

33.274 Radio Frequency Transmission Facilities

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33.274.010 Purpose

Radio Frequency Transmission Facilities are regulated to:

- Ensure City zoning regulations are applied consistently with federal telecommunication legislation and rules;
- Reduce the potential need for additional towers that are built in or near residential and open space zones by encouraging that Radio Frequency Transmission Facilities be located on buildings, existing towers, or utility poles in public rights of way;
- Ensure that towers in or near residential or open space zones are only sited when alternative facility locations are not feasible;
- Preserve the quality of living in residential areas which are in close proximity to Radio Frequency Transmission Facilities;
- Preserve the opportunity for continued and growing service from the radio frequency transmission industries; and
- Support the goals of the City's Broadband Strategic Plan.

33.274.020 When the Regulations Apply

Except as exempted in 33.274.030 below, this chapter applies to all radio frequency transmission facilities and to all associated accessory structures and equipment, including transmitters, antennas, towers, masts, and poles. Facilities within the Healy Heights Plan District are also subject to the regulations of Chapter 33.533.

33.274.025 When a Conditional Use Review is Required

Unless exempted by 33.274.030 or allowed by 33.274.035, all new Radio Frequency Transmission Facilities require a conditional use review. Approval criteria for these reviews are stated in Chapter 33.815, Conditional Uses.

33.274.030 Facilities Exempt from this Chapter

All of the following are allowed without a conditional use and are exempt from the regulations of this chapter:

- A. Emergency or routine repairs, reconstruction, or routine maintenance of previously approved facilities;
- B. Industrial, scientific, and medical equipment operating at frequencies designated for that purpose by the Federal Communications Commission;
- C. Military and civilian radars, operating within the regulated frequency ranges, for the purpose of defense or aircraft safety;
- D. Point-to-point and multipoint microwave facilities, provided that:
 - 1. Any new tower meets the height requirements of the base zone or is less than 50 feet in height, whichever is less; and
 - 2. Any new tower is more than 2,000 feet from any other Radio Frequency Transmission Facility that is supported by a tower;
- E. Amateur and citizen band transmitters and antennas;
- F. Two-way communication transmitters used on a temporary basis by "911" emergency services, including fire, police, and emergency aid or ambulance service;
- G. Radio transceivers normally hand-held or installed in moving vehicles, such as automobiles, watercraft, or aircraft. This includes cellular phones, smart tablets, navigation systems, laptop computers and consumer signal boosters;
- H. Towers, masts, poles, or other supporting structures accessory to a residential use, with a transmitter output power of 1,500 watts or less;
- I. Transmitters, when not used in conjunction with personal wireless service facilities, operating at a frequency less than 1 GHz and a transmitter output power of less than 7 watts, provided that any new tower, pole, or mast meets the height requirements of the base zone or is less than 50 feet in height, whichever is less; and
- J. Radio frequency machines that:
 - 1. Are designated and marketed as consumer products, such as microwave ovens and remote control toys; or
 - 2. Are in storage, shipment, or on display for sale, provided such machines are not operated.

33.274.035 Facilities Allowed Without a Conditional Use Review

All of the following are allowed without a conditional use but are subject to the development standards in this chapter:

- A. New and modified personal wireless service facilities in C, E, I, or CI zones mounted on an existing building or other non-broadcast structure provided that the entire facility is more than 50 feet from an R or IR zone.
- B. New and modified personal wireless service facilities in C, E, I, or CI zones supported by a new tower provided that:

1. The tower is more than 50 feet from an R or IR zone;
 2. The tower meets the height requirement for buildings in the base zone; and
 3. The tower is more than 2,000 feet from other towers. This requirement does not apply to towers that are supporting a personal wireless service facility operating in the same licensed frequencies.
- C.** Other modifications of facilities that were originally approved through a conditional use, including the addition or replacement of antennas and accessory equipment, provided all modifications made over time:
1. Do not increase the footprint of equipment enclosures on the ground by more than 1,500 square feet;
 2. Do not substantially change the physical dimensions of the tower, pursuant to 47 U.S.C. §1455, including changes to tower height when accompanied by substantial evidence that the requested height is the minimum necessary to avoid interference with existing antennas. Such changes are not limited by conditions of prior land use reviews; and
 3. To the extent practicable, modifications must reasonably maintain the appearance of the original facility including, but not limited to, color, screening, landscaping, camouflage, concealment techniques, mounting configuration, or architectural treatment.

