectural, engineering, geographic, ethnic and archeological significance located in the city of Shoreline are necessary for the prosperity, civic pride and general welfare of the residents of the city.

B. Such cultural and historic resources are a significant part of the heritage, education and economic base of the city of Shoreline, and the economic, cultural and aesthetic well being of the city cannot be maintained or enhanced by disregarding its heritage and by allowing the unnecessary destruction or defacement of such resources.

C. In the absence of an ordinance encouraging historic preservation and an active program to identify and protect buildings, sites and structures of historical and cultural interest, the city will be unable to insure present and future generations of residents and visitors a genuine opportunity to appreciate and enjoy the city's heritage.

D. The purposes of this chapter are to:

1. Designate, preserve, protect, enhance, and perpetuate those sites, buildings, districts, structures and objects which reflect significant elements of the city of Shoreline's, county's, state's and nation's cultural, aesthetic, social, economic, political, architectural, ethnic, archaeological, engineering, historic and other heritage;

2. Foster civic pride in the beauty and accomplishments of the past;

~~4~~3. Stabilize and improve the economic values and vitality of landmarks;

~~5~~4. Protect and enhance the city's tourist industry by promoting heritage-related tourism;

~~6~~5. Promote the continued use, exhibition and interpretation of significant sites, districts, buildings, structures, and objects, artifacts, materials, and records for the education, inspiration and welfare of the ~~people~~ residents of the city of Shoreline;

~~7~~6. Promote and continue incentives for ownership and utilization of landmarks;

~~8~~7. Assist, encourage and provide incentives to public and private owners for preservation, restoration, rehabilitation and use of landmark buildings, sites, districts, structures and objects;

~~9~~8. Work cooperatively with other jurisdictions to identify, evaluate, and protect historic resources in furtherance of the purposes of this chapter.

15.20.020 Landmarks ~~and heritage~~ commission created – Membership and organization.

A. The King County landmarks ~~and heritage~~ commission established pursuant to Chapter 20.62 KCC is hereby designated and empowered to act as the landmarks commission for the city of Shoreline pursuant to the provisions of this chapter.

B. The special member of the King County landmarks ~~and heritage~~ commission provided for in KCC 20.62.030 shall be appointed by a majority vote of the city council subject to an open recruitment process~~. Such special~~

~~member~~ and shall have a demonstrated interest and competence in historic preservation. A special member must be a resident or property owner within the City.

1. A special member shall be appointed for a term of four years.~~Such appointment shall be made for a four-year term.~~ Terms shall expire on March 31st. No special member may serve longer than two consecutive terms. A special member shall be deemed to have served one full term if the special member resigns at any time after appointment or if the special member serves more than two years of an unexpired term.

2. ~~Such~~A special member shall serve until their successor is duly appointed and confirmed. In the event of a vacancy, an appointment shall be made to fill the vacancy in the same manner and the same qualifications as if at the beginning of the term, and the person appointed to fill the vacancy shall hold the position for the remainder of the unexpired term. ~~Such special member may be reappointed, but may not serve more than two consecutive four-year terms~~

~~Such special member shall be deemed to have served one full term if such special member resigns at any time after appointment or if such special member serves more than two years of an unexpired term.~~ 3. A special member may be removed by the city manager, with the concurrence of the city council, for neglect of duty, conflict of interest, malfeasance in office, or other just cause, or for unexcused absence from more than three consecutive regular meetings. The decision of the city regarding removal shall be final and there so be no appeal available.

~~The~~4. A special member~~s of the commission~~ shall serve without compensation except for out-of-pocket expenses incurred in connection with commission meetings or programs. The city of Shoreline shall reimburse such expenses incurred by ~~such~~ a special member.

5. A special member shall fully comply with Chapter 42.23 RCW, Code of Ethics for Municipal Officers, Chapter 42.36 RCW, Appearance of Fairness, and such other rules and regulations as may be adopted from time to time by the city council regulating the conduct of any person holding appointive office within the city.

C. The commission shall ~~not conduct any public hearings required under this chapter with respect to properties located within the city of Shoreline until~~file its rules and regulations, including procedures consistent with this chapter, ~~have been filed~~ with the city clerk.