33.274.040 Development Standards

- A. Purpose.** The development standards:
- Ensure that Radio Frequency Transmission Facilities will be compatible with adjacent uses;
 - Reduce the visual impact of towers and accessory equipment in residential and open space zones whenever possible; and
 - Protect adjacent property from tower failure, falling ice, and other safety hazards.
- B. When the standards apply.**
1. Unless exempted by 33.274.030, above, the development standards of this section apply to all Radio Frequency Transmission Facilities.
 2. Applications to modify existing facilities regulated by this chapter are required to meet the development standards and conditions of approval only for elements of the facility that are being modified. In addition, any elements of the original approval that have moved out of compliance with development standards that applied when the facility was approved, such as landscape materials, or applicable conditions of approval, must be brought back into compliance.
- C. General requirements**
1. Tower sharing. New facilities must co-locate on existing towers or other structures to avoid construction of new towers, unless precluded by structural limitations, inability

to obtain authorization by the owner of an alternative location, or where an alternative location will not meet the service coverage objectives of the applicant. Requests for a new tower must be accompanied by evidence that application was made to locate on existing towers or other structures, with no success; or that location on an existing tower or other structure is infeasible.

2. Grouping of towers. The grouping of towers that support radio or television broadcast facilities on a site is encouraged where technically feasible. Tower grouping may not result in radio frequency emission levels exceeding the standards stated in C.5, below.
3. Tower finish. For towers not regulated by the Oregon Aeronautics Division or Federal Aviation Administration, a finish (paint/surface) must be provided that reduces the visibility of the structure.
4. Tower illumination. Towers must not be illuminated except as required for the Oregon State Aeronautics Division or the Federal Aviation Administration.
5. Radio frequency emission levels and exposure limits. All Radio Frequency Transmission Facilities must operate within the radio frequency emissions levels and comply with the exposure limits established by the Federal Communications Commission (FCC). Applicants must certify that the proposed facility will be in compliance with FCC emissions standards with the permit application.
6. Antenna requirements. Antennas must be secured from public access, either by vertical or horizontal separation, fencing, locked access, or other measures as appropriate.
7. Setbacks.
 - a. All towers must be set back at least a distance equal to 20 percent of the height of the tower or 15 feet, whichever is greater, from all abutting R and OS zoned property and public streets.
 - b. Accessory equipment or structures must meet the base zone setback standards that apply to accessory structures.
 - c. Tower guy anchors must meet the base zone setback standards that apply to buildings.
8. Landscaping and screening. The base of a tower and all accessory equipment or structures located at grade must be fully screened from the street and any abutting sites as follows:
 - a. In C, E, I, or CI zones more than 50 feet from an R or IR zone. A tower and all accessory equipment or structures located in the C, E, I, or CI zones more than 50 feet from an R or IR zone must meet the following landscape standard:
 - (1) Generally. Except as provided in (2), below, a landscaped area that is at least 5 feet deep and meets the L3 standard must be provided around the base of a tower and all accessory equipment or structures.

- (2) Exception. If the base of the tower and any accessory equipment or structures are screened by an existing building or fence, then some or all of the required landscaping may be relocated subject to all of the following standards.
 - The building or fence must be on the site;
 - The fence must be at least six feet in height and be totally sight-obscuring;
 - The relocated landscaping must meet the L2 standard. The relocated landscaping cannot substitute for any other landscaping required by this Title;
 - The applicant must demonstrate that the lease includes provisions for planting and ongoing maintenance of the substitute landscaped area; and
 - If any part of the base of the tower or accessory equipment is not screened by a building or fence, 5 feet of L3 landscaping must be provided.
 - b. In OS, R, or IR zones or within 50 feet of an R or IR zone. A tower and all accessory equipment or structures located in an OS, R, or IR zone or within 50 feet of an R or IR zoned site must meet the following landscape standards:
 - (1) Tower landscaping. A landscaped area that is at least 15 feet deep and meets the L3 standard must be provided around the base of the tower.
 - (2) Accessory equipment and structures. A landscaped area that is at least 10 feet deep and meets the L3 standard must be provided around the base of all accessory equipment or structures located at grade.
 - c. In all zones, equipment cabinets or shelters located on private property that are associated with Radio Transmission Facilities mounted in a right-of-way must be screened from the street and any adjacent properties by walls, fences or vegetation. Screening must comply with at least the L3 or F2 standards of Chapter 33.248, Landscaping and Screening, and be tall enough to screen the equipment.
9. Tower design.
 - a. For a tower accommodating a radio or television broadcast facility, the tower must be designed to support at least two additional radio or television broadcast transmitter/antenna systems and one microwave facility, and at least three two-way antennas for every 40 feet of tower over 200 feet of height above ground.
 - b. For any other tower, the design must accommodate at least three two-way antennas for every 40 feet of tower, or at least one two-way antenna for every 20 feet of tower and one microwave facility.
 - c. The requirements of Subparagraphs a. and b. above may be modified by the City to provide the maximum number of compatible users within the radio frequency emission levels.

10. Mounting device. The mounting device or mounting structure used to mount facilities to an existing building or other non-broadcast structure may exceed the height limit of the base zone but may not project more than 10 feet above the roof or parapet of the building or other non-broadcast structure.
11. Abandoned facilities. A tower or mounting device on a non-broadcast structure erected to support one or more Federal Communication Commission licensed Radio Frequency Transmission Facilities must be removed from a site if no facility on the tower or mounting device has been in use for more than six months.

D. Additional requirements.

1. Personal wireless service facilities located in OS, R, C, EX, CI, or IR zones, and personal wireless service facilities located in EG or I zones within 50 feet of an R or IR zone must meet all of the following standards:
 - a. Antennas mounted on towers. Triangular “top hat” style antenna mounts are prohibited. Antennas must be mounted to a tower either on davit arms that are no longer than 5 feet, flush with the tower, within a unicell style top cylinder, or other similar mounting technique that minimizes visual impact.
 - b. Lattice. Lattice towers are not allowed.
2. The minimum site area required for a tower in an R zone is 40,000 square feet.
3. Applications to locate or replace accessory equipment in or within 50 feet of an R or IR zone must be accompanied by a signed and stamped acoustical engineer’s report demonstrating that noise levels from the equipment is in full compliance with Title 18 (Noise) regulations, or demonstrating that with appropriate sound proofing mitigation, that the equipment will comply with Title 18.

33.274.050 Procedures for Conditional Use Review

Unless exempted by 33.274.030 or allowed by 33.274.035, above, all Radio Frequency Transmission Facilities are reviewed through the procedures stated below.

- A. Type Ix procedure.** In all zones, requests for equipment cabinets or shelters located on private property associated with Radio Frequency Transmission Facilities mounted in a right-of-way are processed through a Type Ix procedure.
- B. Type II procedure.** Requests to locate personal wireless service facilities on an existing building or other non-broadcast structure when the facility is in an OS, R, or IR zone, or the facility is within 50 feet of an R or IR zone in C, E, I, or CI zones are reviewed through a Type II procedure.
- C. Type III procedure.** All other requests for Radio Frequency Transmission Facilities are reviewed through a Type III procedure.

33.274.060 Registration of Existing Facilities

All Radio Frequency Transmission Facilities subject to this chapter and existing as of September 19, 1987 must complete and submit the Radio Frequency Transmission Facility registration form available from the City.

33.274.070 Measurements

- A. Measurements by engineer.** All measurements required in this chapter must be made by a qualified licensed engineer with a Federal Communications Commission First Class or General Radio-Telephone License or under the supervision of a registered professional electrical engineer.
- B. Method of measurement.** Measurements are to be made in accord with the latest version of American National Standards Institute's (ANSI) Standard C95.3 Techniques and Instrumentation for the Measurement of Potentially Hazardous Electromagnetic Radiation at Microwave Frequencies, or by similar methods considered appropriate by the engineer.
- C. Instrument calibration.** For all measurements made to ensure compliance with this chapter, evidence must be submitted showing that the instrument or instruments used were calibrated within the manufacturer's suggested periodic calibration interval, and that the calibration is by methods traceable to the National Bureau of Standards. A letter must also be submitted stating that the measurements were made in accordance with good engineering practices and verifying the accuracy of the results of the measurements.

33.274.080 Review of Radio Frequency Transmission Facility Regulations

- A. New federal or state standards.** In the event that either the federal or state government adopts mandatory or advisory standards more stringent than those described in this chapter, the Planning staff will prepare a report and recommendation on any necessary revisions to the City's adopted standards. The Council will endeavor to bring the City standards into compliance with those standards within 30 days of the date the new standards become effective.
- B. Significant new information.** The Bureau of Planning and Sustainability, upon learning of significant new information regarding the relationship between non-ionizing radiation and human health, will prepare a report and recommendation to the Planning and Sustainability Commission, detailing any necessary revisions to the City's adopted standards.

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