15.20.025 Incorporation of King County provisions.

The following sections of Chapter 20.62 KCC, ~~as they are presently constituted~~as it currently exists and ~~or~~as it may be hereafter amended, are incorporated by reference herein and made a part of this chapter~~: except that any references to the "county" or "King County" shall refer to the city of Shoreline, and "department of development and environmental services" shall refer to "planning and development services department."~~

A. KCC 20.62.020 – Definitions, except for the following:

Subsection H is changed to read: Director is the Director of Planning and Community Development, or designee.

Add Subsection z: "Council" is the City of Shoreline City Council.

~~paragraph 1, "Historic Preservation Officer" is the King County historic preservation officer or their designee.~~

B. KCC 20.62.040 – Designation Criteria, except that all references to "King County" are changed to read "City of Shoreline."~~.~~

C. KCC 20.62.050 – Nomination Procedure.

D. KCC 20.62.070 – Designation Procedure, except that all references to "King County" are changed to read "City of Shoreline."

E. KCC 20.62.080 – Certificate of Appropriateness Procedures, except the last sentence of subsection A.

F. KCC 20.62.100 – Evaluation of Economic Impact.

G. KCC 20.62.110 – Appeal Procedure, except that appeals shall be filed with the City of Shoreline City Clerk for a final decision by the Shoreline Hearing Examiner consistent with Chapter 20.30 SMC, Subchapter 4 Land Use Appeals and the rules of the Hearing Examiner. Appeals of a decision by the Hearing Examiner shall be to superior court pursuant to the Land Use Petition Act, chapter 36.70C RCW.

H. KCC 20.62.130 – Penalty for Violation of ~~KCC Section 20.62.080~~SMC 15.20.025(E) above.

I. KCC 20.62.140 – Special Valuation for Historic Properties, except that reference to "King County" in Subsection C is changed to read "City of Shoreline."

15.20.026 Alteration of landmarks – Review process.

Development proposals and p~~P~~ermit applications for changes to landmark properties shall not be considered complete unless accompanied by a certificate of appropriateness pursuant to ~~KCC 20.62.080~~SMC 15.20.025(E) above. Upon receipt of an application for a development proposal or permit which affects a city of Shoreline landmark or a~~n~~ historic resource that has received a preliminary determination of significance under ~~KCC 20.60.070~~SMC 15.20.025(A), the application circulated to the historic preservation officer shall be deemed an application for a certificate of appropriateness pursuant to ~~KCC 20.62.080~~SMC 15.20.025(E) if accompanied by the additional information required to apply for such certificate.

15.20.030 ~~Redesignation~~Designated landmarks.

~~All county landmarks designated pursuant to the provisions of Chapter 20.62 KCC that are located within the boundaries of Shoreline are hereby designated as city landmarks subject to the provisions of this chapter. [Ord. 53 § 3, 1995]~~A. Pursuant to the provisions of this chapter, city landmarks will be designated from time to time and this section will be amended to include those city landmarks. Omission of a designated city landmark in this section does not alter or modify its designation in any way.

B. The following landmarks were designated by King County prior to the incorporation of the city of Shoreline. These landmarks are now city landmarks with the same advantages, responsibilities, and opportunities that all city landmarks possess pursuant to this chapter.

1. Crawford Store, 2411 NW 195th Place (Block 11, Lots 5 and 6 of Richmond Beach, Parcel No. 727710-0435)

2. William E. Boeing House, "Aldarra," 140 Huckleberry Lane NW (Portion of Tracts 86 and 87 of Unrecord Plat of The Highlands, Parcel No. 330470-0105), National Register No. 88002743

C. The following landmarks have been designated as city landmarks since the incorporation of the city of Shoreline pursuant to this chapter:

1. Richmond Masonic Center, 753 N. 185th Street (Block 2, Lot 1 of Richmond Tracts, Parcel No. 728590-0065)

2. Ronald Grade School, 749 N 175th Street (Shorewood High School, Parcel No. 072604-9134